



## Credit Management Practice, SACCO Size and Financial Sustainability of Deposit Taking Saving and Credit Co-Operatives in Kenya

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### Abstract

**Purpose:** Deposit Taking Saving and Credit Co-operatives facilitates financial intermediation, inclusion and deepening. In spite of this, 30 percent do not operate with prudent credit management practices attributed to unremitted deductions by employer institutions or borrowers' default and unskilled employees. This makes them prone to de-licensing for being financially vulnerable thus, putting members' funds at risk. This is still a puzzle even with the investment by the government on an oversight authority that can ensure they are compliant to the regulations so as to maintain financial sustainability. This study was conducted to establish the moderating effect of SACCO size on credit management practice and financial sustainability. The information asymmetry theory was adopted where the study population was the Kenya Deposit Taking Saving and Credit Co-operatives.

**Design and Methodology:** A descriptive cross-sectional survey design with a positivism philosophical paradigm where the sample size was 119 respondents out of which 95 percent responded. Emailed questionnaire and data collection sheet were used in data collection.

**Findings:** A binary logistic regression was carried out where it was established that with presence of a moderator for the independent sub-variables, the strength of relationship between variables didn't change (Nagelkerke R<sup>2</sup> = 20.1 percent) but with introduction of interaction term, the strength of relationship between variables changed (Nagelkerke R<sup>2</sup> = 27.2 percent). However, the relationship strength between variables didn't change with presence of a moderator for the independent variable (Nagelkerke R<sup>2</sup> = 19.9 percent).

**Conclusion and recommendation:** This study thus, concluded that SACCO size had a significant moderating effect on the independent sub-variables but the overall independent variable did not show any significance. This study recommended that SACCO size should only be considered while addressing credit risk mitigation and staff competence of DT-SACCOs in an effort to improve their financial sustainability.

## **1.0 Introduction**

Financial sustainability is the ability of an enterprise to continue offering services and meeting its current costs while attaining its goals for a foreseeable future. It leads to growth of an enterprise and boost wellbeing through wealth maximization and offering employment (CBK, 2017). The need for Savings and Credit Co-operative Societies (SACCOs) financial sustainability has been highly advocated globally, owing to its ability to mobilize savings and offer credit facility to the unbankables. Globally, 274 million members have been recruited who have created a savings pool of \$1.7 trillion and an asset base of \$1.8 trillion (World Council of Credit Unions [WOCCU], 2018). However, a major hinderance to SACCOs operations is improper credit management practice such as non-remittance of dues by organizations (Baka, 2013). They also recruit unskilled volunteers who are involved in making important credit decisions. This has seen fraudsters misuse SACCOs through diversion of its resources into personal investments or pyramid schemes, leading to financially unsustainable enterprises (Cuevas & Buchenau, 2018). Thus, the need for effective and appropriate credit management practice is due so as to safeguard members deposits and the enterprise from closure (Muriuki, 2019).

The SACCOs are of much importance more so to Africa in its fight against poverty as enshrined in sustainable development goals, which contribute to 48 percent of poverty level worldwide (Omilola & Lerven, 2019). They offer Micro credit which are more attractive in African countries like Ghana, Rwanda, Kenya and Tanzania. It assists members solve financing constraints and persue investment that enhance their income levels and upsurge employment thus, favouring economic development (Tumwine, Mbabazize, & Shukla, 2015). Micro-credit clients are risky in nature and thus there is need for maintaining proper credit management practice for them to remain financially sustainable (Duguma & Han, 2018). However, this increases co-operatives operational costs at the expense of profits thus, rendering them operationally unsustainable (Sebhatu, 2012).

