

Solvency Risks And Financial Performance Of Deposit Taking Savings And Credit Cooperatives In Nakuru County, Kenya

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Abstract:

The ability to cover expenses and financial liabilities hinges on earnings and operational efficiency. However, the deposit-taking savings and credit cooperative societies in Kenya are grappling with solvency risks and are facing financial distress. The current study examined the effect of solvency risks, as a component of financial distress on the financial performance of deposit-taking savings and credit cooperative societies in Nakuru County, Kenya. The research was guided by Merton's risk model. The study employed a descriptive research design and the target population comprised unit managers, credit managers, accountants, clerical officers, and marketing representatives of DT-SACCOs operating in Nakuru County. Data collection was done through use of structured questionnaire. Data analysis was aided by Statistical Packages for the Social Sciences (SPSS). Descriptive analysis included frequencies, percentages, means, and standard deviations, while inferential analysis encompassed correlation coefficient analysis and multiple regression analysis. According to the descriptive findings, solvency risks affected the financial performance of the deposit-taking savings and credit cooperative societies. As per the correlation analysis results, the relationship between solvency risks and financial performance of deposit-taking savings and credit cooperative societies was significant ($r=0.684^{**}$; $p=0.000$) at a 1% significance level. The implications are that the financial performance of DT-SACCOs was influenced by solvency risks. The regression analysis results indicated that the coefficient of determination was $R^2=0.468$. Therefore, solvency risks accounted for 46.8% of the financial performance of the deposit-taking savings and credit cooperative societies. The study concluded that solvency risks affected the financial performance of DT-SACCOs. As such, managing solvency risks is crucial for ensuring the sustainable financial performance of DT-SACCOs. The study recommends that DT-SACCOs should establish robust frameworks for managing solvency risks to minimize financial distress and enhance financial performance.

Key Words: Solvency Risks, Financial Distress, Financial Performance, Deposit-taking Savings and Credit Cooperative Societies

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I. Introduction

Solvency risks denote the likelihood that a firm might lack adequate financial resources to fulfill its debt obligations and other liabilities (Stef, 2021). These risks serve as a significant factor contributing to financial distress, which occurs when a company's financial situation deteriorates to a critical juncture where it struggles to effectively handle its liabilities. With solvency risks, firms encounter difficulties in meeting their financial obligations as they become due (Kang, Wang, & Lin, 2022). They often stem from inadequate cash flow, excessive debt burdens, or insufficient assets. As solvency deteriorates, organizations may struggle to access additional financing or secure favorable credit terms, further exacerbating their financial challenges. In deposit-taking savings and credit cooperative societies, solvency risks encompass potential threats that impede the ability to fulfill financial obligations and maintain ongoing operations (Sumaryati & Tristiarini, 2018). These risks contribute to insolvency as SACCOs face challenges in repaying member deposits and meeting loan commitments. Insufficient equity compared to debt complicates the timely settlement of payments. Hence, SACCOs must establish strong frameworks for identifying, evaluating, and mitigating solvency risks to address financial distress effectively.

The firm's capacity to meet expenses and fulfill payments relies on earnings and operational efficiency (Kiyieka & Muturi, 2018). Nonetheless, DT-SACCOs in Kenya are facing cash flow challenges due to significant disparities in expenses and receivables, casting doubt on their ability to effectively utilize surplus capital and maintain long-term financial operations. A SACCO supervision report by the SACCO Societies Regulatory Authority in 2018 highlighted that 30 DT-SACCOs failed to meet the threshold for the core capital to total assets ratio, which declined from 15.02% in 2018 to 14.23% in 2019 (SASRA, 2019). According to the SASRA report (2020), the proportionate total assets of the 84 DT-SACCOs with total assets below Kshs 1 Billion declined from 5.52% in 2019 to 5.21% in 2020. Moreover, the SASRA report (2021) indicated that the proportion of income from other sources to total income decreased to 7.67% in 2021 from 8.35% in 2020. High provisions for loan losses contributed to the decline in the total net income before tax to total income from 18.93% in 2020 to 12.69% in 2021, with net income after tax dropping from 17.59% to 11.20% in the same period. The trajectory of asset levels, core capital, and net earnings defines a SACCO's ability to fulfill obligations (Farah, 2020), thus the reduction in these components jeopardizes the financial capacity to meet obligations and other financial requirements. This underscores solvency risks and financial distress among DT-SACCOs, posing a significant threat to their financial performance. However, research on solvency risks and finances in the context of DT-SACCOs in Kenya is limited. This study examined the effect of solvency risks on the financial performance of DT-SACCOs in Nakuru County, Kenya.

