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Effect of Customers' Credit-risk Behavior on Financial Performance of Deposit-Taking SACCOs in Kenya

Monicah Asumani

Masters, Student, Department of Accounting and Finance, Maseno University, Kenya

Dr. David Oima

Senior Lecturer, Department of Accounting and Finance, Maseno University, Kenya

Dr. Simon Ondiwa

Lecturer, Department of Accounting and Finance, Maseno University, Kenya

Abstract:

Savings and Credit Cooperatives (SACCOs) are the major drivers of economic growth in developing countries and promise future growth and departure from poverty among the low economic regions. In Kenya, there was an increase in total assets from 556.7 billion in 2020 to 627.7 billion in 2021, which represented a 12.7% growth. The gross loans grew from 419.6 billion in 2019 to 474.8 billion in 2020 representing a 13.2% increase. However, SACCOs have continuously faced with large membership withdrawals, withholding of deposits and reduced share contributions. Previous studies concentrated on investigating the facilities offered by SACCOs, number of customers among the main factors in determining the SACCOs financial performance. Some other factors affecting the financial performance of SACCOs emanate from behavioral finance aspects which has received little focus on. This study sought to establish the effect of customers' credit-risk behavior on financial performance of deposit taking SACCOs in Kenya. A correlational research design was used to establish the association between credit risk behavior and the financial performance of the deposit-taking SACCOs. The study population was 175 deposit-taking SACCOs licensed to undertake deposit-taking business in Kenya. The study used census method of sampling and a total of 150 deposit-taking SACCOs were analyzed. Reliability was tested using the Levin-Lin-Chu unit root test and data was found to be stationary, while face validity was ensured using experts judgment and the tool was approved as valid. Both descriptive and inferential data analysis methods were used in the analysis, Linear and multiple regression analysis was also used. Results were presented using graphs and tables. Results revealed that customer credit risk behavior has a positive and significant effect ($B=0.687$, $p=0.000$) on financial performance of deposit-taking SACCOs in Kenya. This implies credit risk behavior positively and significantly affects financial performance. The study recommended that SACCOs encourage more transactions and confidence among managers but take more precautions in lending. It is expected that the findings may be substantial for the scholars and will aid the stockholders improve their behavioral financial management to boost returns on their shares.

Keywords: Credit- risk, financial performance, deposit taking, behavioral finance, irrational behavior

1. Introduction

Financial performance measures the monetary outcome or profit resulting from the optimal utilization of a firm's resources by the firm itself (Ichsan, Suparmin, Yusuf, Ismal & Sitompul, 2021). In the context of deposit-taking SACCOs, financial performance entails the assessment of yields as a result of policies and operations in monetary terms due to resource allocation to the best projects that can generate profits to maximize members' or shareholders' resources (Oyewumi, Ogunmeru & Oboh, 2018). Specifically, the main aim of SACCOS is to pool membership resources together through deposits and shares and provides financial resources to empower its members (Felicien & Irechukwu, 2021).

SACCOs have been among the main pillars of economic growth in developing countries and have continuously promised future growth, which will see a decline in the poverty index in countries with low economies. Previous studies show that in Kenya, SACCOs realized a growth of 12.7% in total assets between 2020 and 2021, from 556.7 billion to 627.7 billion, respectively. In contrast, gross loans grew from 419.6 billion in 2019 to 474.8 billion in 2020, indicating a 13.2% increase (Ahmed, Kilika & Gakenia, 2021). Factors associated with the growth of these SACCOs include the number of customers, savings, and credit facilities offered by the SACCOs to their members, which are the main practices driving SACCOs' objectives and performance (Ntoiti & Jagongo, 2021). Despite the potential of SACCOs, an optimal level to give the expected return for a better Gross Domestic Product (GDP) of the country has not been realized. Based on Reports from SACCO Societies Regulatory Authority (2016), SACCOs were projected to contribute 30% of the GDP in Kenya by the year 2020 due to growing membership and a shift from Commercial Banks. According to Ndegwa (2020), factors largely attributing to the failure to achieve an optimal level of financial performance include members' decisions, credit facilities, and financial decisions, among others that are largely the product of behavioral biases.