In Africa, Kenya has been leading in SACCOs performance which made it to receive an award for being in the forefront in the continent. It has also improved in the global ranking to the 11<sup>th</sup> position (WOCCU, 2014). SACCOs are vital in financial intermediation and development of the country's financial sector. They play a major role in financial services provision to majority of Kenyans particularly in the rural areas (Mumanyi, 2014). The sector consists of Deposit Taking Savings and Credit Co-operative Societies (DT-SACCOs) and non-Deposit Taking Savings and Credit Co-operative Societies (Non-DT-SACCOs) (Mugo, Muathe, & Waithaka, 2018). SACCOs that offer back office services activities are supervised by the Commissioner for Co-operatives. On the other hand, those that offer front office services activities are licensed and regulated by SASRA but they have to be fully registered under the Cooperative Societies Act CAP 490 (FinAccess, 2016).

DT-SACCOs are highly regulated by SASRA in their credit management which is their core business. They make use automated mobile reminders, guarantors and auctioneers to recover loans. Correspondingly, credit officers visit to borrowers' home and sociable reminder have also been considered as appropriate ways of recovering the money borrowed by a member. The management has therefore to put in place a well-defined credit policies and procedures understood by the members and employees of the DT-SACCOs (Mwaniki & Wamioro, 2018). They have put in place stringent credit management practices but financial sustainability has not been achieved. This is necessitated by the high cost involved in credit administration, monitoring and collection (Juma, Otuya, & Kibati, 2018). There is need therefore, to offer ideal level of loans and maintain its effective management.

### **1.2 Problem Statement**

DT-SACCOs facilitates financial intermediation and has financially included 6.3 percent of Kenyans and 60 percent of Kenyan population depend on their activities (FinAccess, 2016). In spite of this, 30 percent do not operate with prudent credit management practices which is attributed to unremitted deductions by employer institutions or borrowers' default and unskilled employees (SASRA, 2018). This makes them prone to de-licensing for being financially vulnerable thus, putting 341

billion members' funds at risk (FSD, 2017). This is still a puzzle even with the investment by the government on an oversight authority that can ensure DT-SACCOs are compliant to the regulations so as to maintain financial sustainability. This is so because members' ends up losing value for their hard-earned money since their deposits are not protected. This can create panic and lack of confidence in the sub-sector and its financial sustainability will be affected and thus leading to de-licensing (SASRA, 2018). Nonetheless, large size DT-SACCOs receive the highest economies of scale which assist in hiring skilled manpower and mitigating credit risk than the small size one. (Sebhatu, 2012). Henceforth, it is essential to find out whether SACCO size have an influence on credit management practice.

### **1.3 Study Objective**

To determine whether SACCO size have a moderating effect on credit management practice and financial sustainability of DT-SACCOs.

### **2.0 Literature Review**

Information asymmetry theory was introduced by Akerlof (1970) in the paper on the market for lemons. The theory states that participants in an economic event have different information about each other. The participants have advantage of possessing more relevant information to a transaction than the other. It illustrates a situation where parties to a transaction have unequal amounts of information about a transaction. This creates a disequilibrium of information between the parties to a transaction, which can lead to a skewed transaction taking place. In the credit market, information asymmetry occurs when a borrower has superior information about the possible risks and returns allied to investment activities for which the finances are allotted. Credit provider however, lacks adequate information regarding the borrower (Edward & Turnbull, 2004). This creates two problems in the credit market; moral hazard and adverse selection. Where adverse selection occurs when the credit provider makes an error in lending decisions, while as, moral hazard occurs where the borrower takes more risks (Binks & Ennew, 2004). Moreover, adverse selection is a situation that a lender may be convinced to issue credit to a borrower with projects that has contrary outcome than borrowers with projects that

will have a positive net present value. On the other hand, moral hazard is the possibility that a borrower may engage in actions that are contrary to the gathered information by the credit provider about the borrower and the intended projects, thereby posing a different level of risk (Tfaily, 2017). Information asymmetry may thus affect the financial sustainability of DT-SACCO in Kenya.

