Examining the Relationship between Credit Risk Identification and Financial Performance of SACCOs in Rwanda, Ngororero District

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Abstract:- **The study set out to investigate the Relationship Between Credit Risk Identification and Financial Performance of SACCOs in Rwanda Ngororero District.The study adopted cross-sectional and correlational research designs on a sample of 30 respondents using a self-administered and an interview guide. Data were analysed using both quantitative and qualitative data methods. Quantitative data were analyzed using descriptive and inferential statistics in SPSS (21.0) while qualitative data was thematically integrated into quantitative results after content analysis. The study established a positive significant relationship (r=0.633, p<0.01) between credit risk identification and the financial performance of SACCOs. It was concluded that improving on credit risk identification would significantly improve on the financial performance of SACCOs in Ngororero District. It was recommended that the oversight role of management should be aligned with specific areas of risk identification such as consumer or commercial loans risk for it to have a significant contribution on the financial performance of these institutions.**

Key words: **Credit Risk identification, Financial Performance.**

I. INTRODUCTION

Effective credit risk management through credit risk identification, risk assessment and credit monitoring with the oversight of a well-established credit management structure enhances the performance of lending institutions (Basel Committee on Bank Supervision, 2003; Brealey, *et al.,* 2008; Hoque, 2015). Despite the emphasis put on credit risk management through credit risk identification, to enhance the financial performance of SACCOs, undesirable financial performance continue to affect SACCOs in Rwanda, Ngororero District.

Theoretical Review

The theory that underpinned this study was the Harry Markowitz's modern portfolio theory (MPT). The theory provides a framework for specifying and measuring investment risk and to develop relationships between risk and expected returns. Its main basic assumption is that investors often want to maximize returns from their investments for a given level of risk (Brealey, Myers & Allen, 2008). The MPT assumes the principle of diversification where an investor can reduce portfolio risk simply by holding combinations of loan assets that are not perfectly positively correlated. In other words, investors can reduce their exposure to individual asset risk by holding a diversified portfolio of assets. Diversification may allow for the same portfolio expected return with reduced risk (Reilly & Brown, 2011).

II. REVIEW OF RELATED LITERATURE

Credit risk identification and financial performance of SACCOs

Credit standards guide the credit risk identification process. Credit risk identification analyses credit risk basing on the models of credit which are Character, Capacity, Capital, Collateral and Condition (Abedi, Brealey, *et al.* 2008). According to Van Horne (2004) credit appraisal standards involve procedures for evaluating each credit applicant before he/ she qualifies for credit. These procedures include evaluating Character, Capital, Capacity, Conditions and Collateral of the credit applicant. In character evaluation, Van Horne (2004) further states that the assessor needs to look at the behavior of the client with the past debts as to whether they have been settled or not.

In the context of capital, there is a need to evaluate whether the credit applicant has adequate capital to operate the loan. This can be in terms of land and buildings, machinery and equipment as well as human capital (The Basel Committee on Banking Supervision, 2006).

In capacity evaluation, there is a need to check the ability of the applicant to acquire loan and this would be basically through examining how the applicant has depended on loan capital previously (Altman, Hartzell & Peck, 1995).Capacity measures a borrower's ability to repay a loan by comparing income against recurring debts and assessing the borrower's debt-to-income (DTI) ratio. In addition to examining income, lenders look at the length of time an applicant has been at his job and job stability (Altman, *et al*., 1995).

According to Delis, Kokas & Ongena (2016), collateral can help a borrower secure loans. It gives the lender the assurance that if the borrower defaults on the loan, the lender can repossess the collateral. For example, car loans are secured by cars, and mortgages are secured by homes. Delis, *et al.* (2016) further states that for the collateral to fully secure the loan, it

should be of greater value than the amount being sought such that in case of default, the return can be compensated through the disposal of such collateral at a low cost.

Van Horne (2003) also explains that the stability of the environmental condition in relation needs to be examined to check if it promotes health investment. Condition refers to how a borrower intends to use the money. For example, if a borrower applies for a car loan or a home improvement loan, a lender may be more likely to approve those loans because of their specific purpose, rather than a signature loan that could be used for anything (Brealey, *et al.,* 2010).

Taking these factors into consideration will inform the lending organisation and particularly SACCOs to predetermine the nature of risk involved in lending to a certain client, which reduces the risk of default with the ultimate result being improved returns on the loan portfolio, increased liquidity and survival of the institution.

