

Influence of Operational Risk on Financial Performance of Deposit Taking Savings and Credit Co-Operatives in Kakamega County

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Abstract: The general purpose of the study was to study the influence of operational risk on the financial performance of deposit taking savings and credit cooperatives in Kakamega County. The specific objective was to find out the influence of financial systems on financial performance of deposit taking savings and credit societies in Kakamega. The study used a descriptive survey design. The population consisted of all the four; Invest and Grow, Weversity, Afya and Sukari deposit taking Saccos operating in Kakamega County. A semi-structured questionnaire was used to collect the data from a sample size of 56 respondents. The data from the respondents was coded on statistical package for social science (SPSS) software and analyzed by descriptive statistics; mean the standard deviation. The data was presented using frequency tables and bar graphs. Correlations, the statistical technique that can show whether and how strongly pairs of variables are related, was used to ascertain the relationship. The study revealed that there was a significant positive linear relationship between financial systems and financial performance of SACCOS in Kakamega County. The study concluded that SACCOS and other financial institutions must focus on the financial systems in minimizing their operational risks. The study recommended that management of SACCOS in Kenya should ensure that adoption and implementation of sound operational risk management practices, that there is appropriate credit risk policy in place, that there is appropriate risk-return tradeoff policy, that there existed favorable internal business environment and that appropriate credit risk limits are set as they impact on the financial performance of the SACCOS.

Keywords: Operational risk, financial systems, Symmetrical Information Theory.

1. INTRODUCTION

Nyaga, (2012) defines a deposit taking savings and credit co-operative is a co-operative financial organization owned and operated by members, according to democratic principles, for the purpose of encouraging savings, by pooled funds to extend loans to members and providing retail financial services to enable them improve their economic and social well-being. The Deposit Taking Sacco's (DTS), in addition to the basic savings and credit products, also provide basic 'banking' services, demand deposits, payments services and channels such as quasi banking services commonly known as ATMs), FOSA and are licensed and supervised under the Sacco Societies Act of, 2008.

With the current complex regulatory and competitive economic environment, companies' have to evaluate the operation risk explicitly across all organization's activities. Operational risk management in financial institutions has undoubtedly attracted attention of the academicians, regulators and practitioners in the recent past. Operation risk is now accepted as a major risk contributor to losses in the financial institutions as seen in Baring bank and Daiwa bank in America that collapsed as a result of malfunctioning of their operation (Leavoy, 2015). Basel Committee on banking Supervision defines operation risk as the risk of loss resulting from inadequate or failed internal processes, human factor and system

and or from external events, these includes legal risk but excludes strategic and reputation risk (BCBS,2011). Operation risk is about risks not covered under credit and market risks, and comes in three dimensions; the course, the event and the consequence (Acharya, 2010)

1.1. Statement of the Problem:

Operational risk is still not fully accepted and understood by academicians and practitioners and it is treated as a left over risk from the other core financial banking risks (Acharyya 2012). The lack of quality data on operational risk forms a physical barrier that hinders the advancement of operational risk research. Most institutions in the past have neglected to collect any operational risk data as it was generally perceived to be unnecessary and the cost incurred in such a task could not be justified (Tang, Guan & Jin, 2010). However the collapse of Barings bank, the oldest merchant bank in London in 1995 after losing \$1.3 billion due to insufficient internal controls at Barings to detect what was taking place, was a wake-up call to the operational risk management (Yazilari, 2012).

Gikundi, Ondiek, Sawa and Musiega (2014) researched on the effects of operational risk on financial profitability in the lending process in ten commercial banks in Kakamega town, findings show that operational risk positively influences profitability of banks. This is consistent to Eptimehin and Obafemi (2015) study in Nigeria on effects of operational risk on financial performance of banks and insurance industry, the results show that operational risk has positive effects on the financial performance. However, this is inconsistent to Tamimi (2015) study on operational risk on the Islamic Arab bank's performance, the study covered eleven out of forty-seven banks in the years 2000 to 2012, and results indicate that operational risk has negative effect on bank's performance. This concurs with Azamat (2014) research on operational risk losses on financial performance in banks in the United States of America; the results show operational risk has a negative effect on financial performance as most firms would hedge the risk to minimize losses. The authors' further recommended research to be conducted on the influence of operational risk on financial performance in other financial sectors in different regions. Based on this argument, this research is to fill the gap finding on the influence of operational risk on financial performance of saving and credit cooperatives in Kakamega County.

