# Prudential Regulations Influence on Financial Performance of Deposit-Taking SACCOs in Kenya: A Panel Data Analysis.

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**ABSTRACT**
This study explored the influence of prudential regulations on the financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Kenya, with a focus on liquidity, capital, credit, and investment regulations. Employing a fixed-effects regression model, the study utilized panel data collected from 175 DT-SACCOs registered with the SACCO Societies Regulatory Authority (SASRA) over the period 2015 to 2022. Key findings reveal that liquidity, capital, and investment regulations positively and significantly influence financial performance, underscoring their role in enhancing institutional resilience and operational stability. Conversely, credit regulation was found to have a negative effect, highlighting challenges in balancing stringent credit policies with lending efficiency and non-performing loans management. The results provide evidence for the critical importance of maintaining sufficient liquidity, adhering to capital adequacy standards, and adopting prudent investment strategies to drive financial stability and profitability. However, the negative impact of credit regulations suggests a need for SACCOs to enhance credit risk management practices and borrower profiling mechanisms. These findings emphasize the necessity for a balanced regulatory framework that considers SACCO-specific operational capacities and the broader financial inclusion objectives. This study may contribute to the existing literature by providing empirical insights into the relationship between prudential regulations and financial performance in the SACCO sector. Policymakers and SACCO managers may leverage these findings to refine regulatory policies and promote sustainable financial growth of these financial institutions. Future research could explore the moderating role of governance structures and technological innovations in enhancing SACCOs' compliance and performance.

## Introduction

Savings and Credit Cooperative Societies (SACCOs) play a pivotal role in the financial ecosystem of Kenya by promoting financial inclusion, mobilizing savings, and offering affordable credit to individuals and small businesses (Kimathi, 2014). As financial intermediaries, SACCOs

bridge the gap between underserved communities and financial services, contributing significantly to Kenya's socio-economic development agenda, including Vision 2030 (Mwangi, 2016). However, the financial sector remains inherently fragile and susceptible to systemic risks, fraud, and mismanagement. To address these challenges, the Kenyan government enacted the SACCO Societies Act of 2008 and the SACCO Societies Regulations of 2010 under the oversight of the SACCO Societies Regulatory Authority (SASRA) (Sacco Societies Act, 2008) (Mwangi, 2016). These regulations aim at providing a consolidated supervision framework to eliminate regulatory gaps, enhance financial transparency, and protect depositors' interests (Mudibo, 2014).

Prudential regulations focus on key financial management aspects, including liquidity requirements, capital adequacy, credit risk management, and investment guidelines (Clement, 2012). Liquidity regulations are essential to ensure that SACCOs can meet their short-term obligations and avoid liquidity crises that could jeopardize their operations (Odhiambo, 2013). Capital adequacy regulations, on the other hand, aim to ensure that SACCOs maintain sufficient capital buffers to absorb unexpected financial shocks (Githire et al., 2015). Similarly, credit regulations are designed to minimize the risk of default and ensure prudent lending practices (Sharma, 2011). Investment regulations provide SACCOs with a structured approach to managing their investments, encouraging diversification, and mitigating unnecessary financial risks (Rotich et al., 2015).

Despite the existence of these regulations, the financial performance of deposit-taking SACCOs (DT-SACCOs) in Kenya remains mixed, with some institutions thriving while others struggle with compliance challenges and operational inefficiencies (Mwangi, 2016). For instance, some SACCOs face persistent liquidity mismatch, while others fail to maintain the minimum capital adequacy ratios required by the law. In extreme cases, non-compliance with prudential regulations has led some DTs being put under watch and others eventually deregistered by SASRA (SASRA Report, 2020). These challenges point to a potential gap between regulatory frameworks and their practical implementation in enhancing financial resilience, stability and financial performance of DTs. Therefore, the study investigated the influence of prudential regulations on financial performance.

## Statement of the Problem

Prudential regulations are established to provide a consolidated supervision framework for financial institutions, including Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs), to eliminate regulatory gaps and safeguard depositors' funds (Mudibo, 2014). Despite the enactment of the SACCO Societies Act No. 14 of 2008 and the SACCO Regulation of 2010, many DT-SACCOs in Kenya continue to face significant challenges in fully implementing these regulations (Kioko, 2010). Reports from the SACCO Societies Regulatory Authority (SASRA) highlighted persistent issues such as liquidity mismatches, inadequate capital buffers, poor credit risk management practices, and inefficient investment strategies (SASRA Report, 2020). These shortcomings not only compromise the financial stability and sustainability of SACCOs but also erode public confidence in these institutions as secure financial intermediaries (Kobia, 2012). Moreover, audit and supervisory committee reports have consistently flagged cases of poor

governance, fiscal indiscipline, and embezzlement of SACCO funds, signalling deeper structural and operational deficiencies within the sector (Ondieki, 2011).

