The Impacts of Credits Risk Management on Profitability of Rural Savings and Credits Cooperative Societies (SACCOS): The Case Study of Tanzania

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Abstract
This study was conducted from 37 rural SACCOS in Morogoro, Dodoma and Kilimanjaro regions in Tanzania to assess the influence of credits risk management on rural SACCOS’ profitability. The study applied univariate regression model where ROA and ROE were the proxies for profitability and Non Performing Loans ratio (NPL) was used as the proxy for credit risks management. This study found out that 70% of rural SACCOS were making loss because they lacked effective credits risk mitigation techniques. The findings also noted the maximum and average loss of 315 and 5 million Tshs respectively. The study further revealed that the credit risk management significantly influenced the profitability of rural the SACCOS. Based on the findings of this study I recommend that rural SACCOS should apply the effective credit risks mitigation techniques, be keen in credits’ processing, monitoring and follow-up, issue loans only to qualified borrowers and establish insurance cover for loans. Furthermore, I recommend that the government should continue to regulate and supervise the rural SACCOS in Tanzania.

Keywords: Impacts, Credits risks management, Profitability, rural SACCOS, Tanzania

1.0 Introduction
Tanzania is situated in Eastern part of Africa and has a population of about 44 million people. The country gained its independence in 1961 and it liberalized its economy from socialism and self reliance to free market economy in 1980s. About 80% of Tanzanians live in rural areas and they depend on peasant agriculture for their survival (NBS 2013). Hakikazi (2006) affirms that cooperatives have been an important part of the development of Tanzania for 75 years. Therefore, the government sees cooperatives as an important means for achieving of development goals because in cooperatives members work together and hence share skills and solve problems jointly (Maghimbi 2010). Cooperatives became the main tool for building a spirit of self-reliance during the socialism. However, the introduction of free market economy made cooperatives to struggle and to compete with other financial and marketing services providers. In Tanzania, Savings and Credits Cooperatives Societies (SACCOS) have grown rapidly since the 1980s and they have remained more stable than the crop marketing cooperatives. SACCOS offer education and loans to their members and are considered as important tool for helping millions of people living both in rural and urban areas (Maghimbi, 2010). According to Wangwe (2004) rural finance services in Tanzania are provided mostly by rural SACCOS than other formal institutions such as banks, public agencies or NGOs. However, in 2000s Cooperative Rural Development Bank (CRDB) linked with SACCOS in order to capture the rural market (Piprek (2007).

From time to time the government of Tanzania has introduced various policies for regulation and supervision of the cooperatives and SACCOS in Tanzania. In 2002 the government introduced the Cooperative Development Policy which supported cooperatives and created the favorable environment to enable them to operate in a liberalized market economy. The policy promoted SACCOS to address the capital problem for individual borrowers who are located in rural areas which are not served by other MFIs (Wangwe, 2004). Moreover, SACCOS offers opportunity for members to save their money and hence it acts as rural banks (Bibi, 2006). In 2013 the parliament approved the new cooperative bill in order to foster the advance operation of cooperative societies in Tanzania. The new law will enable cooperatives and SACCOS to become more independent and creative (URT, 2013). The government policy facilitated the registration of 5346 SACCOS and 970665 members in March 2013 and 2011 respectively (MOFT, 2012; 2013). SACCOS are the important contributor to the economic growth of Tanzania. According to Bwana and Mwakujonga (2013), in Tanzania cooperatives
(including SACCOS) through financing of SMEs contributes about 40% to the country’s GDP and employs 94.7% of school leavers every year. Majority of these SMEs in rural areas depends on co-operative movements for external financing. Qin and Ndiege (2013) established that, there is a strong positive association between the SACCOS’ financial services and the economic growth in Tanzania. They concluded that SACCOS are the distinct microfinance institutions in the economic development in Tanzania and therefore should be promoted with more emphasis on the saving’s objective.

