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Effect of loan-loss provisioning on financial performance of deposit taking SACCOs in Kirinyaga County, Kenya

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ABSTRACT

Savings and Credit Co-operatives in Kenya are required to adhere to regulations set by the SACCOs Regulation Authority. Among the regulations is the requirement that the management has to present a myriad of reports including; the Capital Adequacy Return report, Liquidity Statement report, Statement of Financial Position and Statement of Deposit Return. The Return on Investments report compares land, building, and financial assets to SACCO's total assets and its core capital. Despite the existence of prudential guidelines, their influence on the financial performance of deposit-taking SACCOs in Kenya remains contentious with some claiming regulatory compliance in the form of SASRA prudential guidelines has a positive influence while others argue that SASRA regulation has insignificant influence on the financial performance of deposit taking SACCOs. This study seeks to determine the effect of loan-loss provisioning on the financial performance of Deposit-taking SACCOs in Kirinyaga County, Kenya. The study adopted a cross-section descriptive research design. The study population was 10 deposit-taking SACCOs in Kirinyaga County over the period 2017-2022 relying on secondary data. Data analysis involved descriptive and inferential statistics. From the inferential results, the study concluded that loan-loss provisioning positively and significantly affected the financial performance of the deposit-taking SACCOs in Kirinyaga County. The study recommended that the deposit-taking SACCOs in Kirinyaga County ought to strive to be capital-adequate as well as manage their loans efficiently. Being capital-adequate ensures that the SACCOs can expand their operations and hence be sustainable, competitive, and finally profitable. Managing its loans through periodic classification of the loans and having room for loan loss provision ensures the sustainability of the SACCOs..

Introduction

The performance of a business organisation is a key concept and has remained a debatable concept among scholars and practitioners. Some scholars and industry practitioners view performance as an engine in the achievement of organisational goals and objectives (Taouab & Issor, 2019; De Massis *et al.*, 2020). However, other scholars view that firm performance is not the only ultimate goal for the organisation but other organisation aspects like sustainability and achieving competitiveness are the overarching objectives (Qamar, & Asif, 2016). Performance principally reflects an enterprise's business outcomes and financial health over a specific period of time and is likely to influence its operational sustainability (Hailiang *et al.*, 2020; Tudose *et al.*, 2022).

The financial performance of the deposit taking SACCOs is essentially important to maintain their operations. The deposit taking SACCOs play a significant role in financial inclusion, credit access, savings and poverty alleviation (Omwanza & Jagongo, 2019). Thus, the performance of the deposit taking SACCOs is an issue of critical concern to industry practitioners, policymakers and regulators and researchers. The sustainability and growth of the deposit taking SACCOs would depend on the financial performance that continuously remains elusive to many deposit taking SACCOs. Some deposit taking SACCOs have been unable to maintain operational net income threatening their sustainability, growth and provision of credit access to members.

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Globally, deposit taking SACCOs fight to remain sustainably operational even when the regulatory environment is unfavourable. Interest in the regulation and supervision of microfinance institutions is driven primarily by the desire of sustainable and growing microfinance institutions that are not currently regulated to mobilise deposits from the general public. In the global arena, significant expansion of the microfinance sector has been witnessed. However, regulatory, institutional and financial obstacles remain major hindrances to the growth and diversification of the deposit taking SACCOs with a number of them ceasing operations (Hadizatou, 2021) with streamlining regulatory framework taking the centre position. It is argued that a proper regulatory framework among the SACCOs would ensure compliance with procedures and regulations that include the minimum capital and minimum liquidity ratios. In Slovakia and Czech Republic, the legal and regulatory framework to guide the operations of microfinance is insufficient in content and scope application (Ruesta & Benaglio, 2020). In Romania, after an initial positive 2005 Microfinance Company Law, the current regulatory policies have negatively impacted the Microfinance institutions (Pop & Buys, 2015). In China and Bangladesh, the countries have constantly reviewed their micro finance regulatory policies to support innovation and diversification among the micro finance institutions for growth and sustainability (Rahman & Luo, 2019).

