

## Effect of Financial Risk on Financial Performance of Deposit-Taking Savings and Credit Cooperatives in Nairobi County, Kenya

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### Abstract

This study examined the effect of financial risk on the financial performance of deposit-taking Savings and Credit Cooperative Societies (DT-SACCOs) in Nairobi County, Kenya. The study was motivated by the increasing financial challenges facing SACCOs, particularly rising non-performing loans, liquidity shortages, operational inefficiencies, and market uncertainties that threaten the profitability and sustainability of cooperative financial institutions. Financial risk management has become increasingly critical for financial institutions because exposure to unmanaged risks can significantly reduce profitability and institutional resilience. Specifically, the study investigated the effects of market, credit, liquidity, and operational risk on financial performance, measured by Return on Equity (ROE). A descriptive research design was adopted to examine the relationship between the selected risk factors and institutional performance. The target population comprised 43 licensed DT-SACCOs in Nairobi County as registered with the SACC Societies Regulatory Authority (SASRA), and a census approach was employed to include all the institutions in the study. Secondary data was collected from audited financial statements and SASRA annual reports covering the period 2020 to 2024. Descriptive and inferential statistics were used in the analysis, with multiple regression analysis applied to determine the influence of each financial risk factor on financial performance. The findings revealed that credit and operational risk had a negative and statistically significant effect on financial performance, whereas liquidity risk had a positive and statistically significant effect. Market risk showed a positive but statistically insignificant effect on financial performance. The study concluded that effective financial risk management is critical to the sustainability and profitability of DT-SACCOs and recommended stronger credit appraisal systems, improved internal controls, effective liquidity management, and enhanced regulatory compliance to improve institutional performance.

**Keywords:** *Financial Risk, Financial Performance, Deposit-Taking Savings and Credit Cooperatives*

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## 1. Introduction

Savings and Credit Cooperative Societies (SACCOs) are member-owned financial institutions established to mobilize savings and provide affordable credit facilities to members with the objective of improving their socio-economic welfare. In Kenya, SACCOs play an important role in promoting financial inclusion by extending financial services to individuals and groups that may not easily access conventional banking services. According to the SACCO Societies Regulatory Authority (SASRA, 2023), the SACCO sector in Kenya has experienced significant growth in membership, deposits, and asset base, making it one of the key pillars of the country's financial system. This growth has enhanced SACCOs' contribution to economic development by increasing access to savings and credit services. However, as SACCOs continue to grow, they are increasingly exposed to various financial risks that threaten their profitability and long-term sustainability.

Financial risk refers to the possibility of losses resulting from uncertainties in financial transactions or operations. It includes market risk, credit risk, liquidity risk, and operational risk, all of which can adversely affect the financial institution's performance if not properly managed (Hull, 2018). Market risk arises from fluctuations in interest rates, foreign exchange rates, or investment values. Credit risk arises when borrowers fail to repay loans as agreed, leading to higher loan defaults and reduced income. Liquidity risk refers to an institution's inability to meet short-term obligations as they come due, while operational risk arises from failures in internal processes, human error, fraud, or system breakdowns. For SACCOs, effective management of these risks is essential as weak risk management can erode profitability, undermine members' confidence, and threaten institutional stability (Saunders & Cornett, 2018).

Globally, financial institutions continue to face significant exposure to financial risks stemming from market volatility, economic uncertainty, and operational disruptions. Studies have shown that institutions with weak risk management systems are more vulnerable to declining profitability and financial instability (Brigham & Ehrhardt, 2017). In East Africa, SACCOs have similarly faced challenges related to liquidity shortages, loan defaults, and governance weaknesses, all of which undermine performance. In Kenya, DT-SACCOs operate in a dynamic environment characterized by rising competition, technological change, and increasing regulatory demands. Nairobi County, as Kenya's financial hub, hosts many DT-SACCOs that face substantial financial risks due to their scale of operations and member diversity. This makes it an appropriate context for examining how financial risk affects financial performance.