Despite their importance, many cooperatives and SACCOS in Tanzania face the problems of poor management, embezzlement, lack of working capital, poor business practice and high loans delinquency rates. The problem of Non-Performing Loans (NPL) is caused by poor management and lack of commitment on follow-up of NPL (Hakikazi 2006; Bibby 2006; Maghimbi 2010; Mwakajumulo 2011). For instance, Kibaigwa Financial Services and Credit Cooperative Society (KIFISACCO) in Dodoma region had NPL of 762.5 million Tshs (equivalent to $0.61 million) in 2009 due to management sympathy on NPL follow-up. It is obvious that high amount of NPL influences the profitability of SACCOS negatively. Therefore this paper examines how the NPL influences the profitability of rural SACCOS in Tanzania. This paper is organized as follows: the following section covers the literature review on the influence of credit risk management on MFIs profitability. Then, the methodology used for the study will be presented and results and discussion will follow thereafter. Finally, the conclusion and recommendations of the article will be made available.

2.0 Empirical literature review

2.1 Meaning of risks and Credits risks Management

According to Mbeba (2007), risk is the potential that current and future events, expected or unanticipated may have an adverse or harmful impact on the institution’s capital, earnings or achievement of its objectives. Hence risks occurring in SACCOS might hamper SACCOS performance if are not dealt with properly. Pyle (1997) defines risk management as the process by which managers satisfy their needs by identifying risks, obtaining consistent and understandable operational risk measures, choosing which risks to reduce and which to increase and by what means and establishing procedure to monitor the resulting risk position. Therefore risk management might prevent problems to rural SACCOS before their occurrence. Mbeba (2007) asserts that managing risks effectively reduces the likelihood that a loss will occur or minimizes the scale of the loss that would have occurred. Churchill and Coster (2001) stress that risk management involve three-step which are identifying the organization’s current and future vulnerability points, designing and implementing controls to mitigate risks and monitoring effectiveness of risks mitigation tools. All of these steps might be used by rural SACCOS to improve their loans repayment performance and hence profitability.

Eastern Caribbean Central Bank (2009) defines credit is the provision of funds on agreed terms and conditions to a borrower, who is obliged to repay the amount borrowed (together with interest thereon) while credit risk is the risk that a lender will suffer a financial loss as a result of a borrower’s failure to perform according to the terms and conditions of the credit’s or loan’s agreement. Hence Credit Risk Management is the process of controlling the impact of credit risk-related events on the financial institution and involves the identification, understanding, and quantification of the degree of potential loss and the consequential implementation of appropriate measures to minimize the risk of loss to the financial institution. In this case credit risks management can be practiced by SACCOS to reduce the amount of defaulted loans. The credits risks management in rural SACCOS may include the use of the credit policy which establishes the authority, rules and framework for the effective operation and administration of the credit portfolio for minimization of the credit risks. Thus the use of credits policy and other credits risks mitigation techniques will reduce the amount of Non Performing Loans (NPL) in SACCOS. Eastern Caribbean Central Bank (2009) defines that Non-
performing loans as loans and advances that are not earning income, on which full payment can no longer be expected, which their payments are more than 90 days delinquent and which total credits to the accounts are insufficient to cover interest charges over a three-month period. Many scholars emphasize that the cooperative MFIs should manage their loans well by using the effective credit risk management techniques in order to become profitable. Misra, (2009) revealed loans were not managed by using well by the District Central Cooperative Banks in India and this affected their profitability.

2.2 Profitability and credits risk management

Many scholars use the Return of Assets (ROA) or Return on Equity (ROE) as a measure of MFIs or banks’ profitability (Rosenberg 2009; Ogboi and Unuafe 2013; Aemiro and Mekonnen 2012; Naveen et al 2012). Moreover, they use Non Performing Loans (NPL) ratio as the measure of credits risks management. The ROE is obtained by dividing net income (after taxes and excluding any grants or donations) by average equity over a certain period of time while ROA is calculated by dividing net income (after taxes and excluding any grants or donations) by average assets over a certain period of time (Rosenberg 2009; Mata 2010). Most authors argue that ROA/ROE and NPL are strongly correlated in many cases the negative relationship between ROA/ROE and NPL ratio is revealed. However, some few scholars revealed the positive correlation between ROA and credits risks management where most of authors focused their studies on banks. For instance Ariffin and Kassim (n.d) revealed the positive and strong correlations between ROA and all risk management practices in Malaysian Islamic banks while Kaaya and Pastory (2013) found out that negative correlation between bank performance and credits risks management in Tanzania, among many scholars who noted the same. Hence theoretically if NPL affects banks’ profitability, they can affect SACCOS’ profitability too.