1.2. General Objective:

The research aimed at finding out the influence of operational risk management on financial performance of deposit taking saving and credit co-operative in Kenya

1.3. Specific objectives:

To determine the influence of financial processes risk on financial performance of Sacco's in Kakamega County.

1.4. Research Questions:

How does financial processes risk influence financial performance in Saccos in Kakamega County?

2. LITERATURE REVIEW

2.1. Symmetrical Information Theory:

Derban, Binner and Mulinex (2005) suggest that borrowers have to be screened especially by banking and lending institutions in form of credit assessment. Systematical collection of reliable information from prospective borrowers is critical to accomplish effective screening as advocated by symmetric information theory. Various methods such as qualitative and quantitative techniques can be used in assessing the borrowers even though challenges of using qualitative models are in their subjective nature. However, borrower's characters assessed through qualitative models can be assigned numbers with the sum of the values compared to meet the set threshold. A fault process will magnify the operation risk exposure of the firm. However, this technique minimizes processing costs reduces subjective judgments and possible biases. The credit rating system is important if it exposes changes in expected level of credit loan loss. The ultimate goal is to minimize risk. The study concluded that quantitative models make it possible to numerically establish which factors are important in explaining default risk, evaluating the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan applicants and calculating any reserve needed to meet expected future loan losses.

The importance of loss event data processing system of operation risk that is incorporated into a comprehensive company-wide risk management system ensures a consistent and extensive dataset on operational risk loss event in the entire company and can be used in the assessment and modeling of operational risk impact on the company processes. This data processing system enables a company to include the impact of operational risk loss events in the development of new businesses, products or services by enabling the development team to simulate or model the impact of loss events on a

new business before it is developed and launched. The results of these simulations can then be used in the overall cost-benefit analysis of the new business and included in the final decision on the launch or rejection of the new information system in a business, (Goldstein et al. 2011).

Conceptual Framework:

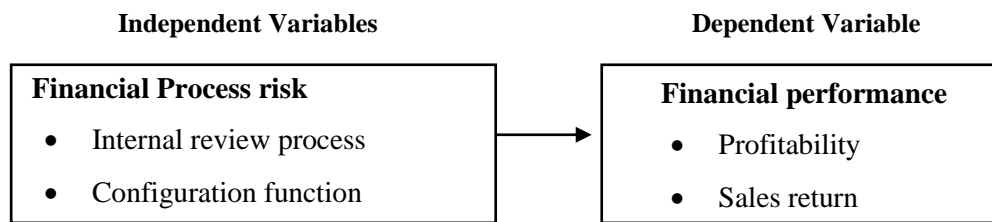


Figure 1: Conceptual Framework

2.2. Financial process:

Okunbor and Obaretin (2010) study on Credit practices in rural SACCO's in Nigeria, financial processes are major contributors of operation risk in the banking institution. It's now a fact over the last decade that large bank losses originated from vulnerabilities in the operational processes, procedures in the system and appearances of threats which cause significant operational loss events as observed in Nigeria's SACCOs. One striking example is the collapse of Barings Bank where misuses of accounts by an insider trader, lack of internal control and audit coupled with inadequate segregation of duties were cited as the source of fraudulent transactions leading to massive financial losses. The failure to follow laid down processes and procedures as in Stanbic bank proved that the despite of the existence of risk governance standards, there has been experiencing continuous bank fraud, system failures, processes and deliberate refusal to follow procedures with the staff of the bank playing a central role in most of the reported cases (Bank of Uganda On-Site Examination Report, 2009).

