

## The Influence of Investment Regulation on the Financial Performance of Deposit-Taking SACCOs in Kenya: Evidence from Panel Data.

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**Date Received:** 11<sup>th</sup> Aug 2025

**Date Revised:** 12<sup>th</sup> Dec 2025

**Date Published:** 2<sup>nd</sup> Jan 2026

**Website:**

[www.edithcowanjournal.org](http://www.edithcowanjournal.org)

**ISSN:** 2790-0657

**DOI:**

10.55077/edithcowanjournalofstrategicmanagement.v9i1.143

**Key Words:**

Investment regulation, financial performance, Panel data, Deposit Taking SACCOs, Kenya.



### ABSTRACT

Investment regulation plays a critical role in safeguarding the financial stability and performance of deposit-taking Savings and Credit Cooperative Societies (SACCOs), especially in emerging economies. In Kenya, the SACCO Societies Act of 2008 and accompanying prudential guidelines by the SACCO Societies Regulatory Authority (SASRA) require SACCOs to comply with strict investment frameworks. However, despite these regulations, financial performance outcomes across SACCOs remain inconsistent, raising questions about the effectiveness of investment regulation in driving performance. This study investigates the influence of investment regulation on the financial performance of deposit-taking SACCOs in Kenya using panel data covering the period 2018–2023. The study employs a descriptive and explanatory research design using secondary data from 175 SASRA-licensed SACCOs. Panel regression analysis was used to determine the relationship between investment regulatory compliance measured by return on investment (ROI), and financial performance indicators, namely return on assets (ROA). The results reveal that investment regulation has a statistically significant and positive effect on SACCO financial performance, suggesting that compliance with prudent investment standards enhances returns and institutional sustainability. The findings have practical implications for SACCO boards, regulators, and policymakers in optimizing investment policies and strengthening regulatory oversight. The study recommends enhanced enforcement of investment diversification requirements and greater capacity building for SACCO management to interpret and implement investment policies effectively.

## Introduction

In Kenya, Savings and Credit Cooperative Organizations (SACCOs) have long served as vital financial intermediaries, especially for low- and middle-income earners who often face limited access to formal banking services. Over the years, the growth and increasing complexity of Deposit-Taking SACCOs (DT-SACCOs) necessitated the establishment of a regulatory framework to safeguard members' savings, enhance accountability, and promote financial stability. The

government responded by enacting the SACCO Societies Act No. 14 of 2008, which paved the way for the formation of the SACCO Societies Regulatory Authority (SASRA) in 2010. SASRA was mandated to oversee, license, and supervise DT-SACCOs to ensure they adhere to prudential standards, particularly in areas such as liquidity, capital adequacy, credit management, and investment practices (Njoki, 2025).

Investment regulation, one of the core pillars of prudential oversight, plays a critical role in determining the strategic direction and financial sustainability of SACCOs. Poor investment decisions can jeopardize member deposits and erode public confidence in SACCOs. Recognizing this, the SACCO Societies Act stipulates that DT-SACCOs must formulate and maintain sound investment policies that guide the nature, type, and limits of investments undertaken. These policies are required to prioritize safety, liquidity, and returns, ensuring that SACCOs do not overexpose themselves to risky ventures. Furthermore, prudent investment practices are essential in generating sustainable returns, which contribute to profitability indicators such as Return on Assets (ROA) and Return on Equity (ROE) (Njoki, 2025; Rotich et al., 2015).

The SACCO Societies Act (2008) is the principal legislative instrument governing the operations of DT-SACCOs in Kenya. The Act outlines specific investment guidelines aimed at protecting member deposits and ensuring optimal utilization of financial resources. For instance, SACCOs are restricted from investing more than 10% of their total assets in non-earning property. Additionally, they must develop comprehensive investment policies that detail the scope, objectives, and types of permissible investments (Sacco Societies Act, 2008). SASRA further enforces compliance by requiring periodic submission of investment statements and performance reports. These requirements collectively form a framework that promotes transparency, accountability, and financial discipline across the SACCO sub-sector (SASRA, 2020).

Despite the establishment of regulatory frameworks and oversight mechanisms, numerous DT-SACCOs continue to face challenges related to compliance with investment regulations. Audit reports frequently highlight issues such as mismanagement of investment funds, poor diversification, and speculative ventures that expose members to undue risk (SASRA, 2020; Kobia, 2012). While existing studies have broadly examined the influence of prudential regulations on SACCO performance, there remains a dearth of research that isolates investment regulation as an independent variable. Moreover, prior research often fails to integrate panel data methodologies that capture time-series and cross-sectional dynamics (Gatu et al., 2023). This gap presents an opportunity to contribute to the literature by exploring the relationship between investment regulation and financial performance using robust empirical models.

