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Effect of Fraud Risk Assessment on the Financial Performance of Deposit Taking Saccos in Laikipia County

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Problem Statement: Fraud in SACCOs has been on the rise in the recent past. In 2021, SACCOs lost around $10,600 in the 17 months leading up to March 2021, according to the Kenya Financial Sector Stability Report from the Central Bank of Kenya (CBK, 2021). To conduct fraud, the attackers targeted systems' weak controls

General objective of the study: To investigate effect of fraud risk assessment on the financial performance of deposit taking SACCOs in Laikipia County.

Research Design:In this study, a descriptive survey design was utilized.

Finding: The regression analysis reveals that risk assessment has a significant positive influence on financial performance, with an unstandardized coefficient of 0.942. This suggests that for every one-unit increase in Risk Assessment, Financial Performance improves by 0.942 units.

Conclusions: The researcher concluded that the identification and prioritization of potential sources of fraud showcase proactive measures taken by these organizations. This is further reinforced by the evaluation of the likelihood of various fraud types occurring, indicating a thorough understanding of potential risks.

Recommendation: The study recommends that given that risk assessment has a statistically significant positive impact on financial performance; it is advisable for deposit-taking savings and credit cooperative societies in Laikipia County to prioritize and strengthen their risk assessment processes.

Keywords:*fraud risk assessment,performance of deposit taking SACCOs in Laikipia County*

I. INTRODUCTION

Financial performance of financial institutions is a measure of how well the institution is doing financially. This can include measures such as revenue, profitability, and return on investment (Nawaz & Haniffa, 2017). It is typically evaluated using financial metrics and financial statements, such as income statements and balance sheets. According to Matar and Eneizan (2018), profitability is an important measure of financial performance for financial institutions, as it indicates the institution's ability to generate income. Asset quality is also important, as it reflects the institution's ability to manage risk and maintain the value of its assets. Liquidity measures the institution's ability to meet its financial obligations, while capital adequacy measures the institution's ability to absorb losses (Sun et al., 2017). Overall, financial institutions need to maintain a balance between profitability, asset quality, liquidity and capital adequacy, as well as meeting regulatory requirement to maintain a healthy financial performance (Nawaz & Haniffa, 2017).

The World Bank (2021) reports the performance of financial institutions in 2020 improved significantly compared to previous years. In 2020, the financial sector had a global average return on assets (ROA) of 1.2%, compared to 0.8% in 2019. The global average net interest margin (NIM) was 2.4%, compared to 2.1% in 2019. The Global Financial Stability Report (2021) also found that financial institutions have improved their digital infrastructure, with an increasing number of banks offering digital services such as online banking and mobile payments. Asian Development Bank (2021) report found that the average ROA for Asia's financial institutions was 1.3% and the NIM was 3.2%. The African Development Bank (2021) found that the average ROA for Africa's financial institutions was 1.8% and the average NIM was 4.4%. In Kenya, the Central Bank (2021) found that ROA for Kenya's financial institutions was 1.8% and the average NIM was 6.3%. The Savings and Credit Cooperatives (SACCO) Regulatory Authority (SASRA, 2021) report found ROA for SACCOs in Kenya was 5.2% and the average NIM was 7.6%.

The performance of financial institutions is affected by a variety of factors, including economic conditions, interest rates, competition, regulation, technological change, risk management, and political instability (Moussa, 2015; Tudose & Avasilcai, 2020). Economic conditions, such as a recession, can negatively impact financial institutions' profitability and asset quality. Changes in interest rates can also affect profitability by impacting the spread between what financial institutions earn on their assets and what they pay on their liabilities. Financial institutions operate in a highly competitive market, and competition can affect their ability to attract and retain customers, as well as the pricing and terms of their products and services (Matar & Eneizan, 2018). Financial institutions are also subject to a wide range of regulations, and changes in regulations can affect their operations and profitability. Technological change is another important factor, as financial institutions need to keep up with the latest advancements to maintain their competitive edge (Tudose & Avasilcai, 2020). Effective risk management is critical for financial institutions to mitigate the various types of risks they are exposed to, such as credit risk, market risk, operational risk, and reputational risk (Adebayo et al., 2022).

Fraud is defined as an intentional deception or misrepresentation that is made in order to gain an unfair or unlawful advantage. In the context of banking and financial institutions, fraud refers to any illegal or unethical activity those results in financial gain for the perpetrator at the expense of the bank or financial institution (Reurink, 2018). The engagement in different financial activities among banks enhances the potential risk of fraud which would have a detrimental effect on various stakeholders within the institution (Sanusi, Rameli & Isa, 2015).

