The impact of Credit Risk on the credit unions in Ghana: What are the financial lessons to be learned?

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Abstract

Unlike commercial banks that deal with stakeholders and customers from different places, Credit Unions deal solely with their members who are in turn the owners of the union. This can therefore lead to conflict between borrowing members (who demand low credit from the union) and saving members who request a high rate of return on what they have invested in the union. The study aimed to assess the credit risk management approaches and their effects on the financial performance of Credit Unions in Ghana. The study used a purposive sampling technique to select 35 respondents from the credit unions. The data was collected from the respondents using questionnaires. The data was analyzed using descriptive statistics such as mean, and standard deviation. The study further revealed that the occurrence of credit risks had retarded the financial progress of the Credit Union and made them spend more than it earns discouraging customers from saving with the Credit Union. The study recommends that the Government and management of the credit unions should have good policies in place to collect back loans granted to customers.

Keywords: Credit risk; credit unions; descriptive statistic; retarded.

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1. INTRODUCTION

Globally, the membership of the credit unions has been increasing as happened in Ghana. In 2002, Credit Unions in Ghana had 253 affiliates with 123,204 memberships. Currently, the average membership in Credit Unions is 400-500 and their average loan size is US$153 (Ghana Credit Union Association. It can be argued from the discussions that the activities or operations of Credit Unions in savings and borrowing have resulted in both opportunities and threats. The threats may include risks such as credit risks, operational risks, liquidity risks, market or pricing risks, operational risks, compliance and legal risks, and strategic risks (Bandyopadhyay & Saxena 2023). Risk is defined as the insecurity about the future and the expression of the future danger that the effective future outcome will deviate from the expected or planned outcome negatively (Singh, 2013).

Further, interference from the government, weak lending procedures, direct lending with poor assessment of the lender, inapt credit policies, unstable interest rates, weak institutional capacity, inappropriate laws, poor loan underwriting, lack of sufficient knowledge on lending, and poor supervision of banks were identified as the sources of credit risks (Quoc Trung, 2021). The more credit risk increases in the financial institution, the more it faces liquidity and solvency problems (Bawa & Basu 2020).

The occurrences of credit risks have recently cautioned financial institutions to put measures in place to manage the risk. This requires management to identify the causes of the risk and measure the risk (Etu-Menson, 2010; Von Tamakloe et al., 2023). In other words, credit risk management is the performance of activities that are implemented to minimize foreign exchange losses, reduce the volatility of cash flows, protect earnings fluctuations, increase profitability, and ensure the survival of the firm (Frimpong, 2010; Temba et al., 2024). However, the management of credit risks is diverse and this depends on the type of financial institution and its ability. The study therefore examined the credit risk management methods/techniques used by Credit Unions to minimize the occurrence of credit risks.

The lack of capacity to adequately make timely and accurate forecasts in lending is a problem for many financial institutions in Ghana (Ofei, 2002; Etu-Menson, 2010). The poor lending procedures have resulted in credit risks and most importantly occur in Microfinance Institutions and Savings and Loans Financial services in Ghana (Etu-Menson, 2010). This shows that credit risk has gained root in most financial institutions in Ghana. Credit risks have affected the sustainability of many Savings and Loans. Ofei (2002) showed that the number of Credit Unions in Ghana has reduced over the past 25 years.

1.1. Purpose of study

This study aims to assess the credit risk management approaches and their impact on the financial performance of Credit Unions in Ghana. The specific objectives of this study include the following;

1. To identify the various causes of credit risks occurring in Credit Unions in Ghana.

2. To examine the effects of credit risks on the financial performance of Credit Unions.

3. To examine the approaches adopted by Credit Unions to minimize credit risks

The Research Questions considered in this study are as follows:

1. What are the various causes of credit risks occurring in Credit Unions?

2. To what extent do the credit risks affect the financial performance of Credit Unions?

3. What approaches are adopted by the Credit Unions to minimize credit risks?

1.2. Literature review

This section is a review of the literature on some **1Categories of Microfinance Institutions** and some concepts of risk and credit risk management. A review of studies on the effects of credit risks (non-performing loans) has been explained.

1.2.1. Categories of Microfinance Institutions (MFIs)

Microfinance Institutions according to Robinson (2001) are categorized into five (figure 1).