Global economic crises also might have negative impacts on MFIs profitability. Aemiro and Mekonnen (2012) studied the financial performance of Amhara Credit and Saving Institution (ACSI) in Ethiopian MFIs during the 2007-2009 financial crisis and they revealed that when the gross loan portfolio declined by 15.73% in the year 2009, also ROA and ROE declined due to loss of financial revenue. Moreover, the portfolio at risk rose during 2008 and 2009 indicating deterioration of portfolio quality. Similarly, Seibel and Thac (2012) assessed the impacts of 2008 global economic crises on how the rural People’s Credit Funds (PCFs) and the Central People’s Credit Fund (CCF) in Vietnam. Their study revealed that from 2007 to 2008 ROE for both PCFs and CCF declined because people worried about the future. The study revealed that ROE for CCF fell from 14% to 11% because they applied conservative provisioning policy and they also experienced stronger competition which forced them to lower their deposit interest rates and this automatically decreased the earnings. However, the study noted that members honored their repayment obligations and the overdue ratios were constant at a level near zero.

High costs of operation and high loans interest rates might affect profitability of MFIs and sometimes increase default risks for loans. Roberts (2013) found out that a stronger for-profit orientation corresponds with higher interest rates for MFI clients. However, this does not contribute to greater profitability and therefore sustainability of MFIs because the stronger profit orientation is also associated with higher MFI costs. Krahnen and Schmidt (n.d) affirmed that handling a larger credit portfolio also produces additional costs of credit unions which have to be covered by a corresponding increase in interest income, implying that large credit portfolio might lower rural SACCOS’ profitability. Also large portfolio poses high risk of credits default. Kinde (2012) revealed that MFIs profitability in Ethiopia is associated with higher loan sizes. The larger loans were associated with higher cost efficiency and hence profitability. Mata (2010) used the return on equity (ROE) and the return on assets (ROA) to assess the managerial performance and 225 MFIs’ profitability from Latin America and the Caribbean. The study revealed large differences in managerial performances where ROA and ROE ranged from -36% to 25% and -226% to 64% while the average ROA and ROE were 3.24% and 1.14% respectively. Positive signs
of average ROE and ROA indicate good managerial performance with higher credits risks management of MFIs from Latin America and the Caribbean. Similarly, Wenner et al (2007) noted that many MFIs in Latin America recorded high overall rates of profitability and low delinquency rates in both general and agricultural portfolios and also they sustained growth rates in agricultural portfolios over time. Also the study found that larger MFIs had significantly higher ROEs than small MFIs because of diverse strategies and economies of scales. The study further noted that only 23% of regulated and 5% of non-regulated institutions used insurance. Gyamfi (2012) also established that the small MFIs in Ghana were more vulnerable to credit risk than the bigger firms. The study revealed that the consideration percentages for borrowers’ character, savings and cash flow, guarantor/collateral, business type and location and the quality of management by MFIs before granting credits were 57.9%, 47.4%, 5.8% and 10.5% respectively. The study further revealed that MFIs with 70% loans repayment rate increased from 16% to 58% from 2005 to 2007 because MFIs improved credit policies regularly. The study also noted the influence of credit risks management and MFIs’ profitability and the author recommended the MFIs to encourage their clients to insure their business against risks that might affect businesses performance.

Naveen et al (2012) conducted a comparative study between India and Bangladesh, in terms of loans lent by customers and financial sustainability of MFI’s. Their findings revealed that ROE of Indian MFIs was steadily increasing year after year, whereas the ROE of Bangladesh MFIs was decreasing gradually, indicating that India MFIs inclined towards the commercial motive versus social motive of Bangladesh MFIs. The results might also indicate that Indian MFIs were keen in managing credits risk than MFIs in Bangladesh. Parent (2009) noted that Average ROE of banks vs MFIs registered on the microfinance MIX Market portal in Africa, central and South America and Southern Asia were roughly 18% vs 13% in 2006. The study revealed that generally, the average ROE for banks was higher than those of MFIs worldwide. However, there was discrepancy across continents where in Central and Southern America and Southern Asia the ROE for MFIs were higher than banks while in Africa the ROE for banks were higher than MFIs. The average scores of ROE for banks and MFIs for Africa were 19% bank vs 17% MFIs where the Côte d’Ivoire, Ghana, South Africa were the sample of study while the average scores of ROE for banks and MFIs in the central and South America and Southern Asia were 15% vs 17% and 10% vs 43% respectively. In average, MFIs registered a net interest margin four times higher than banks worldwide (24% against 6%) and their portfolio was generally of an excellent quality. The results indicate that credits risks management is vital for improving MFIs profitability. Similarly, Muriu (2012) found out that the ROA for MFIs in Sub Saharan countries in Africa were low. The study found out that the mean ROA and ROE for 32 countries and 210 MFIs were -0.0128 and 0.0140 while the Minimum ROA and ROE were -0.8660, and -0.8630 respectively. The findings indicate that most MFIs in SSA were operating at loss in 1997-2008. The study also noted that age, MFI size, gearing ratio, operating efficiency, and credit risk were significantly correlated with performance. Low profitability of African MFIs might be associated with poor or lack of effective credits risk management practices.