Regionally, African deposit taking SACCOs have structural weaknesses ranging from governance, portfolio management, internal control, human resources and financial sustainability (Remer & Kattilakoski, 2021). In 2007, the deposit taking SACCOs in West Africa under the West African Monetary Union underwent a change in regulations and prudential ratios targeting capital requirement and liquidity. Though the law was deployed, it has not brought any benefit to the performance of deposit taking SACCOs both in return on assets and return on equity (Hadizatou, 2021). However, the minimum capital requirements somehow bolstered financial performance, since they led to an accumulation of funds for investment purposes. In Ghana, the licensing and operations of the deposit taking SACCOs are under the mandate of the Bank of Ghana. According to Ussif and Ertuğrul (2020), regulations and government policies have contributed immensely to growth in the microfinance sector via consumer protection, financial soundness and financial inclusion. In Uganda, the Microfinance Institutions Act of 2016 is aimed at strengthening prudential regulation and supervision (Ministry of Finance, Planning and Economic Development, Uganda, 2019). The Act also provides for the regulation and supervision of deposit taking microfinance institutions. However, Nkurunziza *et al.* (2019) found insignificant change in the performance of microfinance owing to regulatory policies in Uganda an indication of lack of consensus among scholars on the effect of regulatory policies on financial performance of deposit taking SACCOs.

The deposit taking SACCOs and non-deposit taking SACCOs in Kenya are under the regulation of Sacco Society Regulatory Authority (SASRA). The SACCO Societies Act No. 14 of 2008 revised in 2019 and the SACCO Societies (Deposit Taking Business) Regulations, 2010 stipulates the policies, regulations, rules and guidelines under which the deposit taking SACCOs in Kenya should operate. The Acts stipulates licensing of provisions, governance framework, supervisions and inspections by SASRA and protection of customer deposits. The deposit taking SACCOs have been under the regulation of SASRA since 2008. However, the SACCOs Societies Act, 2020 paved the regulations of non-deposit taking SACCOs by SASRA.

Despite the presence of numerous regulations, some of these regulations do not address issues regarding ownership, governance, and accountability. They have also contributed to a large extent to the poor performance and eventual demise of many deposit taking SACCOs because of a lack of effective regulatory oversight (Omino, 2005). This has had a bearing on a number of other constraints faced by the industry, namely: diversity in institutional form, inadequate governance and management capacity, limited outreach, unhealthy competition, limited access to funds, unfavourable image and lack of performance standard.

The performance of SACCOs in Kenya has been fluctuating. The financial performance in terms of return on assets of SACCOs in Kenya has been declining. In 2019, the ROA for SACCOs in Kenya was 10.93%, declining to 10.04% in 2020 and further decline to 9.46% in 2021 (SASRA, 2021). The decline is an issue of concern considering the significant importance of SACCOs to socioeconomic. According to the 2016 Sacco Annual Supervision Report, the DTSs loan portfolio risk increased to 5.23 per cent up from 5.12 in 2015, with the value of non-performing loan increasing from Sh13.21bn to Sh15.57bn. The loan portfolio risk of 5.23 per cent was higher than five per cent recommended maximum by the World council of Credit Unions and three per cent recommended by the local Sacco regulator (SASRA, 2016). According to CBK FSR, (2020), the growth in loan provision by SACCOs has not been stable characterised by rise and falls. In the period 2013-2015, the loan growth rate in the SACCO sector was 15.03%, falling to 12.5% in 2016-2018 and rising to 13.3% in 2019-2021, which has been attributed to financial shocks and dynamic business environment.

Kenya has over 174-deposit taking SACCOs (SASRA, 2021). Sources of funds for DTS include member deposit and borrowing from commercial banks. It is also important to note that the main business of DTS is lending and as such, loans form the biggest assets for DTS. These SACCOS take both non-withdrawable and withdrawable deposits (SASRA, 2011). Non-withdrawable and withdrawable are required to keep a minimum percentage of their member's savings deposits together with short-term liabilities as liquid assets (SACCOS Societies Act, 2010). Their performance is measured through financial and operational activities.

Deposit taking SACCOs in Kirinyaga County have been on the verge of collapse. The financial performance of deposit taking SACCOs in Kirinyaga County have been declining in the last few years. The performance has been recording a declining trend from 2019, which was at 15% to 2021, which was at 10.5% (SASRA, 2022). As the core business of deposit SACCOs is to mobilise member savings then give loans to these members. The deteriorating performance of deposit taking SACCOs in Kirinyaga County have been linked to failure by some of deposit taking SACCOs to adhere to SASRA regulatory compliance framework. In terms of

minimum capital requirements, SASRA requires SACCOs to maintain a core capital to total assets ratio of 10% (Republic of Kenya, 2019). Deposit taking SACCOs are also required to maintain 15% of its savings deposits and short term liabilities in liquid assets (GoK, 2008). However, this has not been established through an empirical literature review in the context of deposit taking SACCOS in Kirinyaga County.