A study on information risk in five sectors quoted in Nigerian Stock exchange revealed that the non- information technology risk; the inappropriate procedures and processes of activities contributed immensely on the banks operation risk. A sample of one hundred and forty respondents from ten companies using the simple regression model and descriptive statistics for the purpose of data analysis, result showed that the application of operation risk management practices by quoted companies in Nigeria is effective in curbing fraudulent processes (Okunbor et al. 2010).

2.3. Financial Performance of a SACCO:

Financial performance is the measure of how well a firm uses its assets to generate revenues. This definition is used as a general measure of a firm's overall financial soundness over a given of time, and can be used to compare similar firms in the same industry and across industry or to compare industries or sectors in aggregation (Githinji, 2011). Financial performance measures efficient and effective utilization of resources available to a firm aiming at maximizing capital returns of an organization as availed in financial statement (Parrenas, 2005).

Kariuki (2014) explained that evaluating the financial performance of a business enables managers and decision-makers to measure the results of business strategies and activities in objective and unbiased monetary terms. It therefore facilitates measurement of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation

Trew (2006) study on Finance and growth in banks ascertained that a firm's growth theory is not directly connected to the financial growth of a firm. The firm's growth model of a firm has three categories; the finance mechanism endogenous growth and the treatment of asymmetric information. The research emphasized that regardless of the source of endogenous growth, the primary feature that influences growth in most models is some financial constraint on the acquisition of either knowledge through education or technology through entrepreneurship.

2.4. Empirical studies:

Kamau (2010) in a study on adaptation of risk management by commercial banks in Kenya, indicated that operational risk was very critical and it was 44% out of the other risks that occurred in commercial banks, and this is due to the high increase in the use of automated technology, lack of qualified staffs and lack of management supports in the organizations, and also the internal and external frauds. Mago, Hofisi and Shamiso (2013) study on microfinance

Institutions and Operational Risk Management in Zimbabwe concluded that limited capability, untrained staff inadequate resources and at times the politics hinders the management of operation risk. Using secondary sources, the challenges found include transaction risks, fraud and legal risk. Legal risk uncertainties should also be removed to allow an enabling management of operation risks in financial institutions as these would strengthen their operational risk management.

3. RESEARCH METHODOLOGY

3.1. Introduction:

Kothari (2004) defined research methodology as a way to systematically solve the research problems. Research methodology described in details how the research is, what methods are used to achieve the research objectives. This chapter presented the methodology, which was used to carry out the study. It described the research design, target population, the sampling frame, the sample and sampling techniques that were used to select the sample size. It also described how data was collected and analyzed.

3.2. Research Design:

The study employed descriptive survey design. Descriptive survey was conducted to describe the present situation, what people currently believe, what people are doing at the moment and so forth (Collins, Onwuegbuzie, and Jiao, 2007). The purpose is the description of the state of affairs as it exists at present (Kothari, 2004). This choice of the research design was because of the need to describe the present situation regarding operation risk and performance of Invest & Grow Sacco, Weversity Sacco, Sukari Sacco and Afya Sacco deposit taking savings and credit cooperatives. The researcher used primary data.

3.3. Target Population:

Cooper and Schindler (2007) target population is the specific population from which information is obtained, it referred to an entire group of individuals, events or objects having a common observable characteristic. The study targeted all the population in the four deposit taking Sacco's. Kothari (2010) refers to this as a complete enumeration of all items in the population. . The target population comprises of the four Sacco's; Invest and Grow Sacco, Wevarcity Sacco, Afya Sacco and Sukari Sacco deposit taking Sacco's licensed and operating in Kakamega County as per the registration report of SASRA (2014).

3.4. Sampling Technique:

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample was selected, this enables a researcher come up a sample size that is representative of the entire population under study. (Cooper & Schindler, 2007).

3.5. Sample Size:

A sample is a subset of a population of element drawn from a large population. According to Kothari (2010) a sample is a population selected for observation and analyses and used to make inference to the population from which it was obtained. It suggested that at least 10% of the population is a good representation where the population is large and 20% where the population was small. The research used a census thus all the 56 respondents of four deposit taking Sacco's as per the registration report of SASRA (2014). The respondents comprises Sacco managers, Credit Managers, Tellers, Accountants, Cashiers, Finance Managers and FOSA Managers in finance department from the top and middle level managers. Census method was undertaken as the population is below 100. This ensured adequate representation of the subjects of the study.