Globally, in Japan the Standard to address the dangers of Fraud in a review was set up in 2013 by Business Accounting Council (BSA, 2019), a warning body found inside the Japanese FSA. In Australia, AS 8001-2011 Fraud and Corruption, gives a proposed way to deal with controlling the danger of extortion and debasement and is expected to apply to all substances. In Hong Kong, the Code on Corporate Governance sets out the standards of good corporate administration, where recorded organizations are urged to either follow the code arrangements or give clarifications to any deviations from the code arrangements (Wesley, 2019).

It has therefore become a necessity for organizations to constantly improve upon their fraud and fraud risk management strategies as fraudsters continue to stay ahead of the best fraud detection models. In order to decrease the likelihood of fraud occurring inside an organization, fraud risk management is used. This entails locating, evaluating, and reducing fraud threats inside a company (Samociuk & Iyer, 2017). This can include implementing policies and procedures to prevent and detect fraud, training employees on how to recognize and report fraudulent activities, and investing in advanced technologies such as fraud detection software. The process of fraud risk management thus involves integrating a culture that meets various pillars including identification of risks, evaluation, determination of actions or plans and implementation of the plans (Madah Marzuki et al., 2020). In this study, the researcher will focus fraud risk assessment, prevention, governance and monitoring.

Fraud risk assessment is an essential component of effective fraud risk management. It involves identifying and assessing the potential risks of fraud within an organization, and implementing strategies to mitigate these risks (Sadgrove, 2016). It includes steps such as identifying potential fraud risks, assessing their likelihood and impact, prioritizing them, developing a fraud risk management plan, and monitoring and reviewing it regularly. A well-designed and executed fraud risk assessment can help financial institutions to identify, assess, and manage the potential risks of fraud, which can ultimately help them to minimize losses and maintain their reputation (Apreku-Djan et al., 2022; Rehman and Hashim, 2020).

According to Sileyew (2019), a location is a geographical site where the actual data collection takes place and in the case of the study, it was in Laikipia County, Kenya. Laikipia County is found on the slopes of Mount Kenya. The region is well known in agricultural, tourism and other trade activities which generate substantive income to the region. The Sacco's in Laikipia County were having issues related to poor client-staff relations since transactions were processed slower than expected, frequent change of customer needs and preferences hence it become costly to keep developing new services and products on request. Implemented financial innovations were not user friendly for clients to use hence they avoided using them resulting to loss of purported income to the Sacco.

II. STATEMENT OF THE PROBLEM

Fraud in SACCOs has been on the rise in the recent past. In 2021, SACCOs lost around $10,600 in the 17 months leading up to March 2021, according to the Kenya Financial Sector Stability Report from the Central Bank of Kenya (CBK, 2021). To conduct fraud, the attackers targeted systems' weak controls. The CBK study advised all SACCOs to assess and enhance their IT infrastructure for increased member protection. Majority of Sacco members complain of suspected fraud among their deposit-taking institutions reflected by a rating of 9.64 % (SASRA, 2021). In 2019, Biashara Sacco - one of the biggest SACCOs in Laikipia County was hacked. Other saccos such as Taifa SACCO and Mwalimu SACCO have also had cases of fraud. There is a higher chance of a cyber-attack, a data breach, and identity theft among SACCOs since cyber-breach occurrences are growing more complex. SASRA (2021) note that the incidence in mobile banking and cybercrimes resulted to a loss of approximately sh106 million within Saccos by March of 2021.

The rise in fraud has forced the Ministry of cooperatives to establish the Sacco societies' fraud investigation unit within the SASRA framework to tame the rise in fraud (SASRA, 2021). The status of organizations which includes operations and engagement with various stakeholders remains at risk as a result of fraud (Sanusi et al., 2015). Despite the rise in fraudulent activity in SACCOs, much of existing research has been carried out in commercial banks. Studies by Gesare et al. (2016), Njeri (2022), Kabue and Aduda (2017) and Ohando (2015) were all conducted in commercial banks. Others studies by Adebayo et al. (2022), Kariuki (2017), Kimathi (2018), Kiprono and Ng'ang'a (2018) and Mwangi and Ndegwa (2020 were carried out in other sectors of the economy namely the gas sector, kenya ports authority, non-governmental organizations and Kenyan listed companies. Studies carried out in SACCOs are scarce.