II. Objective Of The Study

The objective of the study was to assess the effect of solvency risks on financial performance of deposit taking savings and credit cooperative societies in Nakuru County, Kenya.

III. Literature Review

Solvency risks signify a firm's incapacity to fulfill its financial obligations, which is a crucial indicator of financial distress, assessing the organization's ability to meet its commitments (Ushanov, 2022). These risks indicate that an entity lacks adequate assets or cash flow to cover its debts and overall liabilities (Stef, 2021). Inadequate capital reserves and high non-performing loans contribute to solvency risks in deposit-taking savings and credit cooperative societies. Difficulty in meeting liability-based obligations indicates financial distress (Dahiyat, 2016). The financial obligations of DT-SACCOs, including providing loan facilities, interest payments on savings, dividend payouts, and settling interest and principal amounts of external debts, underscore the importance of maintaining adequate solvency levels for their interest and the overall financial system.

The failure of deposit-taking savings and credit cooperative societies to meet obligations results in significant financial challenges, potentially leading to bankruptcy, indicating the presence of financial distress (Unda & Ranasinghe, 2021). Financial distress is commonly evaluated through metrics such as the debt-to-assets ratio, interest coverage ratio, and equity ratio. A high debt-to-assets ratio suggests higher solvency risk, indicating difficulties in meeting financial requirements. The interest coverage ratio measures DT-SACCOs' operating income's ability to cover interest expenses, with a low ratio implying higher solvency risk and challenges in meeting interest payments. The equity ratio evaluates a DT-SACCO's reliance on members' contributions versus alternative capital of debt (Dahiyat, 2016). A lower equity ratio indicates a higher proportion of operations and investments financed by debt, contributing to financial distress through increased financial leverage. Struggling to generate sufficient cash flows often leads to excessive reliance on debt, resulting in difficulties in meeting interest payments, debt repayments, and other liabilities, thereby exacerbating financial distress (Ushanov, 2022). Merton's risk model serves as a framework for comprehending solvency risks as pivotal factors contributing to financial distress. By incorporating elements such as asset volatility, debt levels, and market dynamics, Merton's model evaluates the likelihood of a firm defaulting. Solvency risks, in this context, denote the probability that a company lacks sufficient resources to meet its debt obligations, potentially leading to insolvency (Sumaryati & Tristiarini, 2018). As a determinant of financial distress, solvency risks underscore the crucial necessity of maintaining a balanced ratio between assets and liabilities. Elevated solvency risks pose challenges for companies in fulfilling their financial commitments, ultimately culminating in financial distress. Thus, Merton's risk model provides insights into how fluctuations in asset values and debt levels can affect an organization's solvency, thereby impacting its vulnerability to financial distress. The association between solvency risks and financial performance is illustrated in Figure 1:

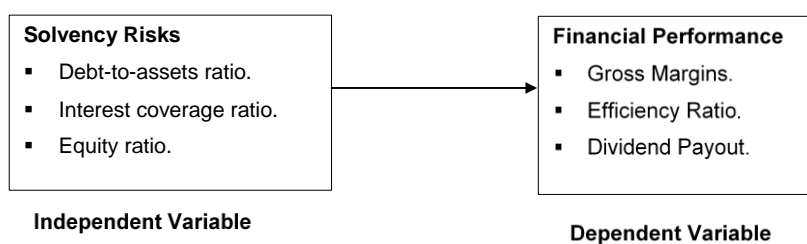


Figure 1: Conceptual Framework

Solvency risks indicates the potential to encounter financial distress due to its debt obligations compared to its assets, its ability to cover interest payments, and the proportion of equity financing relative to total assets (Unda & Ranasinghe, 2021). The DT-SACCOs struggle to achieve stable gross margins and meet dividend payouts from its earnings with solvency risks. Therefore, financial performance depend on effectiveness in management of solvency risks. Katula and Kiriinya (2018) examined the repayment of loans and the financial performance of deposit-taking savings and credit cooperative societies in Embu County. The findings highlighted that various factors, including loan appraisal, loan interest rates, loan follow-up procedures, and customer characteristics, significantly influenced the financial performance of these societies, as indicated by correlation coefficients of 0.938, 0.920, 0.909, and 0.940, respectively. The study concluded that for these SACCOs to achieve financial performance, it is imperative to adopt models aimed at minimizing financial risks, such as those related to loan appraisal, interest rates, follow-up procedures, and customer characteristics. Odhiambo and Muriira (2020) examined the solvency management and financial sustainability of supermarkets in Kenya. The findings underscored a substantial relationship between solvency management and financial sustainability, with financial leverage and operating margins exerting a considerable impact on the financial sustainability of supermarkets. Gweyi, Olweny, and Oloko (2018) assessed the impact of liquidity risk on the financial performance of deposit-taking savings and credit societies. The study revealed that liquid investments and liquidity reserves affected the financial performance of these societies.

Atandi and Olangâ (2022) explored the relationship between liquidity management and the performance of savings and credit cooperative societies. The study established a robust and positive significant relationship between liquidity management and the performance of SACCOs. From the reviewed literature, research gaps were identified. Katula and Kiriinya (2018) concentrated on loan repayment, overlooking the examination of the debt-to-asset ratio, which is crucial in determining solvency risks. Conversely, Odhiambo and Muriira (2020) addressed solvency management, albeit within a different context, focusing on supermarkets rather than DT-SACCOs. Additionally, the key variables analyzed in their study were financial leverage and operating margins, whereas the current study prioritized the assessment of solvency risks. Furthermore, Gweyi et al. (2018) and Atandi and Olangâ (2022) scrutinized liquidity aspects, pertinent to short-term financial health, while the present study specifically assessed the solvency risks and the financial performance of DT-SACCOs.

IV. Research Methodology

The current study employed a descriptive research design. A descriptive research design was well-suited for assessing solvency risks within deposit-taking savings and credit cooperative societies. The target population was all the 21 deposit-taking savings and credit cooperative societies in Nakuru County. These 21 DT-SACCOs constituted the unit of analysis. The unit of observation was the unit managers, accountants, credit officers, clerical officers and marketing representatives. Therefore, 5 respondents were obtained from each DT-SACCO thus the total population was 105. A simple random sampling technique was employed. Nasiuma's (2000) sample determination formula was utilized as follows:

$$N = \frac{[NC^2]}{[C^2 + (N-1)e^2]}$$

Whereby;
 n=Sample size
 N=Population size
 C=Coefficient of variation which is 50%
 e= Error margin which is 0.05
 The sample size will be determined as follows:
 $n = \frac{[105 \times 0.5^2]}{[0.5^2 + (105-1)0.05^2]}$
 $= \frac{26.25}{0.25 + 0.26}$
 $= \frac{26.25}{0.51}$
 $= 51.47=51$
 Therefore, the sample size was 51 respondents.

Data was collected through structured questionnaire. Descriptive and inferential statistical analysis methods were adopted. Statistical Packages for Social Sciences (SPSS) aided data analysis. Descriptive analysis involved key measures such as frequencies, percentages, means, and standard deviations. The inferential analysis encompassed correlation coefficients and multiple regressions. The findings were presented through tables, and the multiple regression analysis employed the following model:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y= Financial Performance

β_0 = Constant (Coefficient of intercept of β_0)

β_1 = Beta Coefficient

X_1 = Solvency Risks

ε = Error of Margin

V. Findings And Discussions

This section presents the descriptive and inferential findings of the research examining the effect of solvency risks on the financial performance of deposit-taking savings and credit cooperative societies in Nakuru County.