The theory makes the assumption that parties to a contract have unequal amount of information about the other party. Borrowers are knowledgeable about their riskiness than the lenders and they utilize the information efficiently against the lenders. Individuals are exposed to risk differently and thus; borrowers are divided into the groups of high risk and low risk. The risk aversion level has no any relationship with riskiness and there exists no product substitute. Organizations are assumed to incur the same cost in their transaction. Additionally, the self-perceived level has a positive correlation with the real level risk (Mahdavi & Izadi, 2012). This leads to imperfection in the market that gives rise to transaction cost.

Information asymmetry is experienced differently with regard to size of the enterprise. It was noted by Abad, Sánchez-Ballesta, and Yagüe (2017) that small sized SACCOs experience more information asymmetry problems than the larger sized ones. This is attributed to larger SACCOs operating in an environment with more transparency in the information availed. The problems of information asymmetry with the DT-SACCOs reduce when the SACCO size increases. It disappears when the SACCOs assets are fully diversified and the depositors do not require monitoring the SACCOs on how they manage their money as they offer credit to borrowers.

Information asymmetry creates market failure in the lending markets leading to high priced loan products driving low priced loan products out of the market. This elaborates the reason why loans attract high loan interest even in a low risky investment with low returns. It is a way of lessening the adverse selection and moral hazard problems effect from differences in information, where finances of capturing the information asymmetries is very expensive. This may make it impossible to manage credit as many loans will be non-performing when borrowers experience less returns in their investments.

Empirical review relating to the study objective was carried out. Kiptoo and Kimani (2018) conducted a study to find out the relationship between credit risk management strategies and table banking groups sustainability in Uasin Gishu County. Credit limits, repayment period, guarantors and credit in compliance with covenant were used as measures of credit risk management strategies. The study was based on credit risk theory where a descriptive research survey research design was adopted. The study was targeting all the table banking groups in Kenya but it was able to access 538 table banking groups registered in Uasin Gishu County. Self administered questionnaires were issued to 230 table banking groups selected through purposive sampling and simple random sampling. Descriptive statistics results indicated that credit limits, strict repayment period policies, reliable guarantors were considered while issuing credit to a borrower. Best performing loans were awarded for their compliance. The regressed data results indicated that there exists a positive significant relationship between credit risk management strategies and Uasin Gishu County table banking groups financial sustainability. It was thus concluded that the table banking groups had credit risk management strategies that were effective and efficient in enhancing financial sustainability. On recommendation the government was challenged to develop training programs that can assist in enhancing the credit risk management strategies. Further, the table banking groups were encouraged to insure the group so as to caution against any possible losses through defaults. The scope of the study was not justified and thus it could be a good representative of other table banking groups in Kenya.

A descriptive survey design was adopted by Mwaura and Wanyoike (2014) who did a study on the role of credit risk management practices and sustainability of micro-credit schemes in Nakuru County. The intervening variables were groups dynamics and government regulations. Structured questionnaire was utilized in collecting data. Pearson's correlation findings revealed that there existed a positive and strong relationship between independent variables and dependent variable. Therefore, a wise practice of credit risk management results to an immense and improved firm

financial sustainability. However, it is not clear how the researcher arrived to 95 respondents from 127 micro-credit schemes in Nakuru County. This creates an unfounded research methodology which requires to show a clear path on any research carried out.