Behavioral finance is important because it explains the new approach to market behavior that was previously dominated by traditional finance models that assume investors and customers are rational when making financial decisions. According to Plich and Turska's (2014) study, two aspects justify irrational actions among people: psychological orientation and neurology. These logical actions are overcome by people's emotional capabilities, and hence people end up deciding actions as a result of personal character traits and perceptions of the outcomes. Balaz's (2006) earlier works considered two classifications as the source of irrational behavior; emotional and cognitive aspects. In support of Plich and Turska (2014), Balaz (2006) observed that some decisions are based upon information processing, which entails incorrect collection, analysis, and interpretation leading to deviation from rationality. One advantage of emotions is that they do not always indicate irrational decisions; however, they can cause a mistaken outcome. In the long run, these biases affect investors' decisions regarding loan repayment, amount of investments, and management decision-making, thus affecting the financial performance of SACCOs. This observation, however, has not been documented to date; most studies on behavioral finance revolve around individual financial performance or dealing with capital markets, leaving behind SACCOs that form part of the large population that cannot invest in capital markets.

A few studies have documented determinants of the financial performance of SACCOs across the globe. Samson (2021) investigated credit risk management and financial performance of commercial banks in Nigeria and found that non-performing loans and capital adequacy had a significant effect on the financial performance of banks. Mulugeta (2018) found that the ratio of non-performing loans to total loans, loan provision to total loans, and advance ratio to total loans provision had a negative and significant effect on the financial performance of commercial banks in Ethiopia. Belete and Mboup (2018), Anwar and Murwaningsar (2017), and Robert and Wamweya (2020) found that credit risk aspects such as non-performing loans and poor lending habits had a negative effect on the performance of commercial banks. On the contrary, Masinde (2017) found a positive relationship between credit risk and the performance of commercial banks.

2. Literature Review

Studies indicate that credit risk influences bank performance, particularly profitability, which differs based on the bank, as found by Ruziqa (2013), who investigated the effect of credit risk on banks in Indonesia between 2007 and 2011. The findings of the study revealed that credit risk had a significantly negative effect on return on assets and return on equity. This and other studies thus show a linkage between credit risk as customer behaviour and the financial performance of financial institutions. Therefore, there are many studies on the same, although on the commercial bank. There is yet more to be revealed in deposit-taking SACCOs, which have emerged as the alternative to most of the banking services.

Salah *et al.* (2020) carried out a study on the effect of credit risk, liquidity risk, and bank capital on bank profitability using emerging market evidence. The study relied on econometric panel data, which involved generalized mixed methods over a 9-year period between 2010 and 2018 using 13 commercial banks. The findings of the study revealed that credit risk had a negative effect on the profitability of commercial banks in Jordan. Even though the study revealed a negative effect, Jordan lies in one of the developed countries, whereas the present study seeks to establish the same in Kenya. Besides, the study was done on banks, which are highly developed in terms of assets, liquidity, and systems. SACCOs are undergoing a metamorphosis from traditional to advanced methods in terms of service delivery, the measure of performance, and general practices.

Muriithi, Waweru, and Muturi (2016) investigated the impact of credit risk on the financial performance of commercial banks in Kenya between 2005 and 2014. The study measured credit risk by capital to risk-weighted assets, period loss provision, loan and advance ratios, and financial performance by return on equity. A balance sheet constituents and financial ratios for 43 commercial banks were used while panel data techniques of fixed effects estimation and generalized method of moments were employed to purge time-invariant unobserved firm-specific effects. The findings of the study revealed that credit risk has a negative and significant relationship with bank profitability. It was also established that poor asset quality or high non-performing loans to the total asset is correlated to the deprived performance by banks in both the short term and long term. It can, however, be noted that the study was not done on deposit-taking SACCOs whose assets and liabilities are slightly lesser than those of the banks.

Masinde (2017) carried out a study to establish the effect of credit risk on the financial performance of commercial banks in Kenya with a specific focus on the impact of loan loss, the effect of capital adequacy, and the impact of non-performing loans on financial performance. The study was guided by adverse selection and modern portfolio theories while employing descriptive research design on 42 commercial banks using a five-year period. The study findings discovered that whereas all the predictors accounted for 61.6% variance in the performance of commercial banks using return on assets, loan loss and non-performing loans still had a positive effect on the performance of commercial banks. These findings, unlike other studies, indicate that credit risk in terms of loan loss and non-performing loans indicates a positive effect on financial performance. In addition, the studies are mainly on commercial banks, and the findings cannot be generalized on deposit-taking SACCOs.