This study seeks to evaluate the influence of investment regulation on the financial performance of DT-SACCOs in Kenya over the period 2018–2023. Specifically, it aims to:

- i. Assess the extent to which investment regulations, as enforced by SASRA, affect SACCO profitability.

- ii. Analyze whether adherence to investment policies correlates positively with financial sustainability and member value creation.

The main hypothesis is:

**H<sub>0</sub>:** There is no statistically significant relationship between investment regulation and the financial performance of deposit-taking SACCOs in Kenya.

## Literature Review

Understanding the relationship between investment regulation and financial performance of deposit-taking SACCOs (DT-SACCOs) requires grounding in relevant financial theories. Two key frameworks provide a strong foundation for this analysis: the Modern Portfolio Theory (MPT) and Regulatory Theories in Finance particularly the Public Interest Theory. These theories offer complementary perspectives, explaining how SACCOs manage risk-return trade-offs while adhering to regulatory expectations designed to safeguard the financial system and protect depositors.

The Modern Portfolio Theory, developed by Harry Markowitz in 1952, revolutionized the field of investment by introducing the concept of risk diversification as a strategy for optimizing returns. At its core, MPT posits that investors can construct an "efficient portfolio" by combining assets in a way that maximizes expected returns for a given level of risk—or, conversely, minimizes risk for a given level of return. The theory emphasizes the importance of asset correlation and the role of diversification in reducing the total volatility of a portfolio (Nielsen & Jorgensen, 2008).

In the context of DT-SACCOs, MPT is especially relevant given that investment activities directly affect their profitability and long-term sustainability. Kenyan SACCOs are mandated by the SACCO Societies Act of 2008 to avoid risky or non-performing assets and to ensure investments are well diversified and yield reasonable returns (Njoki, 2025). A SACCO investing in a diverse range of instruments such as government securities, fixed deposits, and real estate reduces its exposure to asset-specific risks and promotes stable returns. This is critical because SACCOs operate primarily on member deposits, and a failure in investment management can undermine trust and trigger liquidity problems.

MPT further underpins regulatory provisions that prohibit SACCOs from over-concentrating their investments in specific non-earning or speculative assets. By requiring boards to regularly review and update their investment policies, the SACCO Act essentially integrates MPT's principles of dynamic risk management and strategic asset allocation (Sacco Societies Act, 2008; SASRA, 2020). Consequently, DT-SACCOs that follow investment policies aligned with MPT are better positioned to achieve consistent financial performance, measured through key metrics such as Return on Assets (ROA) and Return on Investment (ROI). However, critics of MPT, especially from behavioral finance, argue that the model oversimplifies investor behavior by assuming that all investors act rationally and have access to perfect information (Damghani, 2013). Nonetheless, in

a regulated SACCO environment where investment policies are standardized and reviewed by oversight bodies like SASRA, MPT remains a valuable framework for guiding prudent investment decisions.

Public Interest Theory is one of the most prominent explanations for why financial regulation exists and how it serves society. Rooted in welfare economics, the theory posits that regulation is instituted to correct market failures and protect public welfare by minimizing risks, reducing information asymmetry, and preventing exploitation or systemic failure (Posner, 1974). Regulatory bodies are seen as benevolent institutions acting in the public's interest to ensure the stability and fairness of financial markets. In Kenya, SACCO regulation embodies this theory through institutions such as SASRA, which was created to promote transparency, accountability, and financial soundness in the SACCO sub-sector. The SACCO Societies Act of 2008 outlines investment regulations designed to protect member savings by preventing excessive speculation and ensuring liquidity adequacy. These policies are enforced through licensing requirements, regular audits, and statutory compliance reporting (SASRA, 2020).

Public Interest Theory also helps justify why regulations place strict limits on the types and sizes of investments SACCOs can undertake. For instance, the Act prohibits investing more than 10% of total assets in non-earning property, thereby reducing the risk of capital being tied up in illiquid or speculative ventures. From this lens, regulation is not simply a bureaucratic constraint but a strategic tool to ensure SACCOs operate prudently and maintain the public's trust (Njoki, 2025). Nonetheless, critics of Public Interest Theory argue that regulation can be captured by special interest groups or poorly implemented, leading to inefficiencies or even regulatory failure (Stigler, 1971). Despite this, in the case of DT-SACCOs in Kenya, regulation has played a vital role in elevating financial standards and protecting member assets in an increasingly complex financial ecosystem.

### Similar Studies

Investment regulation is a cornerstone of financial governance, influencing how institutions allocate resources and manage risk. Globally, the relationship between investment regulation and financial performance has been explored across various financial institutions, though with differing scopes and implications. At the global level, Sehhat and Rad (2011) examined investment strategy alignment in insurance firms, concluding that well-structured regulatory frameworks significantly improve the selection of investment instruments, especially those intended to match future liabilities. However, they noted that insurers often struggle with regulatory compliance due to misaligned internal policies, highlighting the gap between regulation and strategic investment implementation. While insightful, this study focused on insurance firms, which differ structurally and operationally from SACCOs.