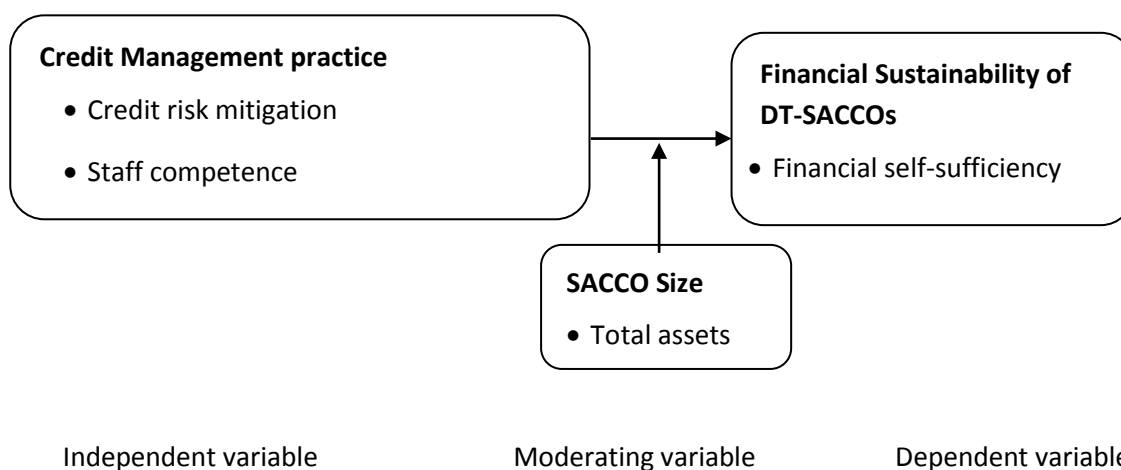
Noor, Njeru and Muoria (2017) did a research on credit risk and transport firms in Kenya performance. Triangulation approach was undertaken in the study where 2013 Kenyan transport firms were targeted. A sample size of 172 was used in obtaining information through a questionnaire. Cronbach alpha and Kaiser-Meyer-Olkin and Barlett test of sphericity were used in testing the reliability and validity of the data. The study concluded that a statistically significant correlation between credit risk and transport firms performance. On recommendation the study emphasized transport firms should establish a credit risk environment that is appropriate as they administer, monitor and control risks. Nevertheless, the sampling procedure is missing thus, the sample used may not be a representative of the transport firms in Kenya. In addition, the study did not have the theoretical and empirical discussions.

The relationship between credit risk management techniques and microfinance institutions in Kampala, Uganda financial performance was reviewed by Shieler, Emenike and Amu (2017). The study was guided by credit risk identification, credit risk appraisal, credit risk monitoring, credit risk mitigation variables. Sixty members of staff in finance and credit departments of three licensed microfinance institutions in Kampala, responded to the closed ended questions. Additionally, the microfinance institutions annual reports of 2011 to 2015 were used in collecting secondary data. Results from Pearson linear correlation coefficient indicated that credit risk identification and credit risk appraisal had a strong positive relationship on financial performance, while credit risk monitoring and credit risk mitigation had a moderate significant positive relationship on financial sustainability. On recommendation microfinance institutions were emphasized to follow stringent credit management practices so as to achieve a maximum financial performance. Though, the study respondents came from finance and credit department a 6.7 percent of the staff did not indicate their section of work. This could have attracted responses from staffs

who did not have knowledge of credit management in the organisation. Thus, forming unreliable information which could have led to wrong conclusions and recommendations.

An exploratory research was carried out by Kipkoech (2015), with the aim of determining the effect of credit management on SACCO profitability. The objectives of the study were to establish the causal effects of credit debt collection, credit risk assessment, credit granting decision and credit policy on firms' profitability. SACCOs' annual reports and structured questionnaires were used to obtain information from the respondents who included credit officers, credit managers, business development managers and tellers. Multiple regression and correlation analysis results indicated that independent variables (credit debt collection, credit risk assessment, credit granting decision and credit policy) had significant relationship with firm profitability. The study did not portray a justification on choice of Uasin Gishu County SACCOs. Additionally, the study needed to show how the questionnaires were administered to the respondents without duplication of responses who work as either subordinates or colleagues. The results thus, might mislead as they are not in line with the scope. Nevertheless, the study only relied on risk assessment, credit granting decision, credit debt collection and credit policy as a measure of credit management while there are many ways of credit management like maintaining staff competence.

## 2.1 Conceptual Framework





### **3.0 Research Methodology**

A descriptive cross-sectional survey design with a positivism philosophical paradigm was used in the study. In selecting the sample size, the study used the 5 clusters of DT-SACCOs based on original field of membership. This resulted to 119 respondents out of which 95 percent responded. The primary quantitative data was collected by use of an emailed questionnaire while secondary data was collected from the audited DT-SACCOs financial statements and SACCO reports. The computed Cronbach's Alpha Coefficient of 0.784 attested the reliability of the questionnaire. Binary logistic regression model was used to test the moderating effect of SACCO size on the predictor variables and the response variable. Nagelkerke's R-Square change tested the strength of the relationship of the predictor variable and response variable. Wald test was carried out to test the significance for individual independent variables at 5% significance level for the P-values.