Roy (2012) evaluated the profitability of MFIs, in Assam North East India and the study revealed that despite more than 94% of borrowers were given loans for agriculture purposes, they didn’t default which made the MFIs to be profitable. The results indicated that Assam MFIs were competent in managing credit risks. Moreover, the study revealed that MFIs of Assam were earning higher ROAs of 9.43% compared to the national average ROA of 1.40 and higher ROE of 19.83% compared to the national average of 12% during 2008-2010. The study further revealed that 73.5% of the MFIs did not require any collateral whereas only 26.5% of the MFIs needed collateral to provide loan to their clients. Ayayi (2011) revealed good credits risks management resulted into high ROA for MFIs in Vietnam. Moreover, the study noted that MFIs had low credit risk because they implemented good governance which decreased the loans write-off ratio and increased the portfolio quality. Hartarska
Interest rates might influence credit risks and profitability of MFIs. Burger (n.d) noted that delinquency rates for the Lesotho credit union declined from 70% and 50% from1985-1991, indicating that it was still high. This pushed the credits union to increase the interest rate to 24% per year in order to cover expenses and ultimately increase ROA. Correspondingly, Bi and Pandey (2011) found out that the median ROA and ROE of the 10 largest microfinance institutions are in India were about 4.3% and 29.5% respectively. The study found out that the smallest microfinance institutions had negative median of ROA and ROE which indicates that they were not sufficient and were making loss. They found also MFIs incurred higher operational costs and offered small loan sizes. The author argued that operational cost was the major reason for charging the higher interest rates for the MFIs. The higher interest rate might also increase the loans’ default risk. Bédécarrats et al (2011) asserted that the MFIs quality of services and reasonable interest rates can reduce Portfolio at Risk (PAR30) and write off ratio (WOR) where it could reinforce clients’ reimbursement capacity, which consequently reduces delinquency and default. The study also concluded that fair working conditions and training of MFIs staff also raise MFI’s portfolio quality. Correspondingly, Crombrugghe et al (2007) argued that high interest rate may cause an adverse selection problem because safe borrowers with good projects or safe sources of income cannot afford to pay high interest rates, and this might increase the loans’ default risks.

Al-Azzam et al (2012) evaluated the effects of socioeconomic and financial access factors on MFIs’ performance by using 222 MFIs worldwide. The study established that credit unions types of MFIs had higher profitability than non-profit counterparts. However, they didn’t mention the reason. The study further noted that fertility showed a negative and statistically significant impact on MFIs’ profitability because might increase households’ consumption and hence reduce loans’ repayment capacity and consequently increase the amount of Non-Performing Loans (NPL). Kereta (2007) suggested that Non-performing loan (NPLs) to loan outstanding ratio can be an alternative indicator for measuring profit quality. The study found that default rate was very low for most MFIs but it was steadily increasing from 2001 to 2005 in Ethiopia. The study found out that the default rate for some MFIs has increase on average from 2% in 2001 to 39% in 2005 respectively. Higher default rate means high NPL and hence lower ROA (profitability). Mago et al (2013) examined the challenges of Operational Risk Management (ORM) by microfinance institution (MFIs) in Zimbabwe using qualitative approach and they found out that MFIs in Zimbabwe had limited capacities in the management of operational risk because they lacked experienced managers and resources which affected their operations. Mago et al (2013) concluded that poor operational risk management has led to the collapse of many MFIs.