Moreover, studies by Buluma *et al.* (2017), Chepkutwo *et al.* (2019), Miano and Gitonga, (2020), Mbuko *et al.* (2022), Kibue and Mang'ana (2022) did not narrow loan loss provisions which is one of the core SASRA regulations that are likely to affect performance of deposit taking SACCOs. The study thus sought to;

Determine the effect of loan-loss provisioning on financial performance of deposit taking SACCOS in Kirinyaga County, Kenya

A number of empirical studies have been reviewed by various scholars. Gitonga (2014) determined the effect of loan loss provisioning on profitability of deposit taking SACCO societies in Nairobi County. In order to establish the effect of loan loss provisioning on licensed DTS profitability, secondary data was obtained from SASRA for a period of four years from 2010 to 2013. This study adopts descriptive design. The findings of the study confirmed that there exists a negative relationship between loan loss provision and profitability of deposit taking SACCOS in Nairobi County. There are other SASRA regulations critical to the operational performance of deposit taking SACCOs like loan provisioning guidelines.

Mutinda (2016) determined the impact of prudential regulatory framework on financial performance of deposit taking SACCOs in Kenya. The study adopted a descriptive survey design. The population of the study was 181 deposit taking SACCOs in Kenya. The study found that the implication of loan provisioning requirement was highest in influencing financial performance of SACCOs in Kenya. Liquidity requirement was however found to have the least impact on financial performance on Deposit Taking SACCOs in Kenya. The proposed study narrows down to deposit taking SACCOs in Kirinyaga County. It adopted a panel approach contrasting the study by Mutinda (2016) that employed descriptive survey design presenting a methodological gap.

Magomere and Otinga (2019) determined the impact of loan loss provision on financial performance of micro- finance institutions in Kakamega County, Kenya. The study results found that loan loss provision significantly influenced financial performance of micro finance institutions in Kakamega County. However, the study did not indicate the nature of the effect whether it was positive or negative. Moreover, the study focused on microfinance institutions, contrasting the current study that focuses on deposit taking SACCOs in Kirinyaga County.

Kayembe *et al.* (2021) investigated the factors affecting the sustainability of microfinance institutions in Malawi. A cross-sectional survey was conducted from November to December 2020 among the MFIs employees in the central region of Malawi. The results of the ordinary least square regression indicated that reporting and loan management systems were positively significantly influencing the sustainability of MFI. The operations of microfinance institutions may slightly differ from that deposit taking SACCOs presenting a contextual gap. Moreover, the study focused at microfinance institutions in Malawi. Because of differences in regulatory frameworks targeting financial institutions, there is a need to conduct a study focusing on local SACCOs in Kenya.

Majority of studies have focused on the effect of loan loss provision on performance of banks (Pelealu & Worang, 2017; Ekaningtias & Shonhadji, 2017; Mustafa *et al.*, 2019; Zulfikar & Sri, 2019). However, the effect differs significantly. Ekaningtias and Shonhadji (2017), Mustafa *et al.* (2019) and Zulfikar and Sri (2019) indicated that loan loss provision has significant effect on bank performance while Pelealu and Worang, (2017) loan loss provision has not significant positive effect on bank profitability. However, few studies have focused on the effect of loan loss provision on the performance of deposit taking SACCOs. The proposed study seeks to determine the effect of loan loss provisions on performance of deposit taking SACCOs with particular focus to the ones operating in Kirinyaga County.

This paper is organized as follows: following the introduction part, a second part is a literature review with theoretical and empirical studies that shed a light on linkage between theory and practice. The third part introduces the background information on research and methodology. After analysis and findings of the study, authors provide discussions and implications. Finally, this paper concludes with key points, recommendations, future research directions and limitations.

Literature Review

This study reviews theoretical underpinning of the study and empirical study relating to area of study.