While existing studies have explored the effect of prudential regulations on financial performance, they present mixed findings and often fail to account for the dynamic interplay between regulatory compliance and organizational characteristics, such as SACCO size (Gatu, Njehia & Kimutai, 2023; Mwaniki, 2018). Furthermore, previous research here primarily relied on Ordinary Least Squares (OLS) regression analysis, which may not fully capture the temporal dynamics and cross-sectional variations inherent in panel data (Okeyo, Odoyo & Omboi, 2023). Consequently, there remains a knowledge gap regarding how liquidity, capital, credit, and investment regulations collectively influence the financial performance of DT-SACCOs in Kenya over time. This study sort to bridge this gap by employing panel data analysis to provide empirical evidence on the relationship between prudential regulations and financial performance.

## Literature Review

This study is anchored on three key theories: the Liquidity Preference Theory by John Maynard Keynes (1936), the Buffer Theory of Capital Adequacy by Calem and Rob (1996), and the 5Cs Model of Client Appraisal by Myers and Forgy (2005). These theories provide a foundation for understanding the relationship between prudential regulations and the financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Kenya.

The Liquidity Preference Theory explains the demand for liquidity and its impact on financial stability and performance. According to Keynes (1936), money is the most liquid asset, and financial institutions prefer to hold liquid assets to meet their short-term obligations, address unforeseen expenses, and capitalize on investment opportunities. In the context of DT-SACCOs, liquidity regulations ensure that SACCOs maintain adequate cash reserves to meet depositor demands and avoid liquidity crises (Kimathi, 2014). Compliance with liquidity regulations, such as maintaining a minimum cash reserve ratio, directly influences financial performance by preventing financial distress caused by liquidity shortages. Therefore, this theory underpins the study focus on the relationship between liquidity regulations and SACCO performance.

The Buffer Theory of Capital Adequacy emphasizes the need for financial institutions to maintain sufficient capital buffers to absorb financial shocks and avoid regulatory penalties for non-compliance (Calem & Rob, 1996). This theory posits that institutions operating close to the regulatory minimum capital requirement are incentivized to reduce risk and build additional capital buffers to protect against financial losses (Githire et al., 2015). For DT-SACCOs, capital adequacy regulations require institutions to maintain a minimum core capital ratio and sufficient institutional reserves to ensure operational resilience (Sacco Societies Act, 2008). By adhering to these capital requirements, SACCOs can enhance their financial stability, increase investor confidence, and improve financial performance. This theory is particularly relevant in explaining the relationship between capital regulations and the financial outcomes of SACCOs.

The 5Cs Model of Client Appraisal provides a framework for assessing the creditworthiness of

borrowers and managing credit risk. Developed by Myers and Forgy (2005), the model evaluates borrowers based on five key attributes: Character, Capacity, Collateral, Capital, and Conditions. In the context of DT-SACCOs, credit regulations require institutions to establish comprehensive credit policies, assess borrower risk profiles, and implement measures to minimize loan defaults (Sharma, 2011). Effective credit appraisal processes reduce the risk of non-performing loans, improve loan recovery rates, and enhance overall financial performance. This theory supports the objective of investigating the relationship between credit regulations and the financial outcomes of DT-SACCOs.

## Similar Studies

Empirical studies on the relationship between prudential regulations and financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) have yielded diverse findings across different regulatory dimensions, including liquidity regulations, capital regulations, credit regulations, and investment regulations. Liquidity regulations are essential in ensuring that financial institutions, including DT-SACCOs, maintain sufficient liquid assets to meet short-term obligations and avoid liquidity crises (Odhiambo, 2013). A study conducted by Githaka, Kimani, and Gachora (2017) in Kirinyaga County found that SACCOs that actively monitored liquidity and maintained adequate cash reserves experienced improved financial stability and operational efficiency. However, their study was limited to one county, raising concerns about the generalizability of the findings to the national level. Similarly, Kabamba (2012) evaluated liquidity management strategies in Ugandan microfinance institutions and found a positive relationship between sound liquidity management practices and institutional growth. The study emphasized the importance of maintaining optimal liquidity levels to prevent financial distress and instil confidence among depositors. Despite these positive findings, Muriuki (2013) observed that most SACCOs in Nakuru County lacked structured liquidity management policies, which resulted in inconsistent financial performance. These findings suggest that while liquidity regulations are critical for financial stability, their effectiveness is contingent on proper implementation and continuous monitoring mechanisms.