3.6. Data Collection Instruments and Procedure:

Burns and Grove (2010) defined data collection as the precise, systematic gathering of information relevant to the research problems, using methods such as interviews, participant observations, focus group discussion, narratives and case histories. Cooper and Schindler (2007) state that the questionnaire is conveniently used because it is cheaper and quicker to administer. The study used quantitative primary data gathered by use of structured questions. According to Kothari (2004) primary data is that which is collected afresh and for the first time, and thus happen to be original in character. Research administered structured questionnaire for ticking where applicable. Questions were used as the instrument for data collection.

3.7. Pilot Test:

A pilot test is an exercise that involves the administration of the data collection instrument to a smaller number of respondents in order to test for the reliability and validity of the data collection instrument. Kothari (2004) describes a pilot survey as a replica and a rehearsal of the main survey. The study conducted a pilot study in order to establish the validity and reliability of data collection instruments. Questionnaires were piloted by issuing them to five respondents. The questionnaires were coded and responses input into SPSS which was used to generate the reliability coefficient.

3.7.1. Validity;

According to Mugenda and Mugenda (2003) validity is the accuracy and meaningfulness of inferences, which are based on the research results. Therefore, validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. To ensure content validity, the questionnaire was subjected to thorough examination by supervisors. They were asked to evaluate the statements in the questionnaire for relevance and whether they were meaningful, clear and loaded of offensive. On the basis of the evaluation, the instrument was adjusted appropriately before subjecting it to the final data collection exercise. Their review comments were used to ensure that content validity is enhanced.

3.7.2. Reliability:

Reliability is the consistency of a set of measurement items (Cronbach, 1951). Reliability is the consistency of measurement, or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. In short, it is the repeatability of measurement. A measure is considered reliable if a person's score on the same test given twice is similar. The researcher used the most common internal consistency measure known as Cronbach's Alpha (α) which was generated by SPSS. It indicated the extent to which a set of test items can be treated as measuring a single latent variable (Cronbach, 1951). The recommended value of 0.7 was used as a cut-off of reliability for this study.

3.8. Data Analysis and Presentation:

Data Analysis is the processing of data to make meaningful information (Saunders, Lewis and Thornbill, 2009). After quantitative data has been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS was used to produce frequencies, descriptive and inferential statistics which were used to derive conclusions and generalizations regarding the population. A multiple linear regression model was used to test the significance of the influence of operation risk on financial performance on SACCO in Kakamega County. The multiple linear regression model was as laid below.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = Financial performance

X₁ = financial systems

X₂ = financial security

X₃ = financial process

e = Error term and α = constant

β = coefficient of independent variables

4. DATA ANALYSIS AND PRESENTATION

This chapter dealt with the analysis and results of the data. The findings were presented based on the one specific objectives of the study. Precisely, the study examined the influences of financial systems on financial performance of SACCOS in Kakamega. A structured questionnaire was used during the study to collect data. Section A addressed the general/demographic information of the research, while subsequent section addressed issues relating to independent variables.

4.1. Response rate:

Table 4.1: Response rate

category	Frequency	Percent
Returned Questionnaires	53	95.50%
unreturned Questionnaires	3	4.50%
Total	56	100%

A total number of 56 questionnaires were administered to employees in the sampled SACCOs. According to table 4.1, a response of 53 was recorded. This constituted 95.5% response rate. Response rate refers to the extent to which the final data set included all sample members and is calculated as the number of people with whom interviews are completed divided by the total number of people in the entire sample, including those who refused to participate and those who were unavailable. According to Mugenda and Mugenda (2003), a response rate of more than 50% is adequate for analysis.

4.2. Work Experience of the Respondents:

The study sought to establish the work experience of the respondents. The results are in Figure 4.1.