Theoretical review

This theory that guided the study was Portfolio Theory. The theory was developed by Markowitz (1952). According to the theory, a right combination of different assets maximises returns (Sirucek & Křen, 2015). The portfolio theory states that it is not enough just to look at the expected risk and return of one particular portfolio. By investing in more than one portfolio, an investor can obtain the benefits of diversification, a reduction in the volatility of the whole portfolio (Markowitz, 1959). The portfolio theory of investment, which attempts to maximise portfolio, expected return for a given amount of portfolio risk, or equivalently minimise risk for a given level of expected return, by carefully choosing the proportions of various assets. The theory assumes that investors must make a balance between risks and returns (Markowitz, 1959). The theory maximises return by cautiously selecting different investment

portfolios. Portfolio theory is widely used in practice in the financial industry (Markowitz, 2009) to classify portfolios based on investment returns.

The portfolio theory is a sophisticated investment decision approach that aids an investor to classify, estimate, and control both the kind and the amount of expected risks and returns associated with certain investment assets (Omisore, Yusuf & Christopher, 2011). Essential to the portfolio theory are its quantification of the relationship between risk and return and the assumption that investors must be compensated for assuming risk (Sirucek & Křen, 2015). By combining different assets whose returns are not perfectly positively correlated, portfolio theory seeks to reduce the total variance of the portfolio return.

The portfolio theory is applicable in this study. During credit classification, deposit taking SACCOs have to carefully select their products and services to ensure high returns and reduce credit default from members. Moreover, close scrutiny of members' credit score should be undertaken to enhance loan repayment when members borrow from the SACCOs.

Empirical Review and Hypothesis Development

Gitonga (2014) determined how profitability DTSs is affected by provisioning of loan loss. Secondary data from SASRA reports between the periods 2010 to 2013 was adopted. This investigation adopts descriptive design. The outcomes pointed out to the existence of a negative nexus between loan loss provision and profitability of DTSs. There are other SASRA regulations critical to the operational performance of deposit taking SACCOs like capital requirement and credit classification techniques. The proposed study introduces capital requirement and credit classification as some of important SASRA

Mutinda (2016) determined how the performance of DTSs in Kenya financially is influenced by prudential regulatory framework. This research adopted a descriptive survey design and the 181 DTSs in Kenya formed the target population. From the outcomes, the performance of the Kenyan DTSs financially was highly influenced by the requirement on loan provisioning. However, the requirement on liquidity had the least impact on DT SACCOs performance financially in Kenya. The proposed study narrows down to DTSs in Kirinyaga County. It adopted a panel approach contrasting the study by Mutinda (2016) that employed descriptive survey design presenting a methodological gap.

Magomere and Otinga (2019) determined the impact of loan loss provision on micro- finance institutions in Kakamega County, Kenya performance financially. The investigation results found that loan loss provision significantly influenced performance of micro finance institutions in Kakamega County financially. However, the study did not indicate the nature of the effect whether it was positive or negative. Moreover, the study focused on microfinance institutions, which is in contrast to the current study that focuses on DTSs in Kirinyaga County.

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Conceptual Framework

The conceptual framework depicts the diagrammatic representation of the variables. The independent variable is loan-loss provisioning. The financial performance of DTSs formed the dependent variable. It is postulated that loan-loss provisioning significantly affects the performance of DTSs in Kirinyaga County financially.

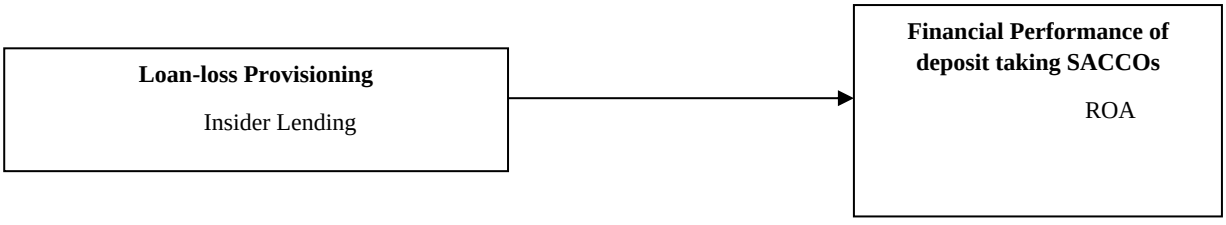

Figure 1: *Conceptual Framework;* Source: Author (2023)

Research and Methodology

The study utilised correlational research design. The design is appropriate in determining cause and effect between study variables. Correlational research design is suitable in determining the relationship between two or more variables in a study and helps answer the where, how, why and what questions in a study population. Correlational research design is appropriate for quantitative data. Thus, the study employed quantitative data because they are readily available for the target deposit taking SACCOs in SASRA reports and individual SACCO audited financial reports. Thus, the design was useful in determining the effect of loan loss provisioning on financial performance of Deposit Taking SACCOS in Kirinyaga County.