### **4.0 Results and Discussions**

This section presents the results and discussions of response rate, the descriptive results and the hypothesis test.

#### **4.1 Credit Management Practice Descriptive Results**

Credit management practice was evaluated through credit risk mitigation measures used and the staff competence. The first evaluation of credit management practice was through credit risk mitigation. The study posed questions based on these measures of credit risk mitigation in DT-SACCOs. The respondents were required to indicate if they consider borrowers credit referencing bureau report, credit score, guarantors' information, number of shares held and the savings trend before issuing credit. The DT-SACCOs that were found to consider credit report while issuing loans to borrowers were 88.5 percent, while those who considered the credit score were 88.5 percent, 100 percent considered guarantors' information and number of non-withdrawable deposits while 62.8 percent considered the saving trends. Further, the researcher sought to find out the highest repayment period offered to the borrowers on loans issued. It was noted that 82.3 percent of the DT-SACCOs issued loan with the highest repayment period of more than one year. On the other hand, only 17.7

percent of the DT-SACCOs issued loans with the highest repayment period of one year.

The study further evaluated the staff competence of credit section employees where experience, academic and professional qualification were considered. An analysis was conducted to determine credit section employees experience by considering their longest period of employment in the DT-SACCOs. The analysis results show that credit section staff who were employed in the DT-SACCOs for a period of three years constituted the majority at 67.3 percent while those who had been employed for a period exceeding three years constituted 32.7 percent. Moreover, the staff competence was also measured by enquiring the highest academic qualification and professional qualification attained by the credit section staff in the DT-SACCOs. It was noted that the credit section staffs had different level of academic qualification with certificate level being the lowest qualification and bachelor level being the highest qualification. The analysis shows that diploma holders constituted the majority at 85.5 percent in the academic qualification while bachelor degree holders constituted 12.4 percent and certificate level holders constituted 1.8 percent. On the other hand, the credit section staff were professionally qualified differently. The analysis shows that certified public accountant level II holders constituted the majority at 76.1 percent in the professional qualification while diploma in co-operative management holders constituted 15.9 percent, certified public accountant level I holders constituted 4.4 percent and certified public accountant level III holders constituted 3.5 percent.

Visual binning was carried out to aggregate the parameters of credit risk mitigation and staff competence. Visual binning is a data aggregation or recoding technique that create new distinct ordinal categories of variables from the continuous scale variables (Gray & Kinnear, 2012). First An average of consideration for credit issuance and borrowers' highest credit repayment period was computed and renamed credit risk mitigation. The resulting figure was awarded scores using the visual binning ranging from 1 to 5. The weakest credit mitigation measure received 1 score, weak credit risk mitigation measure had 2 scores, moderate credit risk

mitigation measures had 3 scores, strong credit risk mitigation measures had 4 scores while the strongest credit risk mitigation had 5 scores. From the findings, 59.3 percent of the DT-SACCOs had moderate credit risk mitigation measures while 40.7 percent had a weak credit risk mitigation measure. Secondly, an average of experience, academic and professional qualification was computed and renamed staff competence. The resulting figure was awarded scores using the visual binning ranging from 1 to 5. The lowest staff competence received 1 score, low staff competence had 2 scores, moderate staff competence had 3 scores, high staff competence had 4 scores while the highest staff competence had 5 scores. From the findings, 64.6 percent of the staff had a moderate competence while 35.4 percent had a low competence.

#### 4.2 Credit Management Practice Multicollinearity Test

The study further tested credit management practice sub-variables degree of correlation.