Figure 1
Microfinance Institutions
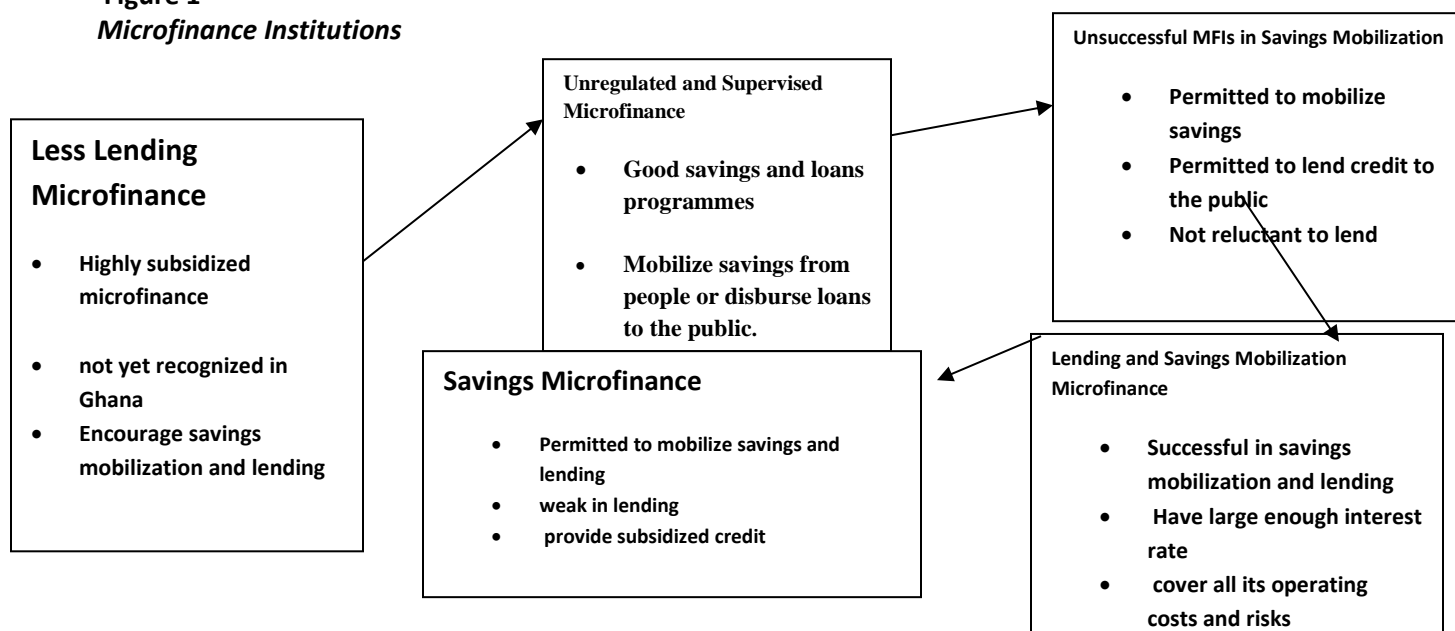
1.2.2. Growth of credit unions

Credit unions in Ghana have grown significantly from 1968 to 2002 as shown in table 1 below:

Table 1
Growth of Credit Unions from 1968 to 2002

Year	Number	Membership
1968	254	60,000
1972	204	27,405
1978	457	48,705
1980	310	49,103
1984	233	49,103
1988	330	65,052
1992	223	44,068
1996	228	51,423
2000	225	70,046
2001	232	96,052
2002	253	123,204

Source: Ghana Credit Union Association (CUA, 2002).

1.2.3. Concepts of credit risks

Credit is defined as the direct borrowing of money or loans from financial institutions. It is that which is provided by a financial institution or debt that is owed (Finley, 2008). Risk is defined as the insecurity about the future and the expression of the future danger that the effective future outcome will deviate from the expected or planned outcome negatively. This definition highlights speculation of risk in the future and how it can affect the outcome or performance of an institution in achieving its stated goal or objectives. Risks that occur in financial institutions can be grouped as credit risk, interest risk, operational risk, market risk, legislative risk, and reputation risk (BCBS, 2011). Among the risks, credit risk is the most frequent that financial institutions experience especially in both the developed and the developing countries (Zribi and Boujelbène, 2011). This is because the risk depends predominantly on customers. Credit risk is defined as the situation where counterparty fails to meet its obligations in harmony with lay down procedures or agreed terms (BCBS, 2011). Within the context of banking institutions, credit risk is the situation where a borrower defaults in payment of a loan. Default is the total or partial loss of any amount lent to the borrower. A large default rate results in great losses and consequently leads to bankruptcy and insolvency of the bank. An example of credit risk was the global financial crisis in 2008 (Shehzad and Haan, 2013).

