

# Investigating the Relationship between Credit Risk Monitoring and Financial Performance of SACCOs in Rwanda, Ngororero District

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**Abstract:-** The study set out to the relationship between credit monitoring 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 correlation ( $r=0.245$ ,  $p<0.01$ ) between credit risk monitoring and the financial performance of SACCOs. It was concluded that improving on credit risk monitoring would significantly improve on the financial performance of SACCOs in Rwanda, Ngororero District. It was recommended that the management of SACCOs therefore should Always ensure detailed documentation of the clients details regarding the loan of the individual client. The management should train further to identify these details which they can incorporate into their loaning system, emphasize adherence to the present credit terms. In this regard, they should agree with their employees on targets such that they are attainable without defying credit terms and motivate employees to ensure timely reporting of problem loans.

**Key words:** Credit Risk monitoring , Financial Performance and Credit terms

## I. INTRODUCTION

As part of its credit risk monitoring process, the Basel Committee for Banking Supervision (2006), states that a lending institution should develop and implement comprehensive procedures and information systems to monitor the quality of its loan portfolio. Despite the emphasis put on credit risk monitoring 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 monitoring and financial performance*

As part of its credit risk monitoring process, the Basel Committee for Banking Supervision (2006), states that a lending institution should develop and implement comprehensive procedures and information systems to monitor the quality of its loan portfolio. These should include the criteria that identify and report problem loans to reasonably assure that they are appropriately monitored as well as administered and provided for. The Basel Committee for Banking Supervision (2006) further states that the credit risk monitoring system should provide the relevant information for senior management to make its experienced judgments the credit quality of the loan portfolio and provide the foundation upon which a loan loss or provisioning methodology is built. That is, the same information should be utilized by senior management to monitor the condition of the loan portfolio and in the methodology for determining amounts of loan loss provisions for credit risk assessment, accounting and capital adequacy purposes.

The Basel Committee for Banking Supervision (2006) further states that for effective loan monitoring, MFIs must work to establish its presence, its purpose, and its commitment to the growth of the local business community. That community outreach plays a large part in institutional sustainability. Loan officers often use monitoring visits to call upon other potential clients in the neighborhood, or to post informational flyers within the community. In addition, the committee asserts that effective loan officers also take the time to explain that loan proceeds are reinvested in new microloans throughout the community. Consequently, one client's failure to pay directly impacts the MFI's ability to extend loans to others in need. Emphasizing the role microfinance plays in building a strong business community reinforces program sustainability.

According to McAllister and Mingo (1994), a credit monitoring system should involve extensive judgment and effective model validation procedures. The scholars recommend that lending institutions should periodically employ stress testing and back testing in evaluating the quality of their credit and establish internal tolerance limits for differences between expected and actual outcomes and processes for updating limits as conditions warrant. Particularly, McAllister and Mingo (1994) point out those financial institutions such as SACCOs should have policies that require remedial actions is taken when policy tolerances are exceeded.

McAllister and Mingo (1994) further state that SACCOs should also document their validation process and results. These results should be regularly reported to the appropriate levels of management. Additionally, the validation of internal credit risk assessment models should be subject to periodic review by qualified, independent individuals (eg internal and external auditors).

Interest rate is critical to financial development as it determines the profit on the loan; hence a strong credit management should strictly monitor its regular payment (Al-Muharrami, 2015). In the same regard, it is noted that interest rate measures the interest income on loans and a percentage of the principal for the use of the asset. It reflects the compensation of the asset use by the lending institutions. The higher the interest rate, the higher the profit and the better the performance (Ongore & Kusa, 2013).

Misati, Nyamongo and Kamau (2011) state that a proper credit monitoring system should ensure that borrowers honour the credit period which is the time in which the borrower should repay the loan. The monitoring systems should ensure that financial institutions provide larger loans and longer repayment periods when borrowers provide adequate collateral. But the monitoring system should ensure that longer credit period increases interest to be paid in the long run and hence increase return on the loan portfolio.

A loan monitoring system should also ensure that adherence to the collection policy and that the necessary and reasonable actions for loan collections and bad debts are kept within the limit. The credit monitoring system should ensure that collection policy establishes protocol and standardized processes to collect outstanding overdue amounts and that all collection activities are undertaken within approved guidelines and accepted code of ethics (Pandey, 2008).

Kariuki (2010) argues that the monitoring system should ensure that the collection policy and escalating nature of collecting processes are clearly articulated to guide clients to appreciate and understand the seriousness and repercussions that result from nonpayment. Ross *et al.* (2008) point out that irrespective of the nature of the loan collection policy, the monitoring system should ensure that all information received from clients is considered confidential and disclosure of information is refrained. It is observed from the literature that

proper credit monitoring ensures that the lending organisation keeps track of loan dynamics. This enables mitigation of adverse changes hence improve the performance of loan in terms of repayment of interest and the principal that shape the liquidity of the businesses.