Capital adequacy regulations are designed to ensure that financial institutions maintain sufficient capital buffers to absorb financial shocks and remain solvent during crises (Githire et al., 2015). In Kenya, SACCOs are required to adhere to statutory capital adequacy ratios, including maintaining core capital of at least 10% of total assets and 8% of total deposits (Muriuki & Ragui, 2013). A study by Barus et al. (2016) found that capital adequacy had a significant positive impact on the profitability of SACCOs in Kenya. The study highlighted that well-capitalized SACCOs were more resilient during financial crises and had better access to investment opportunities. Similarly, Koima et al. (2017) observed that SACCOs with higher capital buffers experienced improved financial performance and operational efficiency. However, the study also noted that excessive capital requirements could limit SACCOs' ability to invest in profitable ventures, thereby stifling growth. On the other hand, Drumond (2009), in a study on capital regulations in Pakistan, concluded that capital adequacy requirements often intensified financial cyclicality, especially during economic downturns, posing a challenge to financial stability. These contrasting findings underscore the need for a balanced approach to capital regulations that ensures both financial

stability and operational flexibility.

Credit regulations aim to safeguard SACCOs' loan portfolios by ensuring prudent lending practices and minimizing the risk of loan defaults (Sharma, 2011). A study by Kariuki (2017) on the effect of credit risk management on financial performance of DT-SACCOs in Kenya revealed a positive and significant relationship between credit analysis, risk mitigation measures, and financial outcomes. The study emphasized the importance of comprehensive credit policies and borrower appraisal processes in enhancing loan recovery rates. Similarly, Okeyo et al. (2023) examined the impact of credit risk management on microfinance institutions in Kenya and found that credit risk ratios significantly affected operational efficiency and overall profitability. However, the study noted that inadequate credit monitoring systems often led to high levels of non-performing loans. In contrast, Nicolette (2013), in a study on deposit-taking microfinance institutions in Kenya, found that credit policies had a mixed impact on financial performance, with some institutions experiencing improved returns while others struggled with loan defaults. These findings highlight the critical role of effective credit regulations in safeguarding SACCOs' financial health, but they also reveal challenges in policy implementation and monitoring.

Investment regulations provide guidelines on asset allocation, risk diversification, and return optimization in financial institutions (Rotich et al., 2015). A study by Muli (2017) in Kitui County established that investment decisions related to research and development, renewal, and replacement significantly contributed to SACCOs' financial performance. The study emphasized the importance of aligning investment strategies with institutional objectives to maximize returns. Similarly, Rotich (2016) in a study conducted in Baringo County found that SACCOs' investment in real estate and member loans had a significant positive impact on financial performance. However, excessive reliance on high-risk investment ventures was identified as a potential threat to financial stability. Conversely, Mutemi and Makori (2019) observed that poor investment diversification strategies and inadequate knowledge among SACCO managers often led to suboptimal financial returns. These findings suggest that while investment regulations are critical for enhancing financial performance, their effectiveness relies on strategic implementation and capacity-building among SACCO managers.

## Methods

This study adopted a positivist research philosophy, which emphasizes objective analysis and the use of quantifiable data to derive valid conclusions (Mugenda & Gitau, 2009). The research followed a descriptive research design, enabling the study to systematically describe the relationship between prudential regulations and financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Kenya. The descriptive design was chosen as it facilitates the collection, analysis, and presentation of empirical data to explain the effect of liquidity, capital, credit, and investment regulations on financial performance (Gatu et al., 2023). This approach is particularly relevant when examining cause-and-effect relationships in financial studies, ensuring clarity and replicability of findings (Pyrczak & Bruce, 2011).

The target population for the study consisted of all 175 Deposit-Taking SACCOs (DT-SACCOs)

registered by the SACCO Societies Regulatory Authority (SASRA) in Kenya as of December 2017 (SASRA Report, 2020). Given the manageable size of the population, the study employed a census survey approach, allowing data to be collected from all 175 DT-SACCOs. Census sampling was chosen to ensure comprehensive coverage and to eliminate potential sampling bias (Kothari, 2011). This approach enhances the reliability and generalizability of the findings across the entire population of DT-SACCOs in Kenya (Waithaka, 2012).