III. METHODOLOGY

The study adopted the cross-sectional and correlational research designs to examine the situation as it existed in its environment. The cross-section design allowed collection of data using different modes of data collection such as self-administered questionnaires and face-to-face interviews (Williams, 2011). In addition, the study being cross-sectional, data gathered represents what is going on at a particular point in time thus helping to obtain useful data in a relatively short period saving time and costs of data collection (Bordens & Abbott, 2011). With respect to the correlational design, this involved exploration of the correlation between the risk identification and financial performance of SACCOs (Williams, 2011). The study used both quantitative and qualitative approaches of data collection. Quantitative data was the basis for drawing statistical inferences by relating the independent and dependent variables. Qualitative data supplemented the quantitative data by providing detailed information in form of statements from interviews for in-depth analysis.

Sample size determination and sampling method

A study sample of 30 respondents were purposively and systematically selected. This sample was arrived at using Krejcie & Morgan (1970).Using Simple random sampling and purposive sampling methods were used for the study because simple random sampling ensured that each individual is chosen randomly and entirely by chance, thus giving each individual in the population the same probability of being chosen for the study (Onen, 2005) and Purposive sampling was used to select particular people to provide in-depth views since the study was both quantitative and qualitative(Patton, 2003).

Data Analysis

Data were collected using self-administered structured questionnaire, interview guide and through documentary review. Quantitative data were analyzed using descriptive and inferential statistics in SPSS (21.0) while qualitative data was thematically integrated into quantitative results after content analysis.

IV. RESULTS AND DISCUSSION

Credit risk identification

These results pertain to the descriptive statistics on risk identification in SACCOs in Ngororero District. The results are summarized in Table 1 below.

Table 1: Descriptive Statistics of credit risk identification

	N	Min.	Max.	Mean	Std. Dev.
This SACCO evaluates the character of the borrower before the loan is advanced.	28	1.00	5.00	4.1120	.92513
This SACCO evaluates the capacity of the borrower before the loan is advanced	28	1.00	5.00	4.7160	.85491
This SACCO requires collateral from the borrower before the loan is advanced	28	1.00	5.00	3.8422	.84016
This SACCO assesses the capital of the borrower before the loan is advanced	28	1.00	5.00	2.2148	.72648
This SACCO examines the condition of borrower before the loan is advanced	28	1.00	4.00	1.7654	.07554

Source: Primary data (2018).

The results in Table 1 show that the respondents agreed (mean=4.1120) that SACCOs evaluate the character of the borrower before the loan is advanced and strongly agreed (mean=4.7160) that SACCOs evaluate the capacity of the borrower before the loan is advanced. The result further indicate that the respondents agreed (mean=3.8422) that SACCOs requires collateral from the borrowers before the loan is advanced, but disagreed (mean= 2.2148) that SACCOs assess the capital of the borrower before the loan is advanced. The results further show that the respondents disagreed (mean=1.7654) SACCOs examine the condition of borrower before the loan is advanced.

The results suggest that whereas SACCOs in Ngororero District adhere to some of the requirements of credit identification such as the valuation of character, capacity and collateral as advanced by scholars such as Van Horne (2004), Altman, et al. (1995) and Delis, et al. (2016), their credit risk identification process falls short of evaluation of capital and condition which are suggested by scholars such as Brealey, *et al.,* (2010) and institutions such as the Basel Committee on Banking Supervision (2006).

Qualitative findings from key informants interviews (KIIs) and documentary review affirmed the above quantitative results. Specifically, it was established through KIIs that management emphasis on credit risk identification is more on character, capacity and collateral evaluation arguing that capital and condition are ultimate of the aforementioned 3Cs as one key informant stated:

> *"What we consider most is character, capacity and collateral values. From our experience, our clients have demonstrated that they meet the put by these 3Cs, they automatically pass the capital and condition tests (June, 22nd2018).*

Whereas the results concur with the with the assertions by Van Horne (2004), Altman, et al. (1995) and Delis, et al. (2016) ideal credit risk identification, they contradict that findings by Brealey, *et al.,* (2010) and institutions such as the Basel Committee on Banking Supervision (2006) that evaluation of the capital and the condition of the business of the borrower are important aspects identify the credit risk. It is thus deduced from the findings that strong aspects in credit risk identification by the SACCOs in Ngororero District are evaluation of borrower's character, capacity and collateral, while the weak aspects are the reluctance of SACCOs to evaluate the capacity and condition of the borrowers.