SPECIFIC OBJECTIVES

i. To determine the effect of fraud risk assessment on the financial performance of deposit taking SACCOs in Laikipia County.

RESEARCH HYPOTHESES

Ho: Fraud risk assessment has no statistically significant effect on the financial performance of deposit taking SACCOs in Laikipia County.

LITERATURE REVIEW

THEORETICAL REVIEW

Agency Theory

The authors of the agency theory are Michael Jensen and William Meckling, who first published the theory in 1976. The agency theory is a form of economics that looks at how the interests of the principals (such as shareholders) and the agents (such as managers) of a company interact and how they can be aligned (Mitnick, 2019). It suggests that the management of a company may act in their own self-interest, rather than in the interest of the shareholders, which can lead to fraud and mismanagement. The theory has been applied to many fields such as finance, law, management, marketing, and organizational behavior. It is also used to analyze the relationship between a company and its customers, suppliers, and other stakeholders (Panda & Leepsa, 2017; Vargas-Hernández & Teodoro Cruz, 2018).

The theory posits that the principal hires an agent to perform a specific task, but the agent may not always act in the best interest of the principal because they may have different goals or incentives (Bendickson et al., 2016). The principal may not have perfect information or control over the agent, which can create a "moral hazard" where the agent takes on more risk than the principal would like. Moral hazard in agency theory is the idea that agents may take more risks when the consequences of those risks are unknown to the principal. This can lead to problems such as the agent taking more risks than they should and the principal not getting the expected return on their investment. This is an important concept in economics, as it can have an impact on the relationship between a company and its customers, suppliers, and other stakeholders (Mitnick, 2019: Panda & Leepsa, 2017).

Effective fraud risk management can help SACCOs to identify and prevent fraud, which can protect the institution's financial performance and maintain the trust of customers and shareholders. The agency theory is relevant in fraud risk management because it deals with the potential conflict of interest between a company's management and its shareholders (Ali, 2020). This theory suggests that management may act in its own interests rather than in the best interests of shareholders. This can lead to fraudulent activities, such as insider trading, self-dealing, and embezzlement. To mitigate this risk, companies need to put in place strong internal controls and have a robust system of checks and balances (Vargas-Hernández & Teodoro Cruz, 2018).

Fraud Management Lifecycle Theory

The economic theory of crime was first proposed by Gary S. Becker in 1968 in his book Crime and Punishment: An Economic Approach. Since then, the theory has been expanded upon and developed by other economic theorists, including Steven D. Levitt, who wrote the book Freakonomics in 2005. According to this idea, criminals rationally maximise their own self-interest within the limitations imposed by the marketplace and other factors (Gottfredson, & Hirschi, 2022). The economic theory of crime borrows from a variety of theories, including neoclassical economics, utilitarianism, and rational choice theory. Additionally, it incorporates game theory, which looks at the decision-making process of two or more parties that are in competition with each other (Cook, 2017; Becker et al., 2017).

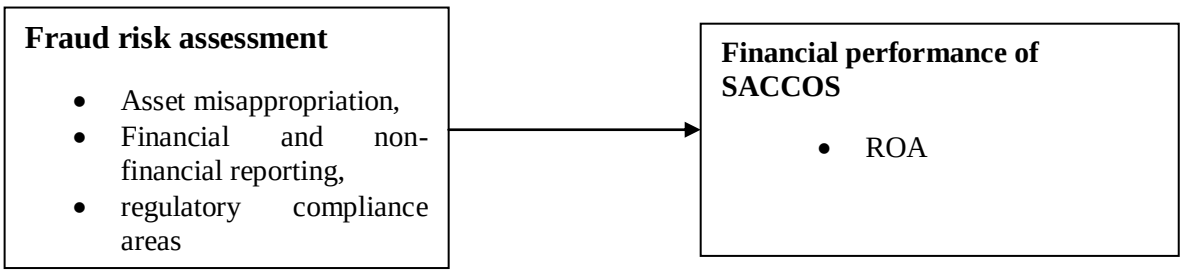
According to this theory, individuals will engage in criminal activity if the potential benefits outweigh the potential costs. The costs of criminal activity include the risk of being caught, the severity of the punishment, and the time and effort required to carry out the crime. The benefits of criminal activity include the financial gain from the crime, the thrill of committing the crime, and the potential for personal or social gain (Akers, 2017; Thornberry, 2018). The theory suggests that increasing the costs of criminal activity, such as by increasing the likelihood of being caught or increasing the severity of the punishment, can deter criminal behavior. Similarly, reducing the benefits of criminal activity, such as by decreasing the financial gain from the crime, can also deter criminal behavior. Additionally, it suggests that factors such as the unemployment rate and income inequality can affect the level of criminal activity (Cook, 2017; Gottfredson, & Hirschi, 2022).