**Table 4.1:** Credit Management Practice Multicollinearity Test Results

		Staff competence	Credit risk mitigation
Staff competence	Pearson Correlation	1	.328**
	Sig. (2-tailed)		.000
	N	113	113
Credit risk mitigation	Pearson Correlation	.328**	1
	Sig. (2-tailed)	.000	
	N	113	113

Staff competence and credit risk mitigation had a weak correlation as shown in table 4.1. Thus, there was no multicollinearity risk between the variables. Spurious outcomes are present in case of multicollinearity between the variables, as they result into inaccurate and unstable matrix inversion that is necessary for regression coefficient computation (Kiai, 2016). Since the variables lacked multicollinearity, they were used in the binary logistic regression as they were.

### 4.3 Credit Management Practice, SACCO Size and Financial Sustainability of DT-SACCOs

The moderating effect of SACCO size on the independent sub-variables and response variable was first carried out. The study tested whether SACCO size had any moderating effect on independent sub-variables (credit risk mitigation and staff competence) and financial sustainability of DT-SACCOs. The test on moderation effects presented a hierarchical regression results for the moderation effects of SACCO size on credit management practice and financial sustainability. The moderation effect was hierarchically analyzed as indicated in equation 1, 2 and 3.

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{crm} + \beta_2 \text{sc} + \varepsilon. \quad \text{Equation 1}$$

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{crm} + \beta_2 \text{sc} + \beta_3 \text{SZ} + \varepsilon. \quad \text{Equation 2}$$

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{crm} + \beta_2 \text{sc} + \beta_3 \text{SZ} + \beta_4 \text{crm} * \text{SZ} + \beta_5 \text{sc} * \text{SZ} + \varepsilon. \quad \text{Equation 3}$$

Where:  $\beta_0$  is a constant;  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are coefficients

P is the probability that a DT-SACCOs will be financially sustainable

crm and sc – are the predictor variables (credit risk mitigation and staff competence)

SZ- Sacco size

crm\*SZ= credit risk mitigation \* Sacco size

sc\*SZ= staff competence \* Sacco size

The results of moderation effect of SACCO size on independent sub-variables and financial sustainability are indicated in table 4.2.

**Table 4.2:** First Hierarchical Regression Results

Predictors	Model 1			Model 2			Model 3		
	Beta <sup>a</sup>	Wald	P	Beta <sup>a</sup>	Wald	P	Beta <sup>a</sup>	Wald	P
(Constant)	-4.643	4.876	.027	-3.022	.079	.778	-188.344	2.637	.104
Sc	1.567	4.611	.032	1.764	1.407	.235	79.983	3.782	.052
crm	1.195	2.653	.103	1.180	2.567	.109	-13.947	.691	.406
SZ				-.224	.024	.878	20.705	2.519	.112
crm*SZ							1.562	.724	.395
sc*SZ							-8.663	3.608	.058
Nagelkerke R <sup>2</sup>	.201			.201			.272		

The results of the moderation indicate that the predictor variables were significant at 5 percent with P-values of 0.027 (Wald statistic = 1.567) for staff competence and 0.032 (Wald statistic =1.195) for credit risk mitigation. As shown in table 4.2, the addition of a moderator in Model 2 resulted to no change in Nagelkerke R square of 20.1 percent. Thus, the moderating effect of SACCO size did not explain any extra variation independent sub-variables and financial sustainability. However, with introduction of interaction term, Nagelkerke R Square changed from 20.1 percent to 27.2 percent. This means that there was significant increase in the variations which was determined by the study variable. Therefore, from the study results it is evident that the relationship improved as interactions effects were introduced in the models. A continued improvement of the Nagelkerke R Square with the introduction of a moderator and the interactions in the model indicates the significance of the moderator in the study (O'Connell, 2006). The study therefore rejects null hypothesis that, SACCO size is not statistically significant in moderating independent sub-variables (credit risk mitigation and staff competence) and financial sustainability of DT-SACCOs in Kenya. This in agreement with Abad, Sánchez-Ballesta, and Yagüe (2017) who observed that SACCO size have a significant moderation effect on the response variable. In contrary Onwonga (2016) indicated that size has no moderating effect between the independent variable and dependent variable.