In Africa, regulatory attention to investment decisions is more recent and less developed compared to global standards. For instance, in Mali, most financial institutions including microfinance bodies possess adequate liquidity but face limitations in long-term investment planning due to short-term capital structures (World Bank, 2016). Similarly, in Egypt, investment regulations remain underutilized due to structural bureaucracy, corruption, and weak

enforcement capacity (Ismail, 2016). These issues limit the effectiveness of investment policies, reducing their ability to influence financial performance outcomes across the sector.

Focusing on the Kenyan context, Rotich (2016) investigated the influence of investment decisions on SACCO performance in Baringo County. His study found that investments in real estate and lending to members positively contributed to financial outcomes. However, the study did not sufficiently account for regulatory compliance levels, nor did it incorporate data across multiple regions or years to establish a robust trend. Muli (2016) conducted a study in Kitui Central Sub-County and identified replacement, renewal, and research-based investment decisions as positively correlated with performance. Nonetheless, this research failed to address investment regulations as set by SASRA or the SACCO Societies Act of 2008, making its applicability to DT-SACCOs limited. Ariemba (2013) also focused on investment decisions in Kitui but gave primary attention to internal decision-making mechanisms rather than external regulatory influences. Moreover, studies like that of Muriuki (2016) explored the financial literacy of fund managers in SACCOs, showing that knowledge significantly influences investment choices. However, the link between regulatory adherence and financial outcomes remains underexplored in such cases.

## 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 investment 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 credit regulation 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 (2018–2022). These reports were sourced from SACCOs' annual financial statements and SASRA databases. Investment regulation refers to the formal rules, policies, and practices that guide the investment activities of deposit-taking SACCOs (DT-SACCOs). In this study, it is the independent variable and is operationalized using Return on Investments (ROI). ROI is particularly relevant because SACCOs are mandated to invest in safe, liquid, and income-generating assets. This indicator directly reflects the success or failure of

adhering to these principles (Rotich et al., 2015). Financial performance is the dependent variable of the study and represents the financial health and sustainability of a DT-SACCO. It is evaluated using Return on Assets (ROA).

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-estimation diagnostic tests such as normality tests, multicollinearity tests, and unit root tests were performed to validate data suitability for analysis (Mwaniki, 2018).

## Results

This section presents descriptive statistics that summarize the financial performance of Deposit-Taking SACCOs (DT-SACCOs) in Kenya, focusing on Return on Investment (ROI) and Return on Assets (ROA) for the period 2018 to 2023. The analysis includes mean values and standard deviations, which help to understand central tendencies and variability among the SACCOs.

**Table 1 Descriptive Statistics**

Variable	Mean (%)	Standard Deviation (%)	Minimum (%)	Maximum (%)	Observation (N)
ROI	8.11	2.50	3.20	12.80	175
ROA	3.54	1.87	1.01	7.25	175

Table 1 shows the mean ROI across the sample SACCOs was 8.11%, suggesting that, on average, DT-SACCOs generated a return of 8.11 shillings for every 100 shillings invested. This is a healthy indicator of financial efficiency in utilizing investment opportunities within regulated guidelines. The standard deviation of 2.50% implies that the ROI among SACCOs varied moderately, with most institutions earning returns fairly close to the mean. The lowest recorded ROI was 3.20%, while the highest was 12.80%. This spread highlights the varying investment capabilities and compliance levels with regulatory investment frameworks among the SACCOs. The mean ROA was 3.54%, which indicates that DT-SACCOs were able to generate an average of 3.54 shillings of net income for every 100 shillings of assets. While lower than ROI, this still reflects effective use of total assets in driving profitability. A standard deviation of 1.87% suggests modest variability in asset utilization efficiency. Some SACCOs reported a minimum ROA of 1.01%, while the best-performing ones achieved up to 7.25%. The range suggests that although some SACCOs have mastered asset management, others still struggle with operational efficiency or face structural challenges. Across the six-year period (2018–2023), both ROI and ROA showed a general upward trend, particularly from 2021 onward. Table 2 shows the summary of pre-estimate test results.

**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);	Stationary data confirmed
Hausman Test	$\chi^2$ Test	$\chi^2(4) = 18.67, p = 0.002$	Fixed-effects model preferred

The pre-estimation diagnostic tests in Table 2 above indicate that the model assumptions are satisfied. The Normality Test shows that the data is approximately normally distributed with skewness and kurtosis values within acceptable ranges. The linearity test confirms linear relationships among the variables, while the multicollinearity test reveals no significant correlation between predictors, as indicated by VIF values between 1.67 and 1.92. The panel unit root test confirms that the liquidity variable is stationary, with a significant p-value, ensuring reliable time-series analysis. Finally, the Hausman Test indicates that a fixed-effects model is preferred, as individual-specific effects are correlated with the explanatory variables. These results provide confidence in the suitability of the fixed effects model for further analysis as shown in Table 3.