1.2.4. Sources of credit risks in financial institutions

According to the Basel Committee on Banking Supervision (BCBS, 2011), credit risk occurs as a result of loans granted by financial institutions. The activities of financial institutions such as bookkeeping, trading books, and both on and off the balance sheet are sources of credit risks. Recently, financial institutions increasingly face credit risk in various financial instruments other than loans including swaps, equities, foreign exchange, and financial futures, and in the expansion of commitments and guarantees, and the settlement of transactions (Zribi and Boujelbène, 2011). Credit risks are usually seen as a result of systematic risk derived from the macro standpoint. The problem of credit risk is systematic because the incapacity of one participant to repay the loan can result in the inability of the other participant to meet loan obligations. An example of this scenario is the one that happened during the mortgage crisis in 2009 (Giesecke and Kim, 2011). During that time, there was a massive closure of most financial institutions worldwide because of a lack of payments on mortgage loans. This situation discouraged most financial institutions from lending money to people for the reason of fear of intractable credit risk.

1.2.5. Control measures for managing credit risks

Credit risk management has become a crucial aim for all financial institutions worldwide. The purpose of managing credit risk is to increase risk-adjusted rate of return upholding exposure to credit risks within satisfactory parameters (BCBS, 2011). Problems emerged in most financial institutions because of poor or weakness in managing credit risks (BCBS, 2011). It is therefore important for such institutions to manage risks and this can be done through the use of quantitative and qualitative methods (Nijskens and Wagner, 2011). This is because according to Chavez-Demoulin et al., (2006), the introduction of the new guidelines (Basel II) has made most financial institutions including Credit Unions use both quantitative and qualitative tools for managing credit risk.

1.2.5.1. Basel II approach to the management of credit risks

The implementation of the Basel II makes validation of credit risk models more imperative. The Basel II proposes three ways for financial institutions to calculate capital to cover losses. The first method is the basic indicator approach, which recommends financial institutions hold capital equivalent to 15 percent of their average gross income to cater for the occurrence of credit risk. The second method, known as the standardized approach proposes that financial institutions should have percentages of gross income to hold as reserves within each business line. For instance, Basel II recommends setting aside 18 percent of

the gross income for high-risk business lines but 12 percent of gross income for low-risk business lines. Medium-level risk businesses such as financial institutions need a 15 percent allocation (BCBS, 2011). The third approach is the advanced measurement method for credit risk management. The approach involves the use of internal risk measurement systems to determine credit risk capital charges.

1.2.5.2. Stress testing as an approach to credit risk management

Most financial institutions across the world frequently use stress testing to manage and control the prevalence of credit risks. It is also used to test the particular risk parameters that define the model (Nijskens and Wagner, 2011). Based on the limited inputs, these models can sometimes cause an underestimation of risk. Stress testing allows for a combination of varied scenarios including conceived scenarios and shock. Because stress testing assists in ensuring that financial institutions sustain adequate capital levels, it has become a regulatory requirement in some countries (Chavez-Demoulin et al., 2006).

1.2.5.3. Credit guarantee scheme

The management or mitigation of credit risk can either take the form of unfunded or funded protection. Credit guarantees are one form of unfunded credit risk mitigation and management. Accordingly, the most creditworthy guarantees are likely to be those provided by the government (Nijskens and Wagner, 2011). The use of credit guarantee schemes by financial institutions enables them to define the type of group to grant their loans. In most developing countries, Ong et al., (2003) and Long et al., (2022) posit that financial institutions feel reluctant to grant loans to SMEs because of the high risk involved. As such, a guarantee company that is more technically efficient is usually used as the conduit for lending to SMEs. In Japan, financial institutions have adopted a lending method based on the partnership model that assures protection and minimizes the risk of blocking funds (Fukuda, 2012). In Korea, there are credit guarantee organizations with other provincial corporations that assist in managing credit risk (Beck et al., 2011). In Malaysia, there is a unique organization that coalesces the roles of a credit rating agency, credit institutions, venture capital companies and guarantee companies in credit risk management and mitigation (Beck et al., 2011).

1.2.5.4. Other simple credit risk management measures

Other credit risk management methods include risk-based pricing, covenants, credit insurance, credit derivatives, credit insurance, and collaterals. The risk-based pricing is a tool used by financial institutions to calculate loan interest rates based on the likelihood of default or the risk of the loan (Fukuda, 2012). The covenants method for managing credit risks involves financial institutions that provide strict covenants in their deal contracts. Collateral involves financial institutions requesting assets from the borrower. The financial institutions hold the asset till the deal is completed (Cui, 2008).