The target population was 10 deposit taking SACCOs in Kirinyaga County (SASAR, 2022) over the period 2017 to 2022. This period has been selected because it was in 2008 that SASRA prudential guidelines were adopted. A census of all the 10 deposits taking SACCOs in Kirinyaga County was conducted in the study. Census technique is appropriate when the study population is small (Cantwell, 2008). A census can provide detailed information on all or most elements in the population, thereby enabling totals for rare population groups or small geographic areas. Furthermore, the accuracy challenges brought by sampling are solved through census (Khan, 2018).

The study relied exclusively on secondary data. The secondary data was sourced from SASRA financial reports. Validity and reliability of the research instrument was ensured. To this end, validity and reliability tests was upheld by ensuring that data are extracted from verified SASRA reports. The data was organised and summarised using descriptive statistics. The descriptive statistics included means, standard deviation, skewness, Kurtosis, minimums and maximums. Descriptive statistics are used to generally describe the features of the population without making any inference. Further, inferential statistics were employed to analyse the data. The inferential statistics involved an unbalanced panel regression model to determine the effect of loan-loss provisioning on financial performance of deposit taking SACCOS in Kirinyaga County. The research utilised STATA software version 16 in analysing the panel data. The model to be estimated was;

$Y_{it} = \beta_0 + \beta_4 X_{4it} + \varepsilon$

Where: Y_{it} is financial performance of deposit taking SACCO i at time t

β_0 is y regression intercept.

β_4 is the regression slope coefficients

X_{4it} is loan-loss provisioning of deposit taking SACCO i at time t

i is deposit taking SACCO

t is time factor 2017 to 2022

ε =error term

Findings and Discussion

Secondary data was collected from the deposit taking SACCOs for the periods 2017 to 2022. The descriptive results were presented in the form of the maximum values, minimum values, standard deviations, means as well as the number of observations. The number of observations in the study as outlined was 60.

Table 1: *Descriptive Statistics*

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	60	0.1555	0.02879	0.105	0.25
Loan Loss Provision	60	1.763533	0.71638	1.000	3.755

From the outcomes, financial performance had a maximum value of 0.25 whereas its minimum value was 0.105. Financial performance was measured using Return on assets (Net Income/Total Assets). Thus, the values 0.25 and 0.105 indicated ROA values for the deposit taking SACCOs under review during the review period. Its mean and SD were 0.1555 and 0. 0.02879 in that order. The results are in line with the findings of Amin *et al.* (2018) which pointed out that regulated MFIs improved financial performance compared to the unregulated ones. Loan loss provision further had a mean of 1.763533and respective SD of 0.71638. The minimum value for firm size was 1 and the maximum value was 3.755. Loan loss provision was measured as a ratio of loan loss provisions on NPLs to total loans. The results concur with the findings of Magomere and Otinga (2019) which pointed out that loan loss provision significantly influenced financial performance of micro finance institutions in Kakamega County.

Trend Analysis

The trend analysis for the financial performance of the deposit taking SACCOs in Kirinyaga County is presented in figure 2.