**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]
Credit 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

As shown in Table 3, the model's performance is summarized by the following statistics: the within R-squared is 0.1121, the between R-squared is 0.6421, and the overall R-squared is 0.4743. The F-statistic for the model is 6.02, with a p-value of 0.0002, indicating that the model is statistically significant. The coefficient for investment regulation is  $\beta = 0.266$  with a p-value of 0.03, indicating a positive and statistically significant effect on financial performance at the 5% level. This suggests that adherence to investment regulation through structured policies, diversification, and regulatory compliance enhances profitability among DT-SACCOs. The 95% confidence interval

([0.120, 0.551]) supports the reliability of this estimate.

## Discussion

The results of this study provide empirical validation of the theoretical frameworks guiding investment regulation and financial performance in financial institutions. In particular, the findings strongly support Modern Portfolio Theory (MPT), which advocates for optimal asset allocation to maximize returns while minimizing risk (Markowitz, 1952). The significant and positive coefficient for investment regulation ( $\beta = 0.266$ ,  $p = 0.03$ ) indicates that SACCOs that adhere to regulatory investment standards benefit from improved financial performance measured through ROA and ROE due to better risk-adjusted returns and compliance-driven accountability.

Furthermore, the study reinforces aspects of Public Interest Theory, which asserts that regulations are designed to protect public welfare and ensure economic stability (Posner, 1974). By mandating structured investment frameworks, the SACCO Societies Regulatory Authority (SASRA) contributes to the enhancement of financial discipline, transparency, and long-term sustainability of SACCOs.

These findings are consistent with those of Rotich et al. (2015), who found that prudent investment decisions were positively associated with financial performance in Baringo-based SACCOs. Similarly, Gatu et al. (2023) documented that compliance with SASRA's prudential guidelines had a statistically significant impact on performance indicators in licensed DT-SACCOs. Unlike previous studies that largely overlooked regulation as a standalone predictor, this study isolates investment regulation and quantifies its effect, revealing its critical role in driving profitability.

## Implications

The primary objective of this study was to examine the effect of investment regulation on the financial performance of Deposit-Taking SACCOs in Kenya, with a focus on key performance indicators such as Return on Assets (ROA) and Return on Equity (ROE). Using a panel dataset covering 105 SACCOs across six years (2018–2023), and guided by Modern Portfolio Theory and Public Interest Theory, the study empirically tested how regulatory adherence influences financial outcomes. The findings clearly indicate that investment regulation has a significant and positive effect on SACCO financial performance. SACCOs that strategically allocate assets, comply with investment guidelines, and prioritize prudent financial management show superior performance compared to those that do not. These results reinforce the theoretical view that structured regulation enhances efficiency, reduces risk, and fosters long-term financial sustainability. From a policy perspective, the findings affirm the value of SASRA's prudential regulatory framework. Regulators are encouraged to continue enhancing compliance mechanisms, strengthen enforcement, and offer training and guidance to SACCO boards and managers. In light of the negative impact of credit regulation observed, policymakers should also reassess credit rules to ensure they are not overly restrictive, thereby preserving SACCOs' ability to lend and earn interest revenue. Ultimately, this study provides a strong foundation for regulatory innovation and

management reform in Kenya's SACCO sector, emphasizing that regulation, when well-designed and effectively enforced, is not a constraint but a catalyst for sustainable financial performance.

For SACCO managers, the findings highlight the strategic importance of compliance with investment-related guidelines as stipulated in the SACCO Societies Act (2008) and SASRA directives. Investment decisions should not be based solely on returns but must also adhere to risk profiles and allocation limits outlined by regulators. The evidence suggests that strategic alignment between regulatory compliance and investment strategy can yield both higher returns and institutional stability.

Managers are therefore encouraged to:

- ◆ Develop and continuously review investment policies,
- ◆ Diversify portfolios within approved asset classes,
- ◆ Train investment committees on compliance and risk analysis.

For policymakers and SASRA, the study reinforces the value of prudential oversight in safeguarding member deposits and ensuring institutional performance. It also suggests the need for:

- ◆ Regular audits and enforcement of compliance,
- ◆ Clear communication of revised regulatory expectations,
- ◆ Enhanced capacity building for SACCO boards and fund managers.

By leveraging the empirical link between regulation and performance, SASRA can further promote a culture of financial integrity, helping to grow public trust in the cooperative movement.

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