The approach to the management of credit risks as identified above varies from one institution to the other. Credit Unions in Ghana are unable to recruit experienced risk management personnel. They also have inadequate resources to train their existing staff to understand and operate these credit risk models.

2. METHODS AND MATERIALS

This study used the mixed method approach where the data was analyzed using numeric and narrative techniques. The study used an interview guide to collect data from the management staff of the Credit Unions. Data was also taken from the audited financial statements of the Credit Unions from 2007 to 2016.

2.1. Research design

The three common approaches to conducting research are quantitative, qualitative, and mixed methods. This study used a mixed research design to achieve the research objectives. Mixed methods

research is an approach to knowledge (theory and practice) that attempts to consider multiple viewpoints, perspectives, positions, and standpoints (always including the standpoints of qualitative and quantitative research. This study is situated within this type of mixed method approach since the quantitative research is not able to provide answers to "why" and "how" questions in research, and as such the qualitative research was required to explain issues that emerged from the quantitative results. Hence, this study adopts more quantitative analysis but employs qualitative analysis to achieve the research objectives. The combination of the two approaches (mixed research method) was relevant in this study because the use of qualitative or quantitative methods has limitations so biases inherent in a single method cancel the biases of the other (Creswell, 2011).

2.2. Participants

The research population is defined as a distinctive collection of individuals with similar characteristics. The population of this study is the staff of Credit Unions in Kumasi. The population includes all staff of the Credit Unions such as operations managers, ICT Officers, Accounts Officers, Branch Managers, finance Officers, Cashiers, and other subordinate staff. The population of the study is 100 comprising the branches of Cooperative Credit Union in Kumasi.

The sample size of the study is 30 staff of the Credit Unions comprising operations managers, ICT Officers, Accounts Officers, Branch Managers, finance Officers, Cashiers, and other subordinate staff. An optimal sample fulfills the requirements of efficiency, representation, reliability, and flexibility (Creswell, 2011). Sampling is the process of selecting the elementary units from the population under investigation (Saunders et al., 2007). A sample size is defined as part of the population chosen for a survey or experiment. It is more convenient to study a portion of the population to make inferences and generalizations to cover the entire population from which the section is drawn for the study.

The sampling procedure is defined as the method followed to select samples from a population (Leedy and Ormrod, 2005). There are two broad sampling methods used in research which include probability and non-probability sampling. Probability sampling is the sampling method that gives every item in the population an equal chance of inclusion in the sample. The forms of probability sampling include cluster, stratified, systematic, and simple random sampling. The non-probability sampling is a sampling technique where the samples from the population are done in such a way that it does not give equal opportunity to all individuals to be selected for a study. The forms of non-probability sampling include purposive, convenient/accidental, and snowball sampling (Saunders et al., 2007). The use of any of the sampling methods depends on the nature and objectives of the study. The purposive sampling procedures were followed to select 30 respondents.

2.4. Data collection tool

This study collected primary data from employees in the Credit Unions. Primary data is the original or first-hand data source collected by the researcher for a precise purpose (Creswell, 2011). The nature of the research objectives stated in Chapter One required primary data to achieve them. The type of data collected from the respondents included the occurrence of credit risk, causes of credit risk, and effects of credit risk on the financial performance of Credit Unions.

Based on the purpose of this study, the questionnaire was used as the instrument to collect primary data from the field. Questionnaires are research tools used in quantitative research to collect primary data for quantitative analysis (Creswell, 2011). Saunders & Allen (2002) classified questionnaires as quantitative and qualitative. This study therefore used quantitative questionnaires and closed-ended questions were largely used. The use of questionnaires in this study helped to collect data from a large sample size of 30 respondents. The questionnaires include the five-point Likert scale, to sum up some of the responses from the Likert item. This Likert scale helped to examine the extent to which the

respondents agree or disagree with a particular question. Strongly disagree (explains your total disagreement with the statement) 2=Disagree (explains your considerate acceptance of the statement); 3=Slightly Agree (explains your loose acceptance of the statement); 4=Agree 5=Strongly Agree (explains your total acceptance of the statement). It also has Yes or No which explains how strongly you are on the subject or not. (0%,20%,40%,60%,80%,100%) was also another means to find out participants responses to a question.

2.4.1. Reliability

This section describes the validity and reliability of the questionnaire data. Reliability and validity are two important concepts in research for improving the accuracy of the evaluation of the research work. Reliability is the degree to which responses from a survey are consistent and accurate representations of the sample frame. If the results of a study can be replicated using a similar or the same methodology, then the research instrument is considered to be reliable. A pre-test was conducted with the branch managers of the Credit Unions on measures they have in place to minimize credit risks. The pre-test was intended to examine the correctness and completeness of the interview questions. It was also intended to have an overview of how the participants would react to the questions during the interview. Again, the pre-test was conducted to indicate the time needed to finish the main interview. Through the pre-test, the interviews were improved.