### 1.1 Problem Statement

Financial risk remains a major factor affecting the financial performance and sustainability of deposit-taking SACCOs in Kenya. Exposure to risks such as loan defaults, liquidity shortages, market fluctuations, and operational inefficiencies can reduce profitability and weaken institutional stability. According to SASRA (2023), the level of non-performing loans in Kenyan SACCOs has continued to rise, while profitability indicators such as Return on Assets (ROA) have declined. This raises concern because SACCOs are expected to maximize returns while protecting members' savings. Poor financial performance among SACCOs threatens the safety of members' funds and reduces confidence in the cooperative financial sector.

Although several studies have examined the relationship between financial risk and financial performance, many have focused on commercial banks rather than SACCOs, despite the differences in operational structures, ownership, and objectives between the two. Commercial banks operate on profit-maximization models, whereas SACCOs are cooperative institutions designed to serve members' financial needs. As a result, findings from banking studies may not fully explain the financial risk dynamics in SACCOs. This created a contextual gap that necessitated the current study to establish the effect of financial risk on the financial performance of deposit-taking SACCOs in Nairobi County.

## 1.2 Research Objectives

- i. To analyze the effect of market risk on the financial performance of DT- saccos in Nairobi County.
- ii. To determine the effect of credit risk on the financial performance of DT- saccos in Nairobi County
- iii. To determine the effect of liquidity risk on the financial performance of DT- saccos in Nairobi County
- iv. To determine the effect of operational risk on the financial performance of DT- saccos in Nairobi County

## 2. Literature Review

### 2.1 Theoretical Review

#### 2.1.1 Asymmetric Information Theory

The Asymmetric Information Theory explains how differences in information access between parties in financial markets lead to inefficiencies such as adverse selection and moral hazard. In lending situations, borrowers often possess more information about their financial position and repayment capacity than lenders do, creating uncertainty in credit decisions. This imbalance influences financing preferences, with firms typically favoring retained earnings, followed by debt, equity, and lastly, external equity, as information sensitivity increases.

The theory was developed by Akerlof (1970), Spence (1973), and Stiglitz (1976), who demonstrated how information gaps can distort market outcomes. In financial markets, lenders may struggle to accurately assess borrower risk, resulting in inefficient credit allocation. For SACCOs, this manifests in loan defaults and risky lending behavior, directly linking information asymmetry to credit risk and financial performance.

The theory is therefore applied in this study to explain how credit risk in SACCOs is influenced by adverse selection and moral hazard, affecting loan repayment behavior and overall financial sustainability.

#### 2.1.2 Shiftability Theory

Shiftability Theory, introduced by Moulton (1915), emphasizes liquidity management through the ability of financial institutions to convert or transfer assets into cash when needed. It argues that liquidity is determined not only by cash holdings but also by the ease with which assets can be traded in financial markets.

Herbart and Dodds (1949) expanded the theory by highlighting the importance of holding marketable securities that can be quickly liquidated. While this enhances liquidity stability, it may expose institutions to market dependency risks, especially during financial crises when asset markets become illiquid.

In this study, the theory is used to explain how SACCOs manage liquidity risk through liquid asset holdings, cash reserves, and investment in marketable securities, and how these decisions influence financial performance.

### **2.1.3 Financial Intermediation Theory**

Financial Intermediation Theory, developed by Gurley and Shaw in the 1960s, explains the role of financial institutions in channeling funds between savers and borrowers. Intermediaries such as SACCOs reduce transaction costs, mitigate information asymmetry, and improve the efficiency of credit allocation.

By screening borrowers, monitoring loans, and managing risk, intermediaries reduce adverse selection and moral hazard. This enhances financial stability and access to credit. However, critics argue that the theory underemphasizes the active role of institutions in risk management.

In this study, the theory is applied to explain how SACCOs enhance financial performance through efficient intermediation, risk management practices, and improved credit allocation systems.

### **2.1.4 Extreme Value Theory**

Extreme Value Theory (EVT) focuses on modeling rare but severe financial events such as market crashes, liquidity shocks, or high default rates. Unlike traditional models that focus on average outcomes, EVT examines tail risks that can significantly impact financial institutions.