2.3 Credit risks management in SACCOS

Most empirical studies have been done to assess the influence of credits risk management on profitability of banks (Haneef et al. 2012; Achou and Tenguh 2008; Li,Y. n.d; Funso et al 2012; Afriyie and Akotey; n.d). Moreover, recently many scholars are motivated to study various issues concerning SACCOS in Tanzania, East Africa and the Horn of Africa. However, most of empirical studies focus on contribution of SACCOS in economic development, outreach, sustainability and the influence of institution’s factors on SACCOS’ efficiency or performance where most of these studies have been conducted by Kenyan scholars. Some of the recent empirical studies done Tanzania are: Bwana and Mwakujonga (2013) and Xin and Ndiege (2013) focusing on contribution of SACCOS in economic development, outreach and sustainability. Nyamsogoro, (2010)-the determinants of financial

To the best of my knowledge, only Lagat et al (2013) studied comprehensively the influence of credits risk management on SACCOS’ performance in East Africa. Their study applied the descriptive and regression analysis to investigate the effect of credits risk identification, risk analysis, risk monitoring, risk evaluation and risk mitigation on SACCOS’ lending portfolio in Kenya. The study found out that all the risk management practices influenced the lending portfolio except risk evaluation. The study further revealed that business loans were performing significantly well in Kenya where 47.4% of the SACCOS issued 81% of agribusiness loans. The study also found out that 87%, 60%, 32%, 27% and 3% of the SACCOS were relying on financial statements from their clients, cash flow projections, business plan, site visits and proforma statements for evaluation of credit risks respectively. However, study concluded that most of the SACCOS were using historical data information for evaluating clients’ risks which was not adequate.

Few studies focus partially the influence of credits risk management on the performance or profitability of SACCOS in East Africa. For instance, Odhiambo (2012) studied how the governance problem affects the SACCOS in Kenya and he found out that board members’ face the problem of the conflict of interests where some members are interested by low interest loans than the financial viability or profitability of the SACCOS. The study revealed that some SACCOS’ members may seek posts in the board or credit committee by promising that will issue cheap loans after being elected and this might pose higher risk of credits’ default. Matumo et al (2013) assessed how front office services activities influence the profitability of SACCOS in Kenya and they found out that SACCOS in Kenya improved their ROA from 13.6%, to 25.3% after allowing non members to operate savings accounts in SACCOS. The study affirmed that front office operations activities promoted the volume of SACCOS’ transactions, thus improved the revenue of the SACCOS in Kenya. It is assumed that the revenues for those SACCOS improved because of the effective credit risks management techniques. Similarly, Olando et al (2013) investigated the relationship between financial stewardship and SACCOS’ growth in Kenya. Their study revealed that that the retained earnings of the majority of the SACCOS in Kenya have been growing annually from 2005 to 2009 and 42.9% of SACCOS’ members acknowledged to receive dividends from their SACCOS. Payment of dividends signifies the increase of ROA for SACCOS and indicates that SACCOS in Kenya have adopted effective credit risks management techniques. The literature review indicates that information concerned the influence of credits risks management (especially when proxied by NPL ratio) on profitability of SACCOS when proxied by ROA and ROE is missing. Therefore this paper investigates how the credits risks management affects the profitability of the rural SACCOS in Tanzania.

3.0 Methodology
This study involved 37 rural SACCOS from Morogoro, Dodoma and Kilimanjaro regions, specifically Morogoro rural, Mvomero, Kongwa, Rombo, Hai, Moshi rural and Siha districts between February and May 2013. The data used for this study was extracted from SACCOS’ financial reports. This study applied the univariate regression model to analyse the influence of credit risk management on profitability of SACCOS. This model is adapted from Achou and Tenguh (2008) who assessed the relationship between Non Performing Loans ratio and profitability in Qatar. The study uses the same proxies of Returns on Assets (ROA) and Returns on Equity (ROE) as the measure for rural SACCOS’ profitability and Non Performing Loans ratio (NPL) as the measure of credit risks management for rural SACCOS. Mathematically ROA is computed by taking net profit dividing by Total Assets, ROE, net profits over total owners’ equity and NPL is obtained by taking non performing loans (aged six months or above after its due date) over total (outstanding) loans. Contrary to Achou and Tenguh (2008), this study has only one hypothesis to be tested: The Non Performing Loans (NPL) doesn’t influence the profitability of rural SACCOS. i.e SACCOS with higher profitability (ROE, ROA) have higher amount of Non-Performing Loans/Total Loans). Therefore the hypothesis was tested in the following regression model:

\[ P(ROA,ROE) = \alpha + \beta(\frac{NPL}{TL}) + \mu \quad \text{......(1),} \]

simplifying the model we can re-write

\[ P(ROA,ROE) = \alpha + \beta(\frac{\log NPL}{\log TL}) \quad \text{...........(2),} \]

where P symbolizes profitability and the base 10 logarithmic function has been introduced for NPL and TL because of their large amounts. Also Also, \( \alpha \) is the intercept and \( \beta \) is the parameter of explanatory variable and \( \mu \) is the error term. Additionally, mean minimum, maximum, variance and standard variations of NPL % ROA %, ROE%, Total assets, Total Owners Equity and Net Profits and Total expenses were descriptively analysed. Rosenberg (2009) suggested that ROA and ROE are indicators for institutions that do not receive subsidies. In this case ROA and ROE were used as proxies for the rural SACCOS’ profitability since majority of rural SACCOS (90%) received zero subsidies while the remaining rural SACCOS received negligible subsidies.

4.0 Results

4.1 Results from descriptive analysis

The descriptive findings from the study are presented in Table 1. The results show that the percentages of NPL ranged from 1.48 to 99.54%. The results indicate that every rural SACCOS faced the problem of NPL and the problem was very serious for some rural SACCOS where almost all loans were defaulted. For instance the study found that one of the SACCOS in Mvomero district recovered only 0.5 million from 109 million Tshs of loans disbursed (1 USD was equivalent to 1610 Tshs). Usually the high amount of NPL negatively influence the profitability of MFIs while the vice versa is true. Higher amount of NPL might be caused by application of poor credits risk mitigation techniques. Also NPL might be caused by poor loans’ processing, monitoring and follow-up. Various scholars have reported that borrowers’ variables such as fertility, level of income, age, education, size of the loan, gender, marital status, geographical location, the loan’s activity, borrowers’ years of experience, size of the business/loan activity, geographical distance from household to credit source, occupation, interest rates, type and value of collateral, forced savings and household size might contribute to high amount of NPL (Mashatola and Darroch 2003; Oni et al 2005; Kereta 2007; Oke et al 2007; Oladeebo and Oladeebo 2008; Kohansal and Mansoori 2009; Haque et al 2011; Ojiako and Ogbukwa 2012; Duy 2013). The results from Table 2 show that the percentages of ROA and ROE ranged from 0% to 10% with a mean of -3.1678. The findings indicate that only few rural SACCOS utilized their assets efficiently. The study noted that rural SACCOS treated loans as a component of assets. Therefore SACCOS attained high percentage of ROA that if they applied the credits management mitigation techniques and were committed in making follow-up of NPL. This result is supported with Ayayi (2011) who revealed that good credits risks management resulted into high ROA for MFIs in Vietnam. The findings further indicate that the percentages of ROE ranged from -621.15% to 82.57% with a mean of -26.8%. The findings also
show that many SACCOS failed to utilize their own equity to generate profits. For example one SACCOS in Dodoma region had total owner equity of 50 million Tshs but it recorded a net loss of 315 million Tshs. Thus some rural SACCOS obtained high ratio of ROA and ROE because they received the external loans which increased their capital, hence the profit obtained from internal and external loans increased the value of ROA and ROE. The results imply that most rural SACCOS they depended more on external funding sources as confirmed by Ndiege et al (2013). The SACCOS with high delinquency in Kongwa district reported to borrow huge amount of loans from CRDB bank, Stanbic bank and other NGOs which provide loans to SACCOS such as SELF, TUICO and inputs supply companies. Therefore receiving large amount of loans from external sources without having effective credits risk mitigation techniques posed high risks of loans’ default. Moreover, seeking loans from other sources increased operation expenses hence reduce the amount of ROA for some rural SACCOS. Dissanayake (2012) found out that cost per borrower and amount of debt to equity were the significant predictor of ROE for MFIs in Srilanka. The results of this study are also consistent with Parent (2009), Mata (2010) and Muriu (2010) who found out that the ROE for most MFIs in Africa were relatively low. The findings from Table 1 also show that the maximum loss for rural SACCOS was 315 million Tshs while the maximum profits were 50 million with a mean loss of 53 million Tshs. Moreover, the study found that out that 70% of the rural SACCOS incurred loss from their operations. The results moreover show that the maximum and minimum total assets were 0.95 million Tshs and 1000 million Tshs respectively with average of 15.55 million Tshs. The findings indicate variance of total assets among rural SACCOS. Nonetheless the important thing was how the rural SACCOS utilized their assets to produce the maximum profit. Maximum profit was obtained if SACCOS apply the effective credits risks mitigation techniques for loans issued. The findings show that the maximum and minimum total expenses for the rural SACCOS were 0.45 million Tshs and 117 million Tshs with a mean of 23 million Tshs. The findings indicate that most of the rural SACCOS incurred large amount of expenses which might influence their profitability (ROA and ROE). The correlation test showed the negative influence of expenses on profitability. However, the influence was not significant.