### 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 credit risk monitoring 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 monitoring*

This subsection presents descriptive statistics on credit monitoring in SACCOs in Ngororero District. The results are summarized in Table 1:

Table 1: Descriptive Statistics of credit monitoring

	N	Min.	Max.	Mean	Std. Dev.
This SACCO ensures that there is always complete credit documentation for each client	28	1.00	5.00	2.2469	.85923
This SACCO always adheres to the preset credit terms when lending	28	1.00	5.00	2.1852	.65405
This SACCO always ensure timely reporting of problem loans	28	1.00	5.00	2.1481	.65405
This SACCO always adheres to the credit policy when lending	28	1.00	5.00	1.9383	.53258

Source: Primary data (2018).

The results in Table 4.5 show that the respondents disagreed (mean=2.2469) that the SACCOs ensure that there is always complete credit documentation for each client, and also disagreed (mean=2.1852) that the SACCOs always adhere to the preset credit terms when lending. The results further indicate that the SACCOs always ensure timely reporting of problem loans and also disagreed (mean=1.9383) that SACCOs always adhere to the credit policy when lending. Hence all the examined credit monitoring aspects are shortfalls in SACCOs in Ngororero District. It is thus deduced from the findings that the weak aspects of credit risk monitoring are lack complete credit documentation for each client, failure by SACCOs to always adhere to the preset credit terms when lending, failure by SACCOs to always ensure timely reporting of problem loans and failure by SACCOs to always adhere to the credit policy when lending.

Qualitative findings affirmed the quantitative results by asserting that full documentation regarding each client is a long and tedious process and as such, the SACCOs only record very basic information. In this regard, one key informant stated:

*“We only document the basic information that gives satisfactory evidence aBORT the clients’ claims. While it is important to document full details of the client, the exercise is too tedious yet we are constrained by human and financial resources to execute the exercise (June22,2018).”*

#### Financial Performance of SACCOs

This subsection presents descriptive statistics on the financial performance of SACCOs in Ngororero District. The results are summarised 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 minimised 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 slows 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.

Table 3: Correlation results

		Credit monitoring	Financial performance
Credit Monitoring	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	81	
Financial Performance	Pearson Correlation	.243*	1
	Sig. (2-tailed)	.029	
	N	28	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 risk monitoring and the financial performance of SACCOs*

The results in Table 3 show that there is a positive significant correlation ( $r=0.243$ ,  $p<0.05$ ) between credit risk monitoring and the financial performance of SACCOs. Therefore, the study hypothesis one that there is no significant relationship between credit risk monitoring and the financial performance of SACCOs is rejected and the alternative hypothesis is accepted.

The results suggest that credit monitoring is positively related with the financial performance of the SACCOs. However, the relationship is weak which implies improving the current practices of credit risk monitoring would slightly improve the performance of SACCOs. The low relationship can be attributed to lack complete credit documentation for each client by SACCOs, failure by SACCOs to always adhere to the preset credit terms when lending, failure by SACCOs to always ensure timely reporting of problem loans and failure by SACCOs to always adhere to the credit policy when lending. Qualitative findings affirmed the quantitative results by asserting that full documentation regarding each client is a long and tedious process and as such, the SACCOs only record very basic information.

Qualitative findings established the basic information recoded aBORT the client includes the application letter, appraisal letter, loan repayment schedule, and the principal amount, amount given at a time, interest rate, loan period, amount recovered and arrears. The findings suggest that by only recording the basic information, SACCOs miss out on other important information for, instance on how the loan to an individual client has been utilized to enhance community welfare although the primary purpose was to facilitate the business of the individual. The findings contradict the

assertion by the Basel Committee for Banking Supervision (2006) states that lending institutions such as SACCOs must work to establish its presence, its purpose, and its commitment to the growth of the local business community through extra activities related to loan monitoring. That community outreach plays a large part in institutional sustainability. The committee states that loan officers often use monitoring visits to call upon other potential clients in the neighborhood, or to post informational flyers within the community. In addition, the committee asserts that effective loan officers also take the time to explain that loan proceeds are reinvested in new micro loans throughout the community. Consequently, one client's failure to pay directly impacts the MFI's ability to extend loans to others in need. Emphasizing the role microfinance plays in building a strong business community reinforces organizational sustainability since more clients from the community will become the clients of the organisation.