EVT is widely used in risk management to estimate extreme losses and conduct stress testing using measures such as Value at Risk (VaR). It is particularly relevant to SACCOs, which may experience sudden withdrawals, spikes in defaults, or market shocks.

In this study, EVT provides a framework for understanding how extreme financial risks affect SACCO liquidity, credit stability, and overall financial performance.

## **2.2 Empirical Review**

### **2.2.1 Market Risk and Financial Performance**

Empirical studies on market risk present mixed and sometimes contradictory findings. In international banking literature, Adawiah et al. (2025), studying 40 listed Indonesian banks, found that market risk has a positive and significant effect on financial performance. The study argued that banks that effectively manage market fluctuations can exploit volatility to achieve higher returns. However, the limitation of this study lies in its focus on listed commercial banks, limiting its applicability to cooperative financial institutions such as SACCOs, which operate under different risk structures and ownership models.

Similarly, Bani Yousef et al. (2023), using panel data from 135 banks across 14 MENA countries, found a positive relationship between market risk exposure and financial performance, particularly for banks operating at median or higher efficiency levels. The study suggested that strategic exposure to market fluctuations may enhance profitability in

competitive environments. However, the data period (2015–2019) does not fully capture post-pandemic financial market dynamics, limiting its relevance to current SACCO operations.

In Africa, Mabe and Simo Kengne (2025), using a panel vector autoregressive (PVAR) model for 41 banks across 11 countries, found that market risk shocks have mixed short-term effects on performance. While financial innovation sometimes improves ROA and ROE, the overall effect of market risk remained statistically weak. The study's limitation is the difficulty in isolating pure market risk from fintech-related risks.

Regionally, Mutunga et al. (2025) found that overall risk management practices, including market risk control, positively influence SACCO performance in Kenya. However, the study did not isolate market risk as a separate variable, limiting precise inference. Similarly, Mbuguah (2023) found that risk management practices improve SACCO performance but did not differentiate among risk types, making it difficult to establish the specific role of market risk.

Shaikh and Mwikamba (2025), in Kenyan commercial banks, found that market risk has an ambiguous effect on performance compared to credit and operational risks, suggesting that its impact is context-sensitive. Mohamud et al. (2025) further confirmed that hedging against market risk improves performance in listed Kenyan banks, although their findings are limited to publicly traded institutions with stronger financial structures than SACCOs.

Overall, empirical evidence shows inconsistent results on market risk, with some studies reporting positive effects and others finding weak or indirect relationships. A key gap is the lack of SACCO-specific studies that isolate the effects of market risk on financial performance.

### **2.2.2 Credit Risk and Financial Performance**

Empirical literature widely agrees that credit risk strongly influences financial performance, typically negatively when poorly managed. Nguyen (2023), analyzing Vietnamese commercial banks using GMM estimation, found that increased non-performing loans significantly reduce ROA and ROE. This confirms that higher credit risk reduces profitability. However, the study is limited by its focus on a single-country banking environment.

In Ghana, Saeed (2026) also found that credit risk indicators such as non-performing loans negatively affect bank profitability, reinforcing the global trend. However, the study remains restricted to commercial banks and does not account for cooperative financial institutions.

In Zambia, AB Bank studies (2025) similarly revealed that increased credit risk reduces profitability, although the findings are limited by a single-institution focus.

In Kenya, Jeptoo et al. (2025) found a weak, statistically insignificant relationship between credit risk assessment and financial performance in commercial banks, suggesting that the effects of credit risk may depend on the effectiveness of internal controls and monitoring systems.

However, SACCO-specific studies provide more relevant insights. Etenyi et al. (2024), using a census of 175 DT-SACCOs in Kenya, found that credit risk management positively influences financial performance. Similarly, Shariff et al. (2022) established that credit risk supervision significantly improves SACCO performance in Mombasa County.