Table 1: The descriptive statistics of the variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPL %</td>
<td>37</td>
<td>1.48</td>
<td>99.54</td>
<td>32.38</td>
<td>23.26</td>
</tr>
<tr>
<td>ROA %</td>
<td>37</td>
<td>-35.44</td>
<td>10.20</td>
<td>-3.17</td>
<td>9.98</td>
</tr>
<tr>
<td>ROE%</td>
<td>37</td>
<td>-621.15</td>
<td>82.57</td>
<td>-26.80</td>
<td>113.29</td>
</tr>
<tr>
<td>Total assets (Tshs)* in million</td>
<td>37</td>
<td>0.95</td>
<td>1000</td>
<td>155</td>
<td>260</td>
</tr>
<tr>
<td>Profits/Loss (Tshs) in million</td>
<td>37</td>
<td>(315)</td>
<td>50</td>
<td>(5.33)</td>
<td>53.22</td>
</tr>
<tr>
<td>Total owners equity (Tshs) m</td>
<td>37</td>
<td>0.095</td>
<td>100</td>
<td>18.3</td>
<td>25.92</td>
</tr>
<tr>
<td>Total Expenses in million</td>
<td>37</td>
<td>0.45</td>
<td>117</td>
<td>23</td>
<td>24.9</td>
</tr>
</tbody>
</table>

*Tshs =Tanzanian Shillings (1 USD =1610 Tshs)

4.2 Results from the regression equation

The univariate regression model was used to test the influence of credits risk management on profitability of the rural SACCOS where ROA and ROE were used as the measure of profitability and NPL ratio was used as the measure of credits risk management. In the regression model, the independent variable is the credits risk management while the dependent variable is profitability. The results from regression equation are displayed in Table 2. The findings show that R-square for ROA and ROE are 0.137 and 0.178 while the beta coefficients of ROA and ROE are -0.370 and -0.422 respectively. The finding implies that only about 14% and 18% of variations of ROA and ROE of rural is influenced by the variations of NPL. Additionally, the negative sign of beta coefficient for NPL indicates that the higher the NPL, the lower

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the ROA or ROE. Meaning that as NPL increases the profitability of the rural SACCOS decreases. The small size of R-square indicates that probably other factors such as increase of expense, embezzlement, and lack of grants also influence the rural SACCOS’ profitability since from their establishment, rural SACCOS relied much on grants to operate. Currently the grants received by the rural SACCOS were zero or negligible. Since the regression test was significance at 0.01 for ROA and ROE, the null hypothesis is not accepted. Therefore the study concludes that there is significance influence of credits risks management on the profitability of rural SACCOS in Tanzania.

The findings from this study are supported by many scholars who examined the influence of credits risks management in banks. Since banks are financial institutions which issue loans like rural SACCOS, the author believes that their results can be compared or contrasted with the rural SACCOS. Achou and Tenguh (2008) applied Returns of Assets ratio and regression model to describe the relationship between credits risks management and banks performance in Qatar and they found out that banks with good credit risk management policies have a lower loan default rate and relatively higher interest income. Haneef et al (2012) investigated the impact of risk management on non-performing loan and profitability of banking sector of Pakistan and they found out that non-performing loans were increasing due to lack of risk management which threatens the profitability of banks in Pakistan. Li (n.d) investigated the impact bank’s specific factors and macroeconomic factors on bank’s profitability measured by return on average assets (ROAA) in the UK banking industry over the period 1999-2006. The study revealed higher credit risks lower banks’ profits. The study also revealed macroeconomic variables, i.e inflation; interest rate and GDP growth rate have insignificant impact on performance. Funso et al (2012) applied the traditional profit theory measured by Return on Asset (ROA), to analyse the relationship between credits risks and commercial bank performance in Nigeria. Furthermore, Kaaya and Pastory (2013) found out that higher the credit risk the lower the bank performance in Tanzania and hence can also lower the rural SACCOS. Contrary to the theory, Afriyie and Akotey (n.d) examined the impact of credit risk management on the profitability of rural and community banks in Ghana by using the panel regression model and revealed significant positive relationship between non-performing loans and rural banks’ profitability, implying that higher loan losses didn’t restrain the banks to earn profits. However, the findings indicated that, rural banks do not have sound and effective credits risk management practices.