In the context of fraud risk management, the economic theory of crime argues that individuals who engage in fraud weigh the potential costs and benefits of their actions before committing the fraud (Gottschalk & Gunnesdal, 2018). The costs of fraud include the risk of being caught, the severity of the punishment, and the time and effort required to commit the fraud. The benefits of fraud include the financial gain from the crime, the thrill of committing the fraud, and the potential for personal or social gain. Economic theory of crime suggests that increasing the costs of fraud by implementing effective fraud risk management measures such as fraud detection and prevention systems, can deter fraudulent behavior (Abdullahi & Mansor, 2018). These measures make it more difficult and less profitable for individuals to commit fraud, which decreases the benefits of committing fraud, and thus reduces the likelihood of fraudulent activity.

CONCEPTUAL FRAMEWORK

. A conceptual framework explores the relationship between independentvariables and dependent variables.

Independent Variables **Dependent Variable**



III. RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

In this study, a descriptive survey design was utilized. In a descriptive survey design, the researcher constructs a survey instrument (such as a questionnaire or interview guide) and administers it to a sample of individuals from the population of interest.

TARGET POPULATION

The unit of observation in the study is the deposit-taking SACCOs in Laikipia County. According to SASRA (2022), there were 7 registered DT-SACCOs operating in Laikipia County for the financial year 219-2023. The unit of analysis will be members of the board and managers of the deposit-taking SACCOs in Laikipia County. Every SACCO is governed by a board of directors comprising between 9 and 13 members. Deposit-taking SACCOs in Laikipia County were selected due to an increase in fraud cases. Additionally, each SACCO has a manager.

SAMPLING TECHNIQUE

A census of all 7 registered DT-SACCOs operating in Laikipia County was carried out. This decision was informed by the small number of the population, eliminating the need to sample. From each SACCO, purposive sampling was used to select managers. Therefore, all 7 managers were included.

Slovin's formula was used to calculate the sample size for the members of the board: n=N+Ne2n=1+Ne2N

Where

"n" represented the sample size,

"N" represented the population, and

"e" was the margin of error.

Therefore, in a population of 79: n=79+79×0.052=66n=1+79×0.05279=66

DATA COLLECTION INSTRUMENT

Data was collected using a self-administered questionnaire. The questionnaire had several sections to collect data on the financial performance of deposit-taking SACCOs, fraud risk assessment, prevention, governance, and monitoring.

DATA ANALYSIS AND PRESENTATION

Upon completion of data collection, the data was exported to SPSS. The collected data was subjected to descriptive and regression analysis. Descriptive analysis was used to establish the performance of deposit-taking SACCOs, assess fraud risk, prevention strategies, governance, and monitoring. To determine the effect of independent variables on performance, linear regression was conducted. The following model guided the regression analysis:

$Y= \beta_0+ \beta_1 x_1 \varepsilon$

Where;

Y= Financial Performance

e= error term,

X_1= Fraud Risk Assessment

FINDINGS AND DISCUSSIONS

Fraud risk assessment by deposit taking SACCOs in Laikipia County

The researcher further sought to establish the level of agreement on fraud risk assessment on deposit taking SACCOs in Laikipia County. The table 4.4 shows the result of the finding.

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Mean	Std.
Potential sources of fraud have been identified	41%	44%	2%	5%	7%	4.077	1.149
Potential sources of fraud are prioritized	49%	38%	6%	0%	6%	4.246	1.031
The likelihood of different types of fraud occurring is evaluated	40%	46%	2%	6%	6%	4.077	1.108
Based on the risk identification and prioritized, control are developed and implemented to mitigate or prevent fraud	44%	36%	5%	6%	7%	4.046	1.205
The potential financial and reputation impact of a successful fraud attempt has been evaluated	47%	35%	2%	9%	6%	4.092	1.195
Regular training regarding	47%	43%	0%	5%	5%	4.246	1.016

fraud risk, detection and prevention are conducted to ensure that employees are aware of the risk						
The regular assessment of fraud risks significantly contributes to the overall financial health of deposit-taking SACCOs.	55%	32%	3%	2%	7%	4.262	1.136
Overall mean						**4.149**	**1.120**