In contrast, Makokha and Njeru (2023) noted a positive association between credit risk and profitability in microfinance institutions but failed to establish clear causality.

Overall, empirical findings consistently show that unmanaged credit risk reduces financial performance, while effective credit risk management enhances profitability in SACCOs. However, gaps remain in longitudinal SACCO-specific studies using audited financial data.

### **2.2.3 Liquidity Risk and Financial Performance**

Empirical studies consistently show that liquidity risk negatively affects financial performance when poorly managed. Chen et al. (2023), studying 125 U.S. banks, found that low liquidity ratios significantly reduce ROA and ROE due to reduced financial flexibility.

Garcia Herrero and Qi (2021), using European bank data, found that liquidity shortages weaken profitability, while higher liquidity buffers improve financial resilience. Similarly, Alvi et al. (2022) in Bangladesh concluded that poor liquidity management reduces profitability in commercial banks.

In Africa, Oladipo and Adeyemi (2024) found that liquidity risk negatively affects financial performance in Nigerian microfinance banks, emphasizing the importance of liquidity buffers.

In East Africa, Musyoka and Wanjiru (2023) found that liquidity risk negatively affects SACCO performance in Uganda, while well-managed liquidity improves profitability.

In Kenya, Ouma and Ndirangu (2024) found that liquidity risk has a strong negative effect on ROA and ROE among Nairobi SACCOs. Similarly, Karanja et al. (2025) concluded that SACCOs with strong liquidity management systems are more financially stable and profitable.

Despite consistent findings, most studies are cross-sectional and fail to capture long-term liquidity behavior, creating a gap for longitudinal SACCO-based analysis.

### **2.2.4 Operational Risk and Financial Performance**

Operational risk is widely recognized as a significant determinant of financial performance. Kim and Lee (2022), in their study of U.S. banks, found that operational failures such as fraud and system breakdowns significantly reduce profitability.

Hamed et al. (2021) confirmed in Europe that operational risk, such as cybersecurity breaches, negatively affects ROA and ROE. Similarly, Chen et al. (2023) found that strong internal controls reduce the impact of operational risk in Chinese banks.

In Africa, Oke and Adegbite (2022) found that operational risk significantly reduces profitability in Nigerian financial institutions.

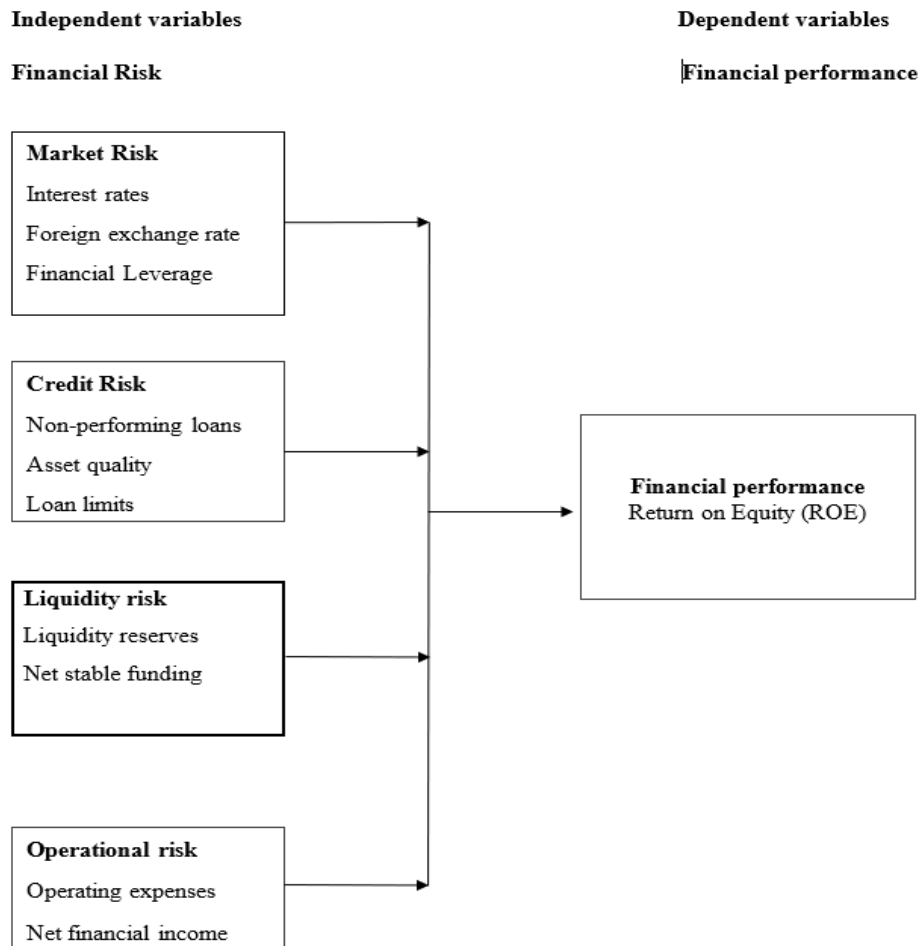
In East Africa, Mwaura and Karanja (2023) found that operational inefficiencies negatively affect SACCO performance in Uganda, and Otieno and Wanjiku (2024) reported similar findings in Kenyan SACCOs.