### Table 2: Coefficients from the Regression equation

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-square</td>
<td>0.137</td>
<td>0.178</td>
</tr>
<tr>
<td>NPL ratio Beta coefficients</td>
<td>-0.370*</td>
<td>-0.422*</td>
</tr>
<tr>
<td>t-statistics</td>
<td>-2.755</td>
<td>-2.360</td>
</tr>
<tr>
<td>F-statistics</td>
<td>7.589*</td>
<td>5.567**</td>
</tr>
</tbody>
</table>

*Significant at 1% level; **significant at 5% level

### 5.0 Conclusion and Recommendations

This study found out that 70% of rural SACCOS were making loss because they lacked effective credits risk mitigation techniques. The findings noted the maximum and average loss of 315 and of 5 million Tshs respectively. The study revealed that the credit risk management significantly influences the profitability of rural SACCOS in Tanzania. the study noted that high amount of NPL by the rural SACCOS put the members’ savings and deposits in risk as asserted by Achou and Tenguh (2008), who argued that bank with high credits risk, has high bankruptcy risk and puts the depositors in risk in Nigeria. Therefore, the same situation applied for rural SACCOS which had higher amount of NPL. Based on the findings of this study, I recommend
that rural SACCOS should apply the effective credit risks mitigation techniques as recommended by Wenner (2007). I recommend also that rural SACCOS should be keen in credits’ processing, monitoring and follow-up. Moreover, they should screen borrowers before issuing loans by using the credit policy and they should issue loans only to qualified borrowers. Considering risks variables and diversity of income of borrowers also is vital for dealing with default risks as recommended by Mustafa et al (2011). Rural SACCOS are encouraged to sensitize their members to insurer their business while the rural SACCOS should establish insurance cover to their members. They can access insurance services from the Savings and Credit Cooperative Union League of Tanzania (SCCULT) and other potential insurance companies as recommended by Bibi (2006). Furthermore, I recommend that the government should continue to regulate and supervise the rural SACCOS in Tanzania. Finally, I recommend that study with large sample size and wider coverage focusing on the influence of credits risk management on the profitability of rural SACCOS in Tanzania should be conducted.

6.0 References


Farmers in Khorasan-Razavi Province of Iran.


Mpiira, S., Kiiza, B., Katungi, E., Staver, C., Tabuti, J. S., Kyotalimye, M. Muwumba, P.,


http://www.ijmsbr.com


Piperk, G. (2007). Linking with Savings and Credit Cooperatives (SACCOs) to expand financial access in rural areas: a case study of CRDB Bank in Tanzania.


7.0 Appendix

Results from the regression model

<table>
<thead>
<tr>
<th>Model Summary: ROE</th>
</tr>
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<tbody>
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<td>Model</td>
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<sup>a</sup> Predictors: (Constant), NPL RATIO

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<sup>a</sup> Predictors: (Constant), NPL RATIO

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<tr>
<td>Model</td>
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</tr>
<tr>
<td>1 (Constant)</td>
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<sup>a</sup> Dependent Variable: ROE

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<sup>a</sup> Predictors: (Constant), NPL RATIO

<sup>b</sup> Dependent Variable: ROA
### Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
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<th>Sig.</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
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<tr>
<td>1 (Constant)</td>
<td>4.267</td>
<td>.938</td>
<td>4.550</td>
<td>.000</td>
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<tr>
<td>NPL RATIO</td>
<td>-.056</td>
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<td>-.2360</td>
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\(^a\) Dependent Variable: ROA

### Correlations Test

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<th>Total Expenses</th>
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<tr>
<td>Total Expenses</td>
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