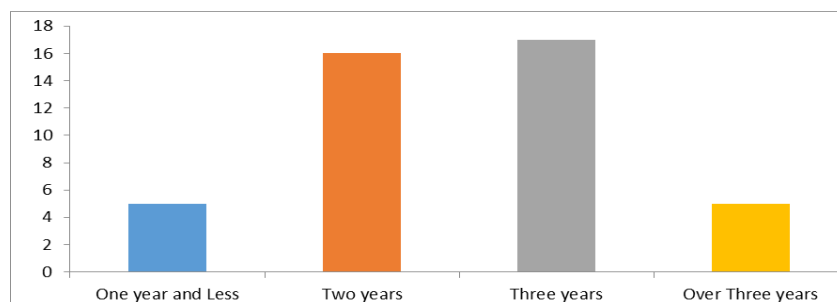


Figure 4.1. Showing Work Experience of the Respondents

The results further revealed that 21 of the respondents had worked for 3 years at the in their SACCOs. The respondents who had worked for 2 years were 20 while 6 respondents had worked for less than one year and over 3 years. The findings implied that majority of the respondents had worked long enough to respond to the questions asked in the questionnaires

4.3. Descriptive Results

In this section, data collected using questionnaires are classified and analyzed. The presentation of responses in the questionnaire was done based on the specific objectives of the study. The tables are presented using frequency and percentage, with the Strongly Disagree; Disagree; Neutral; Agree; Strongly Agree to express frequency of each fact. The mean (M) and the standard deviation (SD) of each statement were also computed.

4.3.1. Descriptive Statistics for Financial Systems:

The second objective of the study was to establish the influence of financial systems on the financial performance of Sacco's in Kakamega County. The study used descriptive analysis to test the relationship. The results are in Table 4.2.

Table 4.2: Descriptive Results for Financial Process

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std Dev
My organization has a centralized operational management system	7.0%	14.0%	16.3%	23.3%	39.5%	3.74	1.31
My organization has a backup system in the event of operation system failure	11.6%	11.6%	18.6%	30.2%	27.9%	3.51	1.33
My organization has segregated duties and spread transaction processing to different individuals	7.0%	16.3%	16.3%	41.9%	18.6%	3.59	1.18
My organization a laid down corrective measures in the event of deliberate inappropriate process and procedures	7.0%	11.6%	11.6%	39.5%	30.2%	3.74	1.22
Organization's processes and procedures are reviewed regularly by external consultants	7.0%	14.0%	14.0%	37.2%	27.9%	3.65	1.23

The study aimed to find out whether SACCOs in Kakamega had a centralized operational management system, the statement had a mean of 3.74 which showed that majority of the respondents agreed. On whether SACCOs in Kakamega had a backup system in the event of operation system failure, the statement had a mean of 3.51 which indicated that majority of the respondents also agreed. The result also showed that the statements “my organization has segregated duties and spread transaction processing to different individuals”, “my organization a laid down corrective measures in the event of deliberate inappropriate process and procedures”, “organization’s processes and procedures are reviewed regularly by external consultants” had a mean of above 3.5 which implied that majority of the respondents also agreed. These findings implied that financial processes in SACCOs in Kakamega were adequate and properly managed. The findings were in agreement with Okunbor and Obaretin (2010) who found out that financial process are major contributors of operation risk in the banking institution. It’s now a fact over the last decade that large bank losses originated from vulnerabilities in the operational processes, procedures in the system and appearances of threats which cause significant operational loss.

4.3.2. Descriptive Statistics of Financial Performance:

The study further sought to establish the level of financial performance of SACCOs in Kakamega. Performance was measured in terms of profits, number of loans disbursed, reduction in non-performing loans, and increase in capital and increase dividend payout. The results are presented in Table 4.3.