Mutua et al. (2025) further established that SACCOs with strong internal controls and risk monitoring systems perform better financially compared to those with weak systems.

However, most studies rely on self-reported data or small sample sizes, which may introduce bias and limit generalizability.

### 2.3 Conceptual Framework

The conceptual framework establishes the correlation between financial risk and the financial performance of the DT SACCOs in Nairobi County.



**Figure 1: Conceptual framework**

In this study, the independent variable is financial risk, while the dependent variable is financial performance.

Financial risk is multidimensional and is categorized into market risk, credit risk, liquidity risk, and operational risk. These dimensions are key determinants of how SACCOs manage their operations, meet financial obligations, and sustain profitability. Market risk arises from changes in interest rates, foreign exchange rates, and financial leverage. Credit risk relates to non-performing loans, asset quality, and loan limits. Liquidity risk concerns liquidity reserves and net stable funding, while operational risk is associated with operating expenses and net financial income. Collectively, these risks influence the stability and efficiency of SACCO operations.

The framework is grounded on financial intermediation theory, asymmetric information theory, shiftability theory, and extreme value theory. These theories explain that financial intermediaries such as SACCOs are exposed to various risks when mobilizing deposits, granting loans, and investing funds. Credit risk arises from information asymmetry between borrowers and lenders, leading to adverse selection and moral hazard. Liquidity risk arises when SACCOs are unable to meet withdrawal demands due to inadequate liquid assets. Market risk results from fluctuations in interest rates and investment returns, while operational risk stems from internal process failures, human error, or system inefficiencies. These risks collectively shape SACCO performance outcomes.

Financial performance is the dependent variable in this study and refers to the financial health, efficiency, and sustainability of SACCOs. It is measured using indicators such as return on equity (ROE), return on assets (ROA), loan recovery rates, asset growth, and liquidity ratios. In this framework, financial risks directly influence financial performance by affecting profitability, cost structures, and financial stability.

The conceptual framework, therefore, illustrates that financial performance is influenced by the various categories of financial risk, as shown in the provided diagram.

### **Intervening Variables**

The relationship between financial risk and financial performance is also influenced by intervening variables that shape the external operating environment of DT-SACCOs. These include political factors and economic conditions.

Political factors such as government policies, regulatory frameworks, taxation policies, and SACCO supervision laws influence how financial risks are managed. Changes in regulation may strengthen risk control mechanisms but may also increase compliance costs, thereby affecting profitability and operational efficiency.

Economic conditions such as interest rates, inflation rates, and overall macroeconomic stability also play a significant role. High interest rates increase borrowing costs and raise credit risk exposure, while inflation reduces members' purchasing power and affects loan repayment capacity. Economic instability may also affect savings mobilization and investment returns.