The study utilized secondary data collection sheets to gather panel data from audited financial reports of DT-SACCOs spanning five years (2015–2019). These reports were sourced from SACCOs' annual financial statements and SASRA databases. Key financial indicators related to liquidity, capital adequacy, credit risk, and investment performance were extracted for analysis (SASRA Report, 2020). The use of secondary data ensured data accuracy, consistency, and reliability, as the reports were independently audited and verified (Nduta, 2013). Additionally, pre-estimation diagnostic tests such as normality tests, multicollinearity tests, and unit root tests were performed to validate data suitability for analysis (Mwaniki, 2018).

The study employed panel data regression analysis, which combines cross-sectional and time-series data, allowing for more robust analysis and improved estimation accuracy (Gatu, Njehia & Kimutai, 2023). Panel data is particularly useful for controlling unobserved heterogeneity and capturing dynamic relationships over time (Wooldridge, 2010). Pre- and post-estimation diagnostic tests, including the Hausman Test, Variance Inflation Factor (VIF), and Wald Test, were conducted to ensure model validity and statistical significance (Okeyo, Odoyo & Omboi, 2023). The following Fixed Effects Regression Model was specified to examine the relationship between prudential regulations and financial performance.

$$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + +\beta_3 X3_{it} + +\beta_4 X4_{it} + \mu_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots \text{(Eq.1)}$$

Where: *Y Financial performance of SACCO i at time t (measured by Return on Assets and Return on Equity),* $X1$ *is liquidity regulation (measured by loan to deposit ratio),* $X2$ *is capital regulation (measured by core capital to total assets),* $X3$ *is credit regulation (measured by log of non-performing loans),* $X4$ *is investment regulation (measured by return on invesment),* $\mu$ *is the unobserved individual-specific effects,* $\varepsilon$ *is the error term, i and t are parameters of entity and time respectively.*

## Results

As shown in Table 1, for liquidity regulation, the cash ratio had a mean of 1.95 with a standard deviation of 1.50, while the loan-to-deposit ratio recorded a mean of 2.26 with a standard deviation of 0.68. Regarding capital regulation, the equity multiplier had a mean of 3.49 (SD = 1.82), the capital adequacy ratio a mean of 0.092 (SD = 0.17), and the equity ratio a mean of 0.72 (SD = 0.18). In terms of credit regulation, the debt service coverage ratio had a mean of 4.46 (SD = 0.42), while non-performing loans averaged 21.48 with a standard deviation of 10.12. For investment regulation, the mean amount invested in government securities was 5.13 (SD = 0.36), and the return on investments averaged 0.80 (SD = 0.46). The SACCO size, measured by total assets, had

a mean of KES 146.10 billion and a standard deviation of 13. Finally, financial performance, assessed using Return on Assets (ROA), showed a mean of 3.78 and a standard deviation of 2.36.

***Table 1 Descriptive Statistics***

| Stats | Cash Ratio | Loan to deposit ratio | Equity Multiplier | Capital Adequacy Ratio | EquityRatio |
|---|---|---|---|---|---|
| Mean | 1.95 | 2.26 | 3.49 | 0.092 | 0.72 |
| Sd | 1.50 | 0.68 | 1.82 | 0.17 | 0.18 |
| Minimum | 0.10 | 1.23 | 0.31 | 0.01 | 0.18 |
| Maximum | 17.14 | 3.46 | 13.22 | 0.90 | 0.99 |

| Stats | DSCR | Non-performing loans (Kes Billions) | gov_securities | ROI | Total Assets (Kes billions) | ROA |
|---|---|---|---|---|---|---|
| Mean | 4.46 | 21.48 | 5.13 | 0.80 | 146.10 | 3.78 |
| Sd | 0.42 | 10.12 | 0.36 | 0.46 | 13.00 | 2.36 |
| Minimum | 0.01 | 14.67 | 3.90 | 0.02 | 0.09 | 0.97 |
| Maximum | 1.84 | 25.79 | 5.69 | 1.58 | 380.04 | 12.33 |

Source: Data (2024).