Qualitative findings established that some SACCOs let lose the stipulated credit terms. In this regard, the findings established that some loan monitoring officers always have targets to strike and in order meet those targets, they deviate from the credit terms to motivate clients to take the loan which sometimes leads to poor performance such as accumulation of NPLs. For the same or related reasons, qualitative findings through key KIIs established that more than often, field credit monitoring officers tend to deviate from the provisions of credit policy which results into untimely reporting of problem loans. The findings contradict the assertion by Misati, et al. (2011) that a proper credit monitoring system should ensure that borrowers honor credit terms such as the credit period which is the time in which the borrower should repay the loan. In addition, Misati, et al. (2011) the monitoring system should ensure that financial institutions provide larger loans and longer repayment periods when borrowers offer collateral.

#### V. CONCLUSION

Generally, it is concluded that improving on credit risk monitoring 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.

#### VI. RECOMMENDATIONS

The weak aspects in credit risk monitoring were identified as lack complete credit documentation for each client by SACCOs, failure by SACCOs to always adhere to the preset credit terms when lending, failure by SACCOs to always ensure timely reporting of problem loans and failure by SACCOs to always adhere to the credit policy when lending. The management of SACCOs therefore should: Always ensure detailed documentation of the clients details regarding the loan of the individual client. The management should train further to identify these details which they can incorporate into their loaning system ensure adherence to the present credit terms. In this regard, they should agree with their

employees on targets such that they are attainable without defying credit terms. Lastly motivate employees to ensure timely reporting of problem loans. This can also be done through setting attainable targets for employees not to deviate from credit policy and the terms which normally results into concealment of such problem loans by the field staff.