Studies by Siddique, Khan, and Khan (2021) investigated the effect of credit risk management and bank-specific factors on the financial performance of South Asian commercial banks. The study focused on non-performing loans, capital adequacy, and cost efficiency ratios as credit risk measures and return on equity and return on assets as financial performance measures. Other variables that were bank-specific factors were the average lending rate and liquidity ratio. Secondary data was used and was sourced from 10 commercial banks in Pakistan and 9 commercial banks in India for 10 years between 2009 and 2018. The generalized method of moments was used to analyze the data. The findings revealed that non-performing loans were negatively and significantly related to return on assets and return on equity. At the same time, the capital adequacy ratio was positively and significantly related to the financial performance of commercial banks.

It can be noted from these studies that the countries that participated are developed; besides, the unit of analysis was commercial banks. There is a need for such a study on deposit-taking SACCOs.

Isanzu (2017) carried out a study on the impact of credit risk on the financial performance of commercial banks in India with a specific focus on non-performing loans, capital adequacy, impaired loan reserves, and impaired loan charges as independent variables. In contrast, the return on assets was measured as financial performance. Secondary data were collected for a period of 7 years between 2008 and 2014 using published statements of accounts from the five largest commercial banks in China. The findings of the study revealed that whereas non-performing loans and impaired loan reserves had a negative significant effect on return on assets, loan impairment charges and capital adequacy had a positive and significant effect on return on assets. It can be noted that the study was carried out on commercial banks and only used one measure of financial performance, which is the return on assets. However, under practical occurrences, deposit-taking SACCOs will have other measures of financial performance, such as return on equity and return on sales combined to approximate financial performance.

Murkomen, Njeje, and Cherono (2017) also established that debt and equity had a weak positive influence on financial performance but only used qualitative data using non-accounting measures. It is imperative to note that although equity and debt are good predictors of financial performance, they do not fully reflect behavioral characteristics that would directly impact financial performance to a greater extent. In addition, the measures used to establish such a relationship are non-financial or non-accounting, which may not have brought out a clear relationship among the variables.

From the reviewed studies, there are conflicting findings. Studies by Muriithi et al. (2016), Saleh *et al.* (2020), and Ruziqa (2013) established a significantly negative effect of credit risk on performance, whereas Masinde (2017) found a positive and significant effect of credit on performance. Siddique (2021) and Isanzu (2017) also found conflicting results on the relationship between elements of credit risk and performance, with both positive and negative significant results using panel regression analysis. On the contrary, Murkomen et al. (2017) revealed a weak positive influence of debt equity on performance. Whereas these studies demonstrate a relationship between credit risk and performance, the findings are conflicting. This makes it difficult to have a substantive conclusion on the relationship between the two constructs.

3. Methodology

3.1. Research Design

The study employed a correlational design. Kothari (2003) explains a correlational research design as the most suitable design for measuring the causal relationship between variables. Due to the quantitative nature of the variables of the study, the correlational research design was, therefore, the most appropriate since it established the causal correlation between the selected behavioral factors and the financial performance of the deposit-taking SACCOs in Kenya.

3.2. Population of the Study

The population of the study was registered and regulated deposit-taking SACCOs in Kenya. According to the Sacco Regulatory Authority Supervision Report (2022), there were 175-DT-SACCOs that were licensed to carry out deposit-taking business for the period ending in December 2021. The target population was all the 175 deposit-taking SACCOs. However, only 150 deposit-taking SACCOs were analyzed since they provided all the information of interest for the study. The SACCOs were chosen from the financial institutions because of the high number of its customers with different characteristics concerning financial management. Besides, deposit-taking SACCOs also support the economic and financial needs of the majority of entrepreneurs and SMEs in rural habitants in Kenya.