## Normality test

The skewness and kurtosis statistics were used to assess the normality of the residuals. The skewness values ranged between -1.20 and 1.10, while kurtosis values were between 2.30 and 3.90, both within acceptable ranges of ±2 and 3–10, respectively. These results confirm that the residuals were approximately normally distributed, meeting the normality assumption necessary for reliable regression analysis.

## Linearity Test

Scatter plot graphs were used to visually assess the linear relationship between the independent variables (prudential regulations such as liquidity, capital, credit, and investment regulations) and the dependent variable (financial performance). The plots showed a clear linear pattern, with no significant deviations or curvilinear trends, confirming that linear regression was appropriate for analysing these relationships.

## Multicollinearity Test

Variance Inflation Factor (VIF) values were calculated to detect multicollinearity among the independent variables. The results showed that all VIF values were below 2.5, well below the critical threshold of 10. For example, the VIF values for liquidity regulation, capital regulation, credit regulation, and investment regulation were 1.89, 1.75, 1.92, and 1.67, respectively. These findings indicate that multicollinearity was not a significant issue, allowing for precise and unbiased coefficient estimation.

## Panel Unit Root Test

The Levin-Lin-Chu test was applied to check for stationarity of the panel data. The p-values for all variables were below 0.05, indicating stationarity at the levels. For instance, liquidity regulation had a test statistic of -3.45 ($p < 0.01$), capital regulation -4.12 ($p < 0.01$), credit regulation -2.98 ($p < 0.05$), and investment regulation -3.72 ($p < 0.01$). These results confirm that the variables were stationary, eliminating concerns about spurious regression results.

## Hausman Test

To determine whether the fixed-effects or random-effects model was more suitable, the Hausman test was conducted. The test statistic was $\chi^2(4) = 18.67$, $p = 0.002$, which is statistically significant. This result led to the rejection of the null hypothesis that the random-effects model was appropriate, favoring the fixed-effects model for its consistency and ability to control for unobserved heterogeneity across SACCOs.

***Table 2 Summary of Pre-estimation Test Results***

| Test | Method | Key Figures | Outcome |
|---|---|---|---|
| Normality | Skewness/Kurtosis | Skewness: -1.20 to 1.10; Kurtosis: 2.30 to 3.90 | Normality assumption met |
| Linearity Test | Scatter Plots | Linear relationships observed | Linearity assumption met |
| Multicollinearity Test | VIF | 1.67 to 1.92 | No multicollinearity |
| Panel Unit Root Test | Levin-Lin-Chu Test | Liquidity (-3.45, $p < 0.01$); Capital (-4.12, $p < 0.01$); Credit (-2.98, $p < 0.05$); Investment (-3.72, $p < 0.01$) | Stationary data confirmed |
| Hausman Test | $\chi^2$ Test | $\chi^2(4) = 18.67$, $p = 0.002$ | Fixed-effects model preferred |

As shown in Table 3 fixed effects regression model was used to examine the influence of prudential regulation practices liquidity, capital, credit, and investment regulations on the financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Kenya, measured by Return on Assets (ROA). The model fit statistics indicated that the explanatory variables significantly accounted for variations in financial performance. The results revealed that liquidity regulation had a positive and statistically significant impact on financial performance, with a coefficient of 0.165 ($p = 0.03$). This implies that a one-unit increase in liquidity regulation corresponds to a 0.165 unit improvement in financial performance, underscoring the importance of maintaining sufficient liquidity to meet short-term obligations and enhance operational stability. Similarly, capital regulation exhibited a strong positive and significant relationship with financial performance, with a coefficient of 0.186 ($p = 0.00$). This finding suggests that better capital adequacy improves SACCOs' resilience to financial shocks, ultimately enhancing their profitability. Conversely, credit regulation was found to have a negative effect on financial performance, with a coefficient of -0.124 ($p = 0.00$). This indicates that stricter credit controls might hinder SACCOs' operational efficiency or increase the burden of managing non-performing loans.

Investment regulation, on the other hand, demonstrated a positive and significant impact on financial performance, with a coefficient of 0.266 (p = 0.03). This finding highlights the critical role of effective investment strategies in driving financial growth and stability in DT-SACCOs.

$Y= 14.648 + (0.165X_1+ 0.186X_2+ 0.124X_3+ 0.266X_4) + \varepsilon$ ..... (Eqn 2)

Where $X_1$, $X_2$, $X_3$ and $X_4$ are liquidity regulation practices, capital regulation practices, credit regulation practices and investment regulation practices respectively.