## REFERENCES

- [1]. Ahmed, S. F., & Malik, Q. A. (2015). Credit Risk Management and Loan Performance: Empirical Investigation of Micro Finance Banks of Pakistan. *International Journal of Economics and Financial Issues*, 5(2), 10-19.
- [2]. Al-Muharrami, S. (2015). Interest rate in Oman: is it fair? *Humanomics*, 31(3), 330-343.
- [3]. Altman, E.I., Hartzell, J., Peck, M., (1995). "A Scoring System for Emerging Market Corporate Debt", *Salomon Brothers*, 15 May.
- [4]. Anderson, J.D. (2006). Qualitative and Quantitative research. *Imperial COE*.
- [5]. Ansong, A. (2013). Risk management as a conduit of effective corporate governance and financial performance of small and medium scale enterprises. *Risk Management*, 3(8)
- [6]. Babbie, E.R. (2009). *The Practice of Social Research*. 12<sup>th</sup> ed. Wadsworth, USA: Pearson.
- [7]. Basel Committee on Bank Supervision. (2003). Overview of the New Basel Capital Accord: *Consultative Document (April)*. <http://www.bis.org/bcbs/cp3ov.pdf>
- [8]. Basel Committee on Bank Supervision. (2003). *Public Disclosures by Banks: Results of the 2001 Disclosure Survey*. Basel Committee Publications No. 97 (May). <http://www.bis.org/publ/bcbs97.htm>
- [9]. Basel Committee on Banking Supervision (2006). Sound credit risk Assessment and valuation for loans. Bank for international Settlements.
- [10]. Beasley M., Carcello, J.V., Hermanson, D.R. & Lapedes, P.D. (2000). Fraudulent financial reporting: *Consideration of industry traits and corporate governance mechanisms*.
- [11]. Beasley, M.S. (2006). *An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud*. *The Accounting Review* 71: 443-465.
- [12]. Beresford-Smith, B., & Thompson, C. J. (2007). Managing credit risk with info-gap uncertainty. *The Journal of Risk Finance*, 8(1), 24-34.
- [13]. Berger, A. and Udell, G. (2003). "Securitization, Risk, and the Liquidity Problem in Banking." *Structural Change in Banking*, M. Klausner and L. White, editors. Irwin Publishers, Illinois.
- [14]. Bhalla, A., & Kaur, M. (2012). SMEs' Access to Finance: An Analysis of Attitude and Decision-making Criteria of Commercial Banks. *Asia-Pacific Journal of Management*.
- [15]. BOR (2017). "Non-Banking financial institutions Department (NBFIs): Overview". BOR
- [16]. Brealey, R., Myers, S. & Allen, F. 2008. *Principles of corporate finance*, 8<sup>th</sup> Edition. New York: McGraw Hill.
- [17]. *Scholars Journal of Economics, Business and Management*, 4(2):73-76.
- [18]. Chaibi, H., & Ftiti, Z. (2015). Credit risk determinants: Evidence from a cross-country study. *Research in international business and finance*, 33, 1-16.
- [19]. Chirinko, R.S., Guill, G.D., (1991). "A Framework for Assessing Credit Risk in Depository Institutions: Toward Regulatory Reform", *Journal of Banking and Finance*, 785-804.
- [20]. Creswell, J. (2014). *Qualitative, Quantitative, and Mixed Methods Approaches*. Fourth Edition. Thousand Oaks, CA: Sage.
- [21]. Creswell, J.W. (1994). *Research design: Qualitative and quantitative approaches*. London: Sage publications.
- [22]. Creswell, J.W. (2009). *Qualitative, Quantitative, and Mixed Methods Approaches*. 3<sup>rd</sup> ed. New Delhi, Thousand Oaks, CA: Sage.
- [23]. Daley-Harris, Sam. 2007. "State of the Micro-Credit Summit Campaign Report". World Bank.
- [24]. DeVellis, R. F. (2003). *Scale Development: Theory and Applications*, 2<sup>nd</sup> Edition. Thousand Oaks, CA: Sage Publications.
- [25]. DiCicco-Bloom, B. & Crabtree, B.F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314-321. DOI: 10.1111/j.1365-2929.2006.02418.x
- [26]. Drost, E.L. (2011). Validity and Reliability in Social Science Research. *Education Research and Perspectives*, 38(1):103-125.
- [27]. Fallon, W., (2006). "Calculating Value-at-Risk," *Wharton Financial Institutions Center, the Wharton School, University of Pennsylvania*, Working Paper 96-49.
- [28]. Fast, N. J., Burris, E. R., & Bartel, C. A. (2014). Managing to stay in the dark: Managerial self-
- [29]. Fincham, J.E. (2008). Response Rates and Responsiveness for Surveys, Standards, and the Journal. *American Journal of Pharmaceutical Education*, 72 (2):1-3.
- [30]. firms in Malta. *Managerial Finance*, 40(6), 587-612.
- [31]. *GlobeFeed.com*. (2016). "Location of the Headquarters of Ngororo District". Retrieved 21 May 2016.
- [32]. Hayes, A.F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modelling [White paper]*.
- [33]. Hoque, F. (2015). Credit management and performance analysis of Jamuna Bank Limited.
- [34]. Joppe, M. (2000). *The Research Process*. Retrieved February 25, 1998, from <http://www.rverson.ca/mjoppe/rp.htm>
- [35]. Kagoyire, A., & Shukla, J. (2016). Effect of Credit Management on Performance of commercial Banks in Rwanda (A Case Study of Equity Bank Rwanda)
- [36]. Krejcie, R. & Morgan, D. (2001). *Determining sample size for Research activities*, Educational and Psychological measurement, 30, 607 – 610.
- [37]. Low, R.K.Y.; Faff, R.; Aas, K. (2016). "Enhancing mean-variance portfolio selection by modeling distributional asymmetries". *Journal of Economics and Business*. doi:10.1016/j.jeconbus.2016.01.003
- [38]. Markowitz, H.M. (March 1952). "Portfolio Selection". *The Journal of Finance*. 7 (1): 77–91.
- [39]. McAllister, P., Mingo, J.J., (1994). "Commercial Loan Risk Management, Credit-Scoring And Pricing: The Need For A New Shared Data Base", *Journal of Commercial Bank Lending*, 6-20.
- [40]. Mugenda, O.M. & Mugenda, A.G. (1999). *Research methods: qualitative and quantitative approaches*. ACTS. Nairobi: Nairobi UNION Publishing Services section.
- [41]. Reilly, F. K. and Brown, K. C. (2011). *Investment Analysis and Portfolio Management*. Australia: South-Western. *Research and Innovation*, 8(1), 69-76.
- [42]. Saunders, A., (1997). "Financial Institutions Management: A Modern Perspective", 2nd ed. Irwin, Homewood, IL.
- [43]. Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students*. Fifth Edition, London: Prentice Hall.
- [44]. Sekaran, U. (2003). *Research methods for business: A skill building approach*. Singapore.
- [45]. Sirohi, R. & Chauhan, P. (2015). Credit Risk Assessment for Mortgage Lending. *International Journal of Research in Business Management*, Vol. 3, Issue 4, Apr 2015, 13-18.
- [46]. Stanton, J.M. (2001). Galton, Pearson, and the Peas: A Brief History of Linear Regression for Statistics Instructors. *Journal of Statistics Education*, 9 (3), 22-28.
- [47]. Tavakol, M. & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, (4):53-55.
- [48]. National Bank of Rwanda (BNR). "Reporting on Census of Micro Finance Institutions in RWANDA".
- [49]. [www.rca.rw](http://www.rca.rw)
- [50]. Van Grueing, H. & Brantanovic, S. J. (2008). *Analyzing and Managing Banking risk: A framework for Assessing Corporate Governance*; Second Edition.
- [51]. Van Horne, J.C. (2004). *Financial Management and Policy*, 5<sup>th</sup> ed., Englewood Cliffs NJ, Prentice Hall.
- [52]. Waltz, C.F., Strickland, O.L., & Lenz, E.R. (2005). *Measurement in nursing and health research*. 3rd ed. New York: Springer Publishing Co.