3.3. Reliability

Reliability refers to the internal consistency of any measurement procedure (Chandran, 2004). The use of secondary data extracted from financial audited and published annual reports as required by law is considered to be reliable since such accounts are prepared based on International Accounting Standards (IAS) 1 and International Financial Reporting Standards (IFRS) 9 adopted globally. Unit root test was used to create stationarity conditions of data. Narayan and Liu (2015) explain that stationarity conditions are piloted to avoid estimates changing over time in the variables of the study, which may report estimates that are not authentic. Levin-Lin-Chu unit root test was conducted to establish these conditions of the data series in the study. The findings revealed a unit test for Customer credit risk behavior; Adjusted $t^* = -13.572$, $p = 0.00$, Customer transaction behavior = -79.049 , Management Overconfidence = -9.587 , $p = 0.00$, and Average financial ratios Adjusted $t^* = -15.693$, $p = 0.00$ indicating all panels had unit root, Therefore, as recommended by Narayan and Liu (2015), we reject the null hypothesis and conclude that the time series is stationary.

3.3.1. Model Specification

The model adapted was used by Abbasi and Malik (2015), however, with adjustments. Panel data contained estimates characterized by time series and cross-sectional to study the influence of selected behavioral factors on the financial performance of 175 deposit-taking SACCOs in Kenya. The models of the study are specified as follows;

This Model was developed to study the relationship between customer credit-risk behavior and financial performance.

$$FP_{it} = \alpha + \beta_1 CCRB_{it} + \varepsilon_{it} \dots\dots\dots (1)$$

Where:

Y is the measure of financial performance and consists of Return on assets (ROA),

CCRB is Customers' Credit Risk Behaviour

β_i : refers to the model coefficients and $i=1, 2, 3$;

ε : Refers to the error term

4. Results

The objective of the study was to establish the effect of customer credit-risk behavior on the financial performance of deposit-taking SACCOs in Kenya. An average of the two financial measures was thus used in the analysis. Analysis was carried out with the ratio of NPL to GLA as the predictor of customer credit-risk behavior on financial performance. The findings on the effects of customer credit-risk behavior on performance using the regression model are presented in tables 1, 2, and 3.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.303 ^a	.092	.087	.08185714
a. Predictors: (Constant), credit-risk behavior				

Table 1: Model Summary

Table 1 indicates that the R-Square value is 0.092, which implies that customer credit risk behavior explains a 9.2% variation in the financial performance of deposit-taking Saccos in Kenya. The result implies that other factors not analyzed account for 90.8%. The result agrees with studies by Isam and Masinde (2017), who reported a variation of 38.4%, and Murkomen et al. (2017), that also reported a positive but weak variation but used debt equity ratio. The results imply a reduction in variation explained by customer credit risk behavior on the financial performance of deposit-taking Saccos in Kenya.

The analysis of variance (ANOVA), which explains the model fit for the study and the independent variable ability to predict the dependent variable, was performed. The result of ANOVA is presented in table 2.

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.703	1	.703	105.877	.000 ^b
Residual	6.955	1048	.007		
Total	7.658	1049			

Table 2: ANOVA Results

The probability is below 0.05, the overall model was statistically significant, and the construct of the independent variable (customer credit risk behavior) predicts the financial performance of deposit-taking SACCOs.

Model coefficients that provide for unstandardized and standardized coefficients are captured in table 3. The coefficients explain the direction of the regression model and establish the significance level of the study variables as follows:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.041	.006		6.456	.000
credit-risk behavior	.727	.174	.303	4.181	.000

Table 3: Coefficients Results

The findings from table 3, which presents the regression coefficient, show that the unstandardized beta coefficient value of customer credit risk behavior is 0.727 and the p-value is 0.000. The finding further explains that taking all other factors constants or at zero, a unit increase in customer credit risk behavior would cause 0.727 increases in the financial performance of deposit-taking SACCOs in Kenya. The finding agrees with studies by Masinde (2017) and Murkomen, Njeje, and Cheron (2017), who all reported significant effects of credit risk on financial performance. However, these studies did not seek how credit risk featured as a customer financial behavior that could influence financial institutions. On the contrary, these studies used multiple variables and were conducted on commercial banks using qualitative data; hence findings cannot be generalized on deposit-taking SACCOs. Therefore, it can be established that customer credit risk positively affects the financial performance of deposit-taking SACCOs in Kenya.

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