Table 4.3.: Results for Financial Performance

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std Dev
My organization profit have increased for the last five years	2.3%	7.0%	2.3%	48.8%	39.5%	4.16	0.95
My organization has increased the number of loan disbursements in the last three years	0.0%	16.3%	4.7%	39.5%	39.5%	4.02	1.06
My organization has a reduced the number of bad debt and loan defaulters	4.7%	11.6%	4.7%	41.9%	37.2%	3.95	1.15
My organization capital base has increased from previous years	4.7%	2.3%	4.7%	41.9%	46.5%	4.23	1.00
My organization dividend payout has increased for the last five years	9.3%	4.7%	4.7%	37.2%	44.2%	4.02	1.24

On whether profit had increased majority agreed as shown by the mean of 4.16, increase in number of disbursed loans had a mean of 4.02, reduction in the number of non-performing loans had a mean of 3.95 while increase in capital had a mean of 4.23 and final increase in dividend payout had a mean of 4.02. The finding implied that SACCOs that participated in this study were performing well financially.

4.4. Correlation Analysis Results:

Kothari (2014) stated that the importance of correlation is to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. The correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. A linearity test was conducted as evidenced by the Pearson correlation coefficient.

4.4.1. Overall Correlation Results:

According to Kothari (2014), the correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. A collinearity test was conducted as evidenced by the Pearson correlation coefficient. The results are presented on Table 4.4.

4.4.2. Univariate Regression Analysis for Financial process and Financial Performance

The study also adopted regression analysis to ascertain the relationship between financial process and financial performance. The results for model summary are as presented on Table 4.16.

Table 4.4: Model Summary for Financial process and Financial Performance

Model	1
R	.485a
R Square	0.235
Adjusted R Square	0.217
Std. Error of the Estimate	0.73808

$R^2 = 0.235$ indicated that 23.5% of variation in the financial performance of SACCOs can be explained by their financial processes while the remaining percentage is explained by other variables not in the model.

F-test was carried out to test influence of financial process on the financial performance of SACCOs in Kakamega. The results are indicated on Table 4.17.

Table 4.5: ANOVA for Financial process and Financial Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.876	1	6.876	12.622	.001 ^b
	Residual	22.335	41	.545		
	Total	29.211	42			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Financial Process						

The results of ANOVA test showed that the F value is 12.622 with a significance of p value = 0.001 which is less than 0.05, meaning that financial process had significant influence on financial performance of SACCOs in Kakamega. The model coefficients results are as indicated on Table 4.18.

Table 4.6: Coefficient for Financial process and Financial Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.825	.644		2.831	.007
	Financial Process	.621	.175	.485	3.553	.001
a. Dependent Variable: Financial Performance						

The coefficient $\beta = 0.621$ was also significantly with a p-value=0.000 which is less than 0.05. The results implied that a unit change in financial process will result in 0.621 units change in financial performance of SACCOs in Kakamega. This further confirmed that there was a significant positive linear relationship between financial process and financial performance of SACCOs in Kakamega. The findings were in agreement with Okunbor and Obaretin (2010) who found out that financial process are major contributors of operation risk in the banking institution. It's now a fact over the last decade that large bank losses originated from vulnerabilities in the operational processes, procedures in the system and appearances of threats which cause significant operational loss.

5. CONCLUSION

The objective of the study was to establish the influence of financial process on the financial performance of Sacco's in Kakamega County. The results of correlation showed that there was a strong positive and significant association between financial systems and financial performance of SACCOs in Kakamega ($r=0.485$, $p=0.000$). This further confirmed that there was a significant positive linear relationship between financial systems and financial performance of SACCOs in Kakamega.

6. RECOMMENDATIONS

The study recommended that management of SACCOs in Kenya should adopt and implement sound operational risk management practices; that is, appropriate credit risk policy, appropriate risk-return tradeoff policy and suitable internal business environment as they impact on the financial performance of the SACCOs. Sacco's management should overcome inadequate knowledge among the implementing managers by providing the necessary knowledge through training and promotion of Risk Management among their staff.

Areas for Further Research:

The researcher suggests that further study should be undertaken in order to investigate the determinants of operational risk; the legal risk, fraud and influence of human risk in operational risk in SACCOS in Kenya. Findings from such study will provide more insight on the relationship between the said determinants, which could be useful in informing risk management strategies and policy in Kenyan SACCOs. Further research should also consider utilizing both qualitative and quantitative techniques that can be used in assessing the borrower's risk.

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