The respondents with a(mean ≈ 4.077; std dev < 1.149) stated that the potential sources of fraud have been identified further majority of the respondents stated that potential sources of fraud are prioritized with a(mean ≈ 4.246; std dev < 1.031). Majority of the respondents stated that the likelihood of different types of fraud occurring is evaluated with (mean ≈ 4.077; std dev < 1.108). Further a majority with (mean ≈ 4.046; std dev < 1.205) stated that based on the risk identification and prioritized, control are developed and implemented to mitigate or prevent fraud. From the findings majority (mean ≈ 4.092; std dev < 1.195) stated that the potential financial and reputation impact of a successful fraud attempt has been evaluated. The respondents with a (mean ≈ 4.246; std dev < 1.016) agreed that regular training regarding fraud risk, detection and prevention are conducted to ensure that employees are aware of the risk. Finally From the findings majority of the respondents stated that the regular assessment of fraud risks significantly contributes to the overall financial health of deposit-taking SACCOs with a (mean ≈ 4.262; std dev < 1.136). The findings are in line with Rehman and Hashim (2020) findings in Oman. The research found out that employing fraud risk assessment help businesses improve their governance practises. In a similar study in Ghana, Apreku-Djan et al. (2022) study found out that applying fraud risk management can improve economic, market and cash value added of banks. It was discovered that fraud risk management techniques and value-based financial performance had a significant beneficial association.

Returns on assets of the SACCO in the 2019 -2023 financial year

	N Statistic	Minimum Statistic	Maximum Statistic	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
ROA	35	107085255.000000	627000000000.0000000	3.737	.597	13.975	1.154
Valid N (listwise)	35						

Findings of the study revealed that the highest ever recorded returns on assets (ROA) of the 7 selected SACCO operating in Laikipia County in 2019-2023 financial year was 627,000,000,000.00 while the lowest ever recorded returns on assets was 107,085,255.00. This implies SACCOs with higher returns on assets may have a competitive advantage over others, potentially attracting more members and investments. Conversely, SACCOs with lower returns may face challenges in retaining members and competing in the market. Further The SACCOs with higher returns on assets may be better positioned in terms of financial stability and sustainability. They may have more resources to invest in growth opportunities, expand their services, and withstand economic downturns.

Regression Coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.114	.140		.818	.263
	Risk_ assessment	.942	.059	.116	.536	.001

a. Dependent Variable: Financial performance

The regression analysis reveals that risk assessment has a significant positive influence on financial performance, with an unstandardized coefficient of 0.942. This suggests that for every one-unit increase in Risk

Assessment, Financial Performance improves by 0.942 units. Additionally, the p-value of 0.001 indicates that this relationship is statistically significant, meaning the likelihood that this effect is due to chance is very low. The standardized coefficient (Beta = 0.116) shows that Risk Assessment, though impactful, has a moderate relative effect compared to other variables.

IV. CONCLUSIONS OF THE STUDY

The researcher concluded that the identification and prioritization of potential sources of fraud showcase proactive measures taken by these organizations. This is further reinforced by the evaluation of the likelihood of various fraud types occurring, indicating a thorough understanding of potential risks. Moreover, the development and implementation of controls based on risk identification and prioritization signify a strategic approach to fraud prevention and mitigation. The evaluation of the potential financial and reputational impact of successful fraud attempts underscores a comprehensive risk management strategy within these SACCOs. Regular training sessions focused on fraud risk, detection, and prevention demonstrate a commitment to raising employee awareness and fostering a culture of vigilance against fraudulent activities. Lastly, the recognition that regular assessment of fraud risks significantly contributes to the overall financial health of deposit-taking SACCOs highlights the importance of ongoing risk management practices in safeguarding organizational assets and maintaining stability.

RECOMMENDATIONS OF THE STUDY

The study recommends that given that risk assessment has a statistically significant positive impact on financial performance; it is advisable for deposit-taking savings and credit cooperative societies in Laikipia County to prioritize and strengthen their risk assessment processes. This could involve employing more sophisticated risk assessment methodologies, leveraging data analytics tools for risk identification, and ensuring that risk assessment practices are comprehensive and regularly updated.

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