Financial Performance of SACCOs

This subsection presents descriptive statistics on the financial performance of SACCOs in Ngororero District. The results are summarized in Table 2

Table 2. Descriptive Statistics					
	N	Min.	Max.	Mean	Std. Dev.
This SACCO has always attained the desired loan recovery rate since year 2012	28	1.00	5.00	2.1605	.69744
This SACCO has always minimised the default rate to the desired level since year 2012	28	2.00	2.00	2.0000	.00000
This SACCO has always attained the desired return on assets since year 2012	28	1.00	5.00	2.1111	.67082
This SACCO has always attained the desired level of liquidity since year 2012	28	1.00	5.00	2.0864	.47952

Source: Primary data (2018).

The results in Table 4.6 show that the respondents disagreed (mean=2.1605) that SACCOs have always attained the desired loan recovery rate since year 2012 and also disagreed (mean=2.0000) that SACCO have always minimized the default rate to the desired level since year 2012. The results in

Table 4.6 further indicate that the respondents disagreed (mean=2.1111) that SACCOs have always attained the desired return on assets since year 2013 while they also disagreed (mean=2.0864) that SACCOs has always attained the desired level of liquidity since year 2013. The results suggest that the performance of SACCOS in terms of loan recovery, minimizing default rate, returns on assets and the desired level of liquidity have not been to the expected level since year 2013.

Regarding loan recovery rate, qualitative findings indicated that slow payments of the interest and principal amount have been experienced due to low returns to clients businesses and the most depression by SACCOs as after February 2018. In this regard, a key informant asserted:

> *The low returns to both the clients and SACCOs have sometimes forced SACCOs to loosen their credit policy which has resulted into liquidity constraints (June 29, 2018).*

The findings contrast the assertion by Brealey, et al. that the financial performance is the ability of the lending institution to earn the expected return from the credit advanced to borrowers and also to ensure that the principal is recovered in the specified time period.

Furthermore, the findings contradicts Brealey, *et al.* (2010) and International Monetary Fund (IMF, 2012) who pointed out that the specific indicators of financial performance include profitability or return on assets as indicated by interest income less collection costs, default rates and loan recovery rate. In this regard, IMF (2012) in contradiction with the study findings state that the financial performance of the lending institutions is indicated by any loan in which payments of interest are less than 90 days past due, has not been placed on non-accrual or workout status and all interest has been refinanced together with continuous payment.

Correlation

Pearson correlations were computed to determine and test the significance of the relationship between individual components of credit risk identification and the financial performance of SACCOs. The results are provided in Table 2:

		Risk identification
Risk identification	Pearson Correlation	1
	Sig. (2-tailed)	
	N	28
Financial Performance	Pearson Correlation	-.040 -.492**
	Sig. (2-tailed)	.000
	N	28
**. Correlation is significant at the 0.01 level (2-tailed).		
*. Correlation is significant at the 0.05 level (2-tailed).		

Source: Primary data (2018)

Relationship between credit identification and the financial performance of SACCOs

The results in Table 2 show that there is a negative significant correlation (r=-0.492, p<0.01) between credit risk identification and the financial performance of SACCOs. Therefore, the study hypothesis one that there is no significant relationship between credit risk identification and the financial performance of SACCOs is rejected and the alternative hypothesis is accepted.

V. CONCLUSION AND RECOMMENDATION

Conclusion

Generally, it is concluded that improving on credit risk identification would significantly improve on the performance of SACCOs in Ngororero District. The credit risk identification systems needs an overhaul to eliminate its negative contribution to financial performance.

Recommendations

The study established that the weak aspects of the reluctance of SACCOs to evaluate the capacity and condition of the borrowers. Therefore, the management of SACCOS should:

➢ Strongly consider evaluating the capacity of borrowers to repay the loan. This should be done by comparing income against recurring debts of the borrower. In addition, this can be done by assessing the borrower's debt-to-income (DTI) ratio.
➢ Endeavour to evaluate the condition for the use of the loan. This should be done by investigating the purpose for which the loan is being acquired and the actual application of the loan. Management should ensure that the loan is used for income producing purposes if it is for business so that part of that income is used to pay back the loan.

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