These intervening variables do not directly determine financial performance but modify the strength and direction of the relationship between financial risk and financial performance. They therefore provide an important contextual layer for understanding variations in SACCO performance.

### **3. Methodology**

The study adopted a descriptive research design, which was appropriate for examining the relationship between financial risk factors and financial performance without manipulating the study environment. The target population comprised all 43 licensed deposit-taking SACCOs in Nairobi County, and a census approach was employed to include all institutions. This enhanced the comprehensiveness and reliability of the findings by ensuring that all licensed DT-SACCOs in the county were represented. Secondary data were collected from audited financial statements and SASRA annual reports for the period 2020 to 2024. The use of regression analysis enabled the researcher to estimate the contribution of each risk factor to changes in profitability, thereby providing empirical evidence on the relationship between financial risk and financial performance (Gujarati & Porter, 2009).

#### 4. Results and Discussion

The analysis employed descriptive statistics, correlation analysis, and panel regression techniques to examine the relationship between financial risks and financial performance (ROE).

##### 4.1 Descriptive Statistics

**Table 4.1: Descriptive Statistics**

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Market Risk (%)	43	5.1	18.4	10.7	3.26
Credit Risk (NPLs %)	43	4.2	22.5	12.9	4.71
Liquidity Ratio (%)	43	15.3	48.6	32.4	6.82
Operational Risk Index	43	1.2	4.7	2.9	0.84
ROE (%)	43	3.1	20.4	11.6	4.01

The descriptive statistics show notable variation in financial risk exposure and performance among Nairobi DT-SACCOs.

Market Risk recorded a mean of 10.7%, indicating moderate exposure to macroeconomic fluctuations such as changes in interest rates and inflation. The variation (SD = 3.26) suggests differing investment strategies across SACCOs, with some adopting conservative portfolios while others take higher exposure positions.

Credit Risk shows a relatively high mean NPL ratio of 12.9%, which exceeds the recommended prudential threshold. This signals weaknesses in credit appraisal and recovery systems, reflected further in the wide dispersion (SD = 4.71). The variation implies inconsistent lending discipline across SACCOs.

Liquidity Risk has a mean liquidity ratio of 32.4%, indicating that most SACCOs maintain moderate liquid buffers. However, the spread between 15.3% and 48.6% indicates that some SACCOs operate near liquidity-stress levels, increasing vulnerability to withdrawal shocks.

The Operational Risk Index averages 2.9, suggesting moderate operational inefficiencies across SACCOs. The relatively low standard deviation indicates that operational risk is fairly uniform across the sector, likely due to similar governance structures.

Financial Performance (ROE) averages 11.6%, indicating moderate profitability despite significant financial risks. The variation indicates that SACCOs with stronger risk management practices achieve better returns.

Overall, the descriptive results indicate that credit risk is the most pronounced challenge, while liquidity and market risks vary significantly across institutions.

#### 4.2 Regression Analysis

The regression model explained a substantial proportion of the variation in financial performance ( $R^2 = 0.539$ ), highlighting the collective importance of financial risk factors in shaping SACCO outcomes.

**Table 2: Model Summary**

R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error
0.734	0.539	0.517	2.76

The model shows a correlation coefficient (R) of 0.734, indicating a strong relationship between financial risks and SACCO performance.

The R<sup>2</sup> value of 0.539 indicates that 53.9% of the variation in ROE is explained by market, credit, liquidity, and operational risk. This confirms that financial risks are significant determinants of SACCO performance.

The adjusted R<sup>2</sup> of 0.517 indicates that, even after accounting for predictors, the model retains strong explanatory power, confirming its reliability.

The remaining 46.1% of variation in ROE is attributed to other factors such as governance quality, macroeconomic conditions, and managerial efficiency.

**Table 3: ANOVA Results**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	582.31	4	145.58	19.12	0.000
Residual	497.89	38	13.10		
Total	1080.20	42			

The ANOVA results show an F-statistic of 19.12 with a p-value of 0.000, indicating that the overall regression model is statistically significant.