***Table 3 Findings on Fixed Effects Model***

| | | | | | | |
|---|---|---|---|---|---|---|
| Number of Observations | | | | | | 524 |
| Number of panels | | | | | | 105 |
| R-sq | Within | | | | | 0.1121 |
| | Between | | | | | 0.6421 |
| | Overall | | | | | 0.4743 |
| | F (4,104) | | | | | 6.02 |
| | Prob > F | | | | | 0.0002 |
| Performance | Coef. | Robust St.Err. | t-value | p-value | [95% Conf | Interval] |
| Liquidity regulation | 0.165 | 0.082 | 2.01 | 0.03 | 0.097 | 0.228 |
| Capital regulation | 0.186 | 0.032 | 5.81 | 0.00 | 0.157 | 0.328 |
| Credit regulation | -0.124 | 0.025 | -4.96 | 0.00 | -0.082 | -0.428 |
| Investment regulation | 0.266 | 0.132 | 2.02 | 0.03 | 0.12 | .551 |
| Constant | 14.648 | 2.657 | 5.51 | 0 | 9.379 | 19.918 |

*** $p<.01$, ** $p<.05$, * $p<.1$

## Discussion

The findings from this study illustrate the significant role prudential regulations play in determining the financial performance of Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs) in Kenya. These results align with global and regional studies, confirming the critical balance between regulatory compliance and financial stability. Each regulatory component namely liquidity, capital, credit, and investment revealed distinct impacts on SACCO performance, providing insights for policymakers, regulators, and SACCO managers.

Liquidity regulation emerged as a key determinant of financial performance, emphasizing the need for SACCOs to maintain adequate cash reserves and adhere to loan-to-deposit ratios. These findings are consistent with Kimathi (2014), who observed that adequate liquidity allows financial institutions to meet short-term obligations and avoid distress. By ensuring that SACCOs have sufficient liquid assets, liquidity regulations protect depositors' interests and enhance operational stability. However, excessive focus on liquidity at the expense of other performance indicators can lead to underutilization of resources, highlighting the need for balanced financial strategies.

Capital regulation demonstrated a strong positive influence on financial performance, emphasizing the importance of adequate capital buffers for institutional resilience. This finding is in tandem with Mwega (2012), who argued that capital adequacy strengthens financial institutions'

ability to withstand economic shocks and seize investment opportunities. The results suggest that SACCOs with robust capital adequacy are better positioned to expand their services and safeguard depositor funds. However, achieving these capital thresholds can be challenging for smaller SACCOs, requiring strategic capacity-building initiatives and innovative financial solutions.

The study revealed a negative relationship between credit regulation and financial performance, aligning with Sambasivam (2013), who highlighted the complexities of managing credit risk in financial institutions. While credit regulations aim to safeguard SACCOs' loan portfolios, overly restrictive policies can hinder lending activities and increase non-performing loans. This highlights the need for SACCOs to adopt advanced credit risk assessment tools and borrower profiling mechanisms to balance risk and profitability. Efficient credit management ensures that SACCOs can maintain lending operations without compromising their financial health.

Investment regulation, on the other hand, had a significant positive impact on financial performance, reaffirming the importance of strategic investment decisions. Effective investment in low-risk ventures, such as government securities, diversifies SACCO income streams and mitigates risks associated with market fluctuations. This finding is supported by Rotich (2016), who emphasized the role of prudent investment policies in driving financial stability. SACCO managers must ensure that their investment strategies align with institutional goals while adhering to regulatory requirements, ensuring both compliance and profitability.

The study also emphasizes the need for SACCO managers to navigate the regulatory environment effectively while addressing operational challenges. For instance, smaller SACCOs may struggle with the financial and managerial capacity required to meet regulatory standards, necessitating targeted support from regulatory bodies. Moreover, the results emphasize that regulations should be adaptable to the unique needs and capacities of SACCOs to avoid stifling their growth potential.

## Implications

This study confirms that prudential regulations are integral to the financial performance of DT-SACCOs in Kenya. While liquidity, capital, and investment regulations positively influence performance, credit regulation presents challenges that require innovative solutions. The findings highlight the importance of a balanced approach to regulatory compliance that considers SACCO-specific characteristics and operational capacities. Policymakers and regulators should use these insights to refine prudential frameworks, fostering an environment that supports SACCO sustainability and contributes to broader financial inclusion goals. Future research could explore the role of governance structures and digital innovations in enhancing SACCOs' ability to comply with regulations while maintaining profitability.

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