Descriptive Findings and Discussions

The objective of the study was to establish the effect of solvency risks on the financial performance of deposit-taking savings and credit cooperative societies. The descriptive findings are presented in Tables 1 and 2:

Table 1: Effect of Solvency Risks on the Financial Performance of Deposit-Taking Savings and Credit Cooperative Societies

	n	SA	A	I	D	SD	Mean	Std. Dev.
Our debt-assets ratio has been consistently maintained at an optimal level.	38	34.2%	47.4%	10.5%	7.9%	0%	4.08	0.882
Debt-assets ratio provides insights into solvency risk profile.	38	39.5%	47.4%	10.5%	2.6%	0%	4.24	0.751
We regularly review the interest coverage ratio.	38	23.7%	31.6%	28.9%	5.3%	10.5%	3.53	1.224
Interest coverage ratio reflects our ability to cover payments.	38	39.5%	47.4%	5.3%	7.9%	0%	4.18	0.865
Low equity ratio increases vulnerability to solvency risk.	38	34.2%	52.6%	13.2%	0%	0%	4.21	0.664
The robustness of equity ratio enhance sustainability in the long term.	38	39.5%	26.3%	10.5%	18.4%	5.4%	3.76	1.304

According to the findings, solvency risks as a determinant of financial distress affect the financial performance of deposit taking savings and credit cooperative societies. 81.6% of the respondents agreed (Mean=4.08; Std. Dev.=0.882) that their debt-assets ratio has been consistently maintained at an optimal level. A high debt-assets ratio in DT-SACCOs contribute to financial distress potentially straining their financial performance. Additionally, 86.9% of the respondents agreed (Mean=4.24) that debt-assets ratio provides insights into solvency risk profile. This ratio indicate the proportion of debt relative to assets, providing a measure of the financial leverage and ability of an entity to meet its long-term obligations. However, 28.9% of the respondents were indifferent (Mean=3.53; Std. Dev.=1.224) on whether the interest coverage ratio is regularly reviewed in their respective DT-SACCOs. A lower interest coverage ratio signal potential challenges in covering interest expenses, potentially leading to financial instability. 39.5% of the respondents agreed (Mean=4.18; Std. Dev.=0.865) that interest coverage ratio reflects the DT-SACCOs' ability to cover payments. They also concurred (Mean=4.21; Std. Dev.=0.664) that low equity ratio increases vulnerability to solvency risk. A low equity ratio increases vulnerability to solvency risk and financial distress by indicating a smaller proportion of ownership funds relative to total assets, potentially limiting the ability to absorb losses and meet financial obligations. Solvency risks adversely affect the financial performance of DT-SACCOs by compromising their ability to meet long-term financial obligations, leading to increased financial strain and potential disruptions that impact overall financial performance.

Table 2: Financial Performance

	n	SA	A	I	D	SD	Mean	Std. Dev.
The SACCO's gross margins assesses its ability to cover costs and generate sufficient income.	38	71.1%	21.1%	5.3%	2.6%	0%	4.61	0.718
Our SACCO has a sufficient operating income.	38	39.5%	52.6%	2.6%	5.3%	0%	4.26	0.760
We maintain stable cash flows.	38	52.6%	34.2%	3.2%	0%	0%	4.39	0.718
Our SACCO's dividend payouts aligns with our profitability.	38	52.6%	36.8%	10.5%	0%	0%	4.42	0.683
Efficiency ratio determines the operational effectiveness of the DT-SACCO.	38	23.7%	44.7%	26.3%	2.6%	2.6%	3.84	0.916
Financial distress impede financial performance of DT-SACCOs.	38	26.3%	57.9%	7.9%	7.9%	0%	4.03	0.822