Further, the study conducted a test on whether SACCO size had any moderating effect on the total score of credit management practices and financial sustainability of DT-SACCOs. The test on moderation effects presented a hierarchical regression results for the moderation effects of SACCO size on credit management practice and financial sustainability. The moderation effect was hierarchically analyzed as indicated in equation 4, 5 and 6.

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{CRMP} + \varepsilon. \quad \text{Equation 4}$$

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{CRMP} + \beta_2 \text{SZ} + \varepsilon. \quad \text{Equation 5}$$

$$\text{Logit } [p] = \beta_0 + \beta_1 \text{CRMP} + \beta_2 \text{SZ} + \beta_3 \text{CRMP} * \text{SZ} + \varepsilon. \quad \text{Equation 6}$$

Where:  $\beta_0$  is a constant;  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are coefficients

P is the probability that a DT-SACCOs will be financially sustainable

CRMP – Is credit management practice

SZ- Sacco size

CRMP\*SZ= credit management practice \* Sacco size

The results of moderation effect of SACCO size on independent variable and financial sustainability are indicated in table 4.3.

**Table 4.3:** Second Hierarchical Regression Results

Predictors	Model 1			Model 2			Model 3		
	Beta <sup>a</sup>	Wald	P	Beta <sup>a</sup>	Wald	P	Beta <sup>a</sup>	Wald	P
(Constant)	-4.658	4.883	.027	-5.683	.648	.421	-19.377	.078	.708
CRMP	1.385	9.323	.002	1.327	5.124	.024	4.133	.085	.770
SZ				.142	.023	.879	1.652	.046	.830
CRMP*SZ							-.308	.039	.843
Nagelkerke R <sup>2</sup>	.199			.199			.200		

The results of the moderation indicate that the predictor variable credit management practice was significant at 5 percent with P-values of 0.002 and a Wald statistic of

1.567. As shown in table 4.3, the addition of a moderator in Model 2 resulted to no change in Nagelkerke R square of 19.9 percent. Thus, the moderating effect of SACCO size did not explain any extra variation in independent sub-variables and financial sustainability. On the other hand, with introduction of interaction term, the Nagelkerke R Square had an insignificant change of 0.1 percent. This means that there was insignificant increase in the variations which was determined by the study variable. Therefore, from the study results it is evident that no relationship improved as moderation and interaction effects were introduced in the models. A continued improvement of the Nagelkerke R Square with the introduction of a moderator and the interactions in the model indicates the significance of the moderator in the study (O'Connell, 2006). The study therefore accepts the null hypothesis that, SACCO size is not statistically significant in moderating credit management practice and financial sustainability of DT-SACCOs in Kenya. This in agreement with Onwonga (2016) who adopted size as a moderator and indicated that it has no moderating effect between the predictor variable and response variable. In contrary Abad, Sánchez-Ballesta, and Yagüe (2017) observed that SACCO size has a significant moderation effect on the response variable.

## **5.0 Conclusion and Recommendation**

The study concluded that SACCO size had a moderating effect on independent sub-variables (credit risk mitigation and staff competence) and financial sustainability of DT-SACCOs in Kenya while it did not show any moderating effect on total scores of credit management practices and financial sustainability of DT-SACCOs in Kenya. The study therefore, made recommendation that SACCO size should be considered while addressing credit risk mitigation and staff competence of DT-SACCOs in an effort to improve their financial sustainability. Thus, DT-SACCOs clustering should be in terms of SACCO size, that is, large sized, medium sized and small sized. This will assist in making fair comparison of credit risk mitigation and staff competence adopted by DT-SACCOs in regard to their size.

## 5.1 Areas for Further Research

Total asset was the only parameter used to measure SACCO size in the study, the study recommended that there is need to used other parameters such as gross loans and total deposits.

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