This implies that financial risks collectively have a significant effect on the financial performance of DT-SACCOs in Nairobi County. The p-value below 0.05 indicates that the model is a strong fit for explaining variation in ROE.

This supports the conclusion that risk variables should not be examined independently but rather as a system that influences performance outcomes.

**Table 4: Coefficient Results**

Variable	B	Std. Error	t	Sig.
Constant	4.312	1.221	3.53	0.001
Market Risk	0.118	0.087	1.36	0.182
Credit Risk	-0.327	0.091	-3.59	0.001
Liquidity Risk	0.194	0.073	2.66	0.012
Operational Risk	-0.215	0.084	-2.56	0.015

The regression equation is:

$$\text{ROE} = 4.312 + 0.118(\text{MR}) - 0.327(\text{CR}) + 0.194(\text{LR}) - 0.215(\text{OR})$$

**Market Risk ( $\beta = 0.118$ ,  $p = 0.182$ )**

Market risk has a positive but statistically insignificant effect on ROE. This implies that fluctuations in interest rates or investment markets do not significantly influence SACCO profitability in Nairobi. This may be due to conservative investment strategies that limit exposure to volatile financial markets.

**Credit Risk ( $\beta = -0.327$ ,  $p = 0.001$ )**

Credit risk has a strong negative and statistically significant effect on ROE. A rise in non-performing loans reduces profitability, confirming that poor credit management undermines financial sustainability. This is the most influential negative determinant in the model.

**Liquidity Risk ( $\beta = 0.194$ ,  $p = 0.012$ )**

Liquidity risk shows a positive and significant relationship with ROE. This suggests that SACCOs maintaining adequate liquidity buffers perform better financially, as they can meet obligations and support lending activities without disruption.

**Operational Risk ( $\beta = -0.215$ ,  $p = 0.015$ )**

Operational risk has a significant negative effect on financial performance. Inefficiencies, weak controls, and governance issues reduce profitability and increase costs, thereby lowering ROE.

**4.3 Summary of Key Findings**

Credit risk is the strongest negative determinant of financial performance. Operational risk significantly reduces profitability. Liquidity management enhances financial performance when properly maintained. Market risk has a limited influence in the SACCO context. The regression results confirm that financial risk management is central to SACCO performance. While credit and operational risks erode profitability, liquidity management strengthens financial stability. Market risk plays a minimal role compared to internal institutional risks. These findings reinforce the importance of integrated risk management systems that address credit quality, operational efficiency, and liquidity adequacy simultaneously to enhance SACCO sustainability.

#### 4.4 Discussion

The study's findings provide empirical evidence that effective financial risk management is critical to the profitability of deposit-taking SACCOs. The negative and significant relationship between credit risk and financial performance indicates that poor credit management remains one of the major threats to SACCO's profitability. This finding supports the view that loan defaults reduce interest income and increase the cost of provisioning for doubtful debts, thereby weakening institutional earnings. The result is consistent with the findings of Saunders and Cornett (2018), who established that poor credit risk management leads to reduced profitability due to deterioration in loan portfolio quality. In SACCOs, where lending forms the major source of revenue, ineffective credit appraisal and weak loan monitoring systems expose institutions to high default rates. This implies that SACCOs must strengthen their lending policies and credit management systems to safeguard profitability.

The positive and significant relationship between liquidity risk and financial performance indicates that institutions with adequate liquidity reserves are more likely to remain profitable. This finding is in line with Shiftability Theory, which emphasizes the need for financial institutions to maintain sufficient liquid assets to meet obligations as they arise. When SACCOs maintain adequate liquidity, they can meet members' withdrawal demands, disburse loans efficiently, and sustain smooth operations, all of which enhance profitability. This finding agrees with Chen and Phuong (2013), who found that institutions with sound liquidity management frameworks tend to achieve better financial performance due to reduced financial distress and improved operational efficiency. The result highlights the importance of balancing liquidity and lending, as effective liquidity management strengthens member confidence and institutional stability.