As the findings, 71.1% of the respondents strongly agreed (Mean=4.61; Std. Dev.=0.718) that the SACCO's gross margins assesses its ability to cover costs and generate sufficient income. 52.6% of the respondents concurred (Mean=4.26; Std. Dev.=0.760) that their respective SACCOs have a sufficient operating income. Moreover, 86.8% of the respondents agreed (Mean=4.39; Std. Dev.=0.718) that their respective SACCOs maintain stable cash flows. 89.4% of the respondents agreed (Mean=4.42; Std. Dev.=0.683) that their SACCO's dividend payouts aligns with their financial performance. Additionally, the respondents concurred (Mean=4.03; Std. Dev.=0.822) financial distress impede financial performance of DT-SACCOs. Overall, the descriptive findings indicated that the solvency risks contribute to financial distress within Deposit-Taking Savings and Credit Cooperative Societies (DT-SACCOs), exerting a significant effect on their financial performance.

Inferential Findings and Discussions

Inferential analysis was conducted to establish the association between solvency risks and the financial performance of deposit-taking savings and credit cooperative societies. It encompassed both correlation and regression analyses.

Correlation Analysis Statistical Results

The correlation analysis established the strength and direction of association between solvency risks and financial performance. The results are shown in Table 3:

Table 3: Correlation between Solvency Risks and Financial Performance		
	Financial Performance	
Solvency Risks	Pearson Correlation	.684**
	Sig. (2-tailed)	.000
	N	38
**. Correlation is significant at the 0.01 level (2-tailed).		

According to the correlation analysis results, the relationship between solvency risks and financial performance of deposit taking savings and credit cooperative societies was significant ($r=0.684^{**}$; $p=0.000$) at 1% significance level. The implications are that the financial performance of DT-SACCOs is influenced by solvency risks, which a determinant of financial distress. Specifically, the debt-to-assets ratio, interest coverage ratio, and equity ratio as indicators of solvency risks, reveals the degree of financial leverage, capability to fulfill financial obligations, and the proportion of equity in the financing structure. High financial leverage and inability to meet obligations signals a financial distress, which deters financial performance of the of deposit-taking savings and credit cooperative societies.

Regression Analysis Statistical Results

Regression analysis was done to predict financial performance from variations in solvency risks. The results are presented in Tables 4, 5 and 6:

Table 4: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 ^a	.468	.453	.29327
a. Predictors: (Constant), Solvency Risks				

The model summary indicates a correlation coefficient of $R=0.684$ and a coefficient of determination of $R^2=0.468$. Therefore, the solvency risks accounted for 46.8% of variation in the financial performance of deposit

taking savings and credit cooperative societies. This means that solvency risks affects the financial performance of DT-SACCOs.

VI. Conclusion

In conclusion, the solvency risks affects the financial performance of Deposit Taking Savings and Credit Cooperative Societies. The findings established that high debt-asset ratios expose DT-SACCOs to solvency risks and financial distress, as increased debt levels amplify the impact of interest expenses on net income which indicates the financial performance. Consequently, prudent management of debt levels becomes imperative to mitigate solvency risks and safeguard profitability. Interest coverage ratio, which measures the ability of DT-SACCOs to meet interest obligations, is instrumental in determining financial distress. A lower interest coverage ratio have led to higher financial burden on DT-SACCOs, leading to default on interest payments and compromising financial performance. Lastly, the equity ratio, representing the proportion of equity relative to total assets, is essential in assessing the financial distress in DT-SACCOs. A higher equity ratio contributes to financial stability, serving as a buffer against potential losses. Therefore, maintaining an optimal balance in these solvency indicators is vital for DT-SACCOs to navigate financial challenges and enhance overall financial performance.

VII. Recommendation

The study recommends that DT-SACCOs should institute a comprehensive frameworks for managing solvency risks, encompassing diversified loan portfolios and stress testing. They should also maintain a robust capital buffer with the ultimate goal of enhancing financial performance.

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