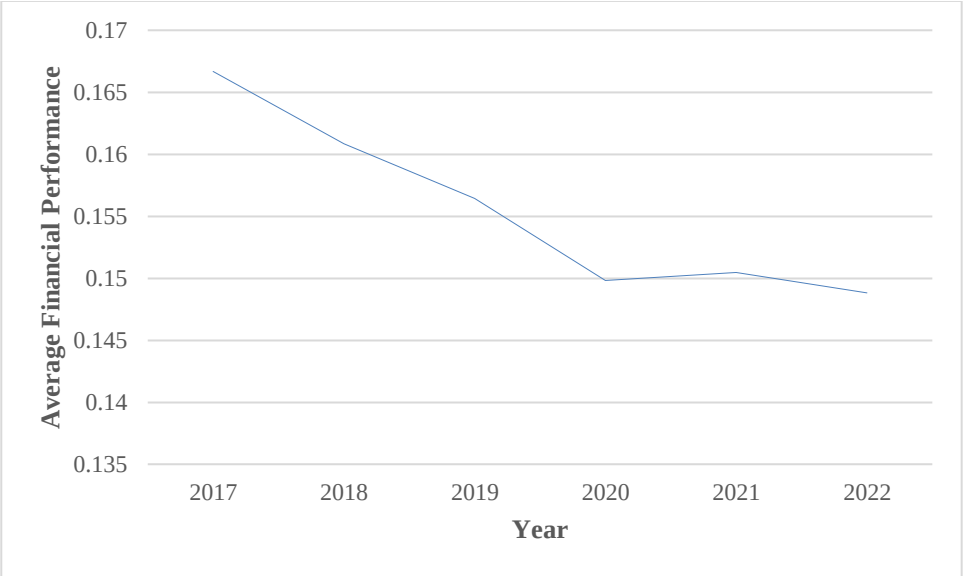

Figure 2: *Trend Line for Financial Performance*

As can be observed, the financial performance of the deposit taking SACCOs in Kirinyaga County was declining over the period under review. Between 2017 and 2020, there was a sharp decline in the financial performance of the deposit taking SACCOs in Kirinyaga County. However, between 2020 and 2022, the decline in financial performance was steady. These results are in line with a report by SASRA (2021) which indicated that the performance of SACCOs in Kenya has been fluctuating. The financial performance in terms of return on assets of SACCOs in Kenya has been declining. In 2019, the ROA for SACCOs in Kenya was 10.93%, declining to 10.04% in 2020 and further decline to 9.46% in 2021 (SASRA, 2021). The decline in the financial performance may be attributed to the effects of Covid-19 pandemic, mismanagement and the political activities in the country among others.

The trend analysis for the loan loss provision of the deposit taking SACCOs in Kirinyaga County is presented in figure 3.

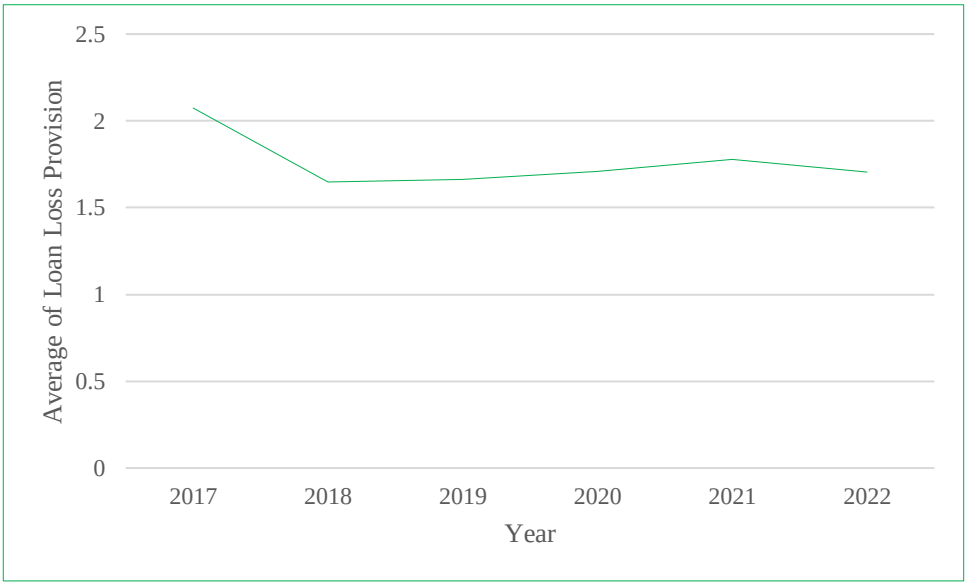

Figure 3: *Trend Line for Loan Loss Provision*

It is clear that the loan loss provision of the deposit taking SACCOs in Kirinyaga County varied over the period under study. There was a sharp decline in loan loss provision between the year 2017 and 2018. However, between 2018 and 2022, there was a steady decline in loan loss provision. The findings are in tandem with the report by CBK FSR, (2020), which pointed out that the growth in loan provision by SACCOs has not been stable characterised by rise and falls. In the period 2013-2015, the loan growth rate in the SACCO sector was 15.03%, falling to 12.5% in 2016-2018 and rising to 13.3% in 2019-2021, which has been attributed to financial shocks and dynamic business environment. The findings are in line with the propositions of the portfolio theory of investment, which

attempts to maximise portfolio expected return for a given amount of portfolio risk, or equivalently minimise risk for a given level of expected return, by carefully choosing the proportions of various assets. The theory assumes that investors must make a balance between risks and returns (Markowitz, 1959). The theory maximises return by cautiously selecting different investment portfolios.