The study also found that operational risk had a significant negative effect on financial performance, indicating that internal inefficiencies and system failures reduce profitability. This finding supports the argument that poor internal controls, fraud, and technological failures increase operational costs and lead to financial losses. Saunders and Cornett (2018) similarly observed that operational risk negatively affects profitability through increased administrative expenses, fraud-related losses, and reduced service efficiency. In the context of DT-SACCOs, weak governance structures and inadequate risk control mechanisms may increase vulnerability to operational losses, thereby reducing financial performance. This finding underscores the importance of investing in reliable systems, strong governance, and effective internal controls to minimize operational inefficiencies.

The positive but insignificant relationship between market risk and financial performance suggests that changes in market conditions did not significantly influence the profitability of DT-SACCOs during the study period. This may be because SACCOs have relatively low exposure to external market fluctuations compared to commercial banks, as their operations are largely concentrated on member deposits and loans. Although changes in interest rates and inflation may affect borrowing behavior and operating costs, these factors did not emerge as significant determinants of profitability in this study. This finding is partially consistent with Athanasoglou et al. (2008), who found that macroeconomic conditions affect financial performance, but the degree of impact varies with the institution's structure and operations. The insignificant effect of market risk in this study suggests that internal management practices have a stronger influence on SACCO profitability than external market factors.

Taken together, the findings suggest that the financial performance of DT-SACCOs in Nairobi County is largely influenced by internal risk management practices, particularly credit and liquidity management, as well as operational efficiency. This implies that strengthening institutional risk management frameworks can significantly improve profitability and financial sustainability.

## 5. Conclusion

The study concluded that financial risk management is a fundamental determinant of the financial performance of deposit-taking SACCOs in Nairobi County. The findings established that credit risk and operational risks negatively and significantly affect profitability, whereas liquidity risk positively and significantly enhances financial performance. Market risk, although positively related to financial performance, had no significant effect on profitability during the study period. These findings indicate that SACCOs' ability to manage internal risks directly affects their financial outcomes.

The negative effect of credit risk implies that high levels of non-performing loans reduce profitability by lowering interest income and increasing credit-related losses. Similarly, the negative effect of operational risk demonstrates that weak internal systems, governance failures, and inefficiencies reduce institutional returns. On the other hand, the positive influence of liquidity risk management suggests that maintaining adequate liquid reserves enhances operational continuity and strengthens profitability. The study concludes that effective management of financial risks is essential to the profitability, sustainability, and resilience of DT-SACCOs. Institutions that adopt prudent credit policies, maintain sound liquidity positions, and implement effective operational controls are more likely to achieve stable financial performance and protect members' savings.

## 6. Recommendations

Based on the findings, the study recommends that deposit-taking SACCOs should strengthen their credit risk management practices by improving borrower appraisal procedures, enhancing loan monitoring systems, and implementing effective loan recovery mechanisms. This will help reduce non-performing loans and improve the quality of loan portfolios, thereby enhancing profitability. SACCOs should ensure that credit decisions are based on an accurate assessment of borrowers' repayment capacity in order to minimize the risk of default.

The study also recommends that SACCOs should maintain adequate liquidity reserves to ensure that they can meet members' withdrawal demands and operational expenses without interruption. Proper liquidity planning and forecasting should be adopted to balance between liquidity needs and lending opportunities. Maintaining optimal liquidity levels will improve financial stability while allowing the institution to generate sustainable returns.

To address operational risk, SACCOs should strengthen internal controls and governance systems by adopting effective oversight mechanisms, investing in secure technological systems, and enhancing staff competence through regular training. Strong governance and efficient systems will reduce fraud, minimize operational losses, and improve service delivery, leading to better financial performance.

The study further recommends that SACCOs should enhance regulatory compliance by adhering to SASRA requirements and adopting comprehensive risk management frameworks. Regulatory compliance promotes transparency, accountability, and prudent financial

management practices that improve institutional stability. By implementing these measures, DT-SACCOs will improve profitability, strengthen member confidence, and safeguard the long-term sustainability of the cooperative financial sector.

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