Correlation Analysis

Correlation analysis was conducted to determine the strength and direction of relationship between the dependent variable (financial performance) and loan loss provision. The range of the correlation values lies from +1 to -1. A value of +1 means a perfect positive correlation, -1 perfect negative correlation and 0.000 no correlation. The range of values from 0.001 to 0.250 meant the presence of weak correlation, 0.251 to 0.500 moderately strong correlation, 0.501 to 0.750 strong correlation and 0.751 to 1.000 very strong correlation.

Table 2: Correlation Statistics

	Financial Performance	**Loan Loss Provision**
Financial Performance	1.000	
	0.068	
Loan Loss Provision	0.739	1.000
	0.000	

Finally, the correlation between loan loss provision and the financial performance of the deposit taking SACCOs in Kirinyaga County is positive, very strong and significant statistically (r= 0.7394, p= 0.0000<0.05). The findings of Magomere and Otinga (2019) gave a confirmation and indicated that loan loss provision significantly influenced financial performance of micro finance institutions in Kakamega County. However, Kayembe *et al.* (2021) found contrary results, which indicated that reporting, and loan management systems were positively significantly influencing the sustainability of MFI.

Regression Analysis

A regression analysis was conducted to determine the existence of linear relationships between the variables in the study. The dependent variable in the study was the financial performance of the deposit taking SACCOs in Kirinyaga County. The independent variable was loan loss provision.

Table 3: Regression Model

Financial Performance	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
Loan Loss Provision	0.02972	0.00355	8.38	0.000	0.02277	0.03668
_cons	0.1031	0.00678	15.2	0.000	0.08981	0.11639
Prob > chi2	0.0000					
R-sq:	0.5468					
Wald chi2(2)	70.19					

From the results tabulated in Table 3, the estimated regression model is statistically significant p=0.000<0.05 and gives explanations to a tune of 54.68% of the total variations in the financial performance of the deposit taking SACCOs in Kirinyaga County. This is evidenced by the R Square value in the estimated model of 0.8465. Thus, the loan loss provision is significant in explaining the changes in the financial performance of the deposit taking SACCOs in Kirinyaga County. Furthermore, the constant for the estimated model was positive 0.1031 implying that there are other factors other than loan loss provision that are significant in giving explanations on the financial performance of the deposit taking SACCOs in Kirinyaga County.

The coefficient of loan loss provision was positive, 0.02972 and statistically significant (0.000<0.05) implying that improving loan loss provision by a unit results in a significant decline in the financial performance of the deposit taking SACCOs in Kirinyaga County. Thus, loan loss provision is a significant determinant of financial performance. The results of this study are consistent with the findings of Gitonga (2014) who confirmed that there exists a negative relationship between loan loss provision and profitability of deposit taking SACCOS in Nairobi County. Mutinda (2016) further found that the implication of loan provisioning requirement was highest in influencing financial performance of SACCOs in Kenya. Liquidity requirement was however found to have the least impact on financial performance on Deposit Taking SACCOs in Kenya. The findings of Magomere and Otinga (2019) further gave a confirmation and indicated that loan loss provision significantly influenced financial performance of micro finance institutions in Kakamega County. However, Kayembe *et al.* (2021) found contrary results, which indicated that reporting, and loan management

systems were positively significantly influencing the sustainability of MFI. Pelealu and Worang, (2017) argued that loan loss provision has not significant positive effect on bank profitability.

Conclusion

The study finally concluded that loan loss provision is a significant determinant of the financial performance of deposit taking SACCOs in Kirinyaga County. Loan loss provision positively, strongly and significantly relates to financial performance of the deposit taking SACCOs in Kirinyaga County. Thus, loan loss provision is a significant determinant of financial performance.

The study recommended that the deposit taking SACCOs in Kirinyaga County ought to strive to be capital adequate as well as manage its loans efficiently. Being capital adequate ensures that the SACCOs are able to expand its operations and hence be sustainable, competitive and finally profitable. Managing its loans through periodic classification of the loans as well as having room for loan loss provision ensures the sustainability of the SACCOs.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.
Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.
Conflicts of Interest: The authors declare no conflict of interest

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