2.4.2. Validity of Data

Validity determines whether the research results truly measure that which it was intended to measure. In other words, data validity is the nearest to truthfulness of the outcome of the research. External validity was achieved because different methods for collecting data were used in this study to make the results appropriate for generalization. Validly was achieved in this study because the responses to the questions in the interview guides were used to answer the research questions. Also, the results from this study correlated or agreed with other results in the literature.

2.5. Ethical considerations

The study sought the consent of the key informants before the interviews were administered. The purpose and benefits of this study were clearly explained to the participants. As part of the ethics of this study, the respondents were assured of the confidentiality of the information they gave out.

3. RESULTS

This chapter presents the analysis of data collected from the respondents. The analysis is done regarding achieving the research objectives stated in chapter one of the studies. The analysis of data was descriptive using frequency distribution tables and percentages. Descriptive statistics such as mean and standard deviation were used in this study to analyze the response on organizational culture, organizational innovativeness, and factors affecting culture. The mean scores of responses on the five-point Likert scale for each of the Likert items were calculated. The standard deviation was also calculated to show the deviation of the responses on the Likert items.

3.1. The causes of credit risks in credit unions

Table 2
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation

	N	Maximum	Minimum	Mean	Std. Deviation
Large amounts of loans are granted to customers causing credit risk	60	2	1	1.30	.462
The poor collection of loans increases credit risk	60	2	1	1.25	.437
The poor assessment of borrowers before loans are given increase credit risk	60	2	1	1.18	.390
Poor governance and management control increase credit risk	60	2	1	1.42	.497
The poor lending practices of the Credit Union cause credit risk	60	2	1	1.25	.437
The interference of the government has led to credit risk	60	2	1	1.43	.500
The high interest rate has led to credit risk	60	2	1	1.32	.469
The ability to meet the deadline of the loan causes credit risk	60	1	2	1.40	.494
Valid N (listwise)	60				

Source: Fieldwork, 2018

Table 2 shows that the mean value of 1.18 is the least meanwhile 1.40 is the highest mean. This means that on average, The poor assessment of borrowers before loans are given is the least cause of credit risk in credit unions while the ability to meet the deadline of the loan causes the highest credit risk to the credit unions. Furthermore, on the aspect of the standard deviations, the least dispersion is 0.390 indicating that the poor assessment of borrowers before loans are given increases credit risk is closely concentrated around the mean while the highest standard deviation of 0.5 indicates that the interference of the government has led to credit risk which has caused the variables to be widely dispersed from its mean.

3.2. Effects of credit risks on the financial performance of credit unions

This section of the chapter addresses the second objective of this study. The Likert scale ranges from 0% in response 1 to 100% in response 6. The mean score determines the type of scale and the standard deviation also determines the variation of response from the participants considered in this study. The mean scores indicate the average response of the participants who agreed or disagreed with the questions (Table 3).

Table 3
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
It has reduced the profit margin of the Credit Union	60	1	6	3.28	1.263

	60	1	6	3.23	1.125
It has retarded the financial progress of the Credit Union	60	1	6	3.23	1.125
It makes the Credit Union spend more than it earns	60	1	6	3.57	1.254
It makes management not capable of achieving their financial objectives for the year	60	1	6	3.73	1.376
It discourages customers from saving with the Credit Union	60	1	6	3.57	1.395
Valid N (listwise)	60				

Source: Fieldwork, 2018

Table 3 shows that the mean value of 3.23 is the lowest mean indicating that the credit risk has retarded the financial progress of the Credit Union. This has the lowest mean of 1.125 below the rest of the variables. The rest of the means and standard deviations are very close to each other indicating that each variable under study was having a close impact on the effect of credit risk on financial performance.

3.3 Approaches adopted by the credit unions to minimize credit risks

Table 4

Descriptive data on approaches adopted by credit unions to minimize credit risks

Approaches to Reduce Credit Risk	N	Min	Max	Mean	Std. Dev.
To give a reasonable interest rate	60	2	5	3.93	1.314
To conduct proper loan assessment	60	1	5	3.74	1.244
To reduce the duration of payments of loans	60	2	5	4.24	1.215
To hold capital equivalent to 15 percent of their average gross income to cater for the occurrence of credit risk**.**	60	2	5	4.71	1.256
To have percentages of gross income to hold as reserves within each business line	60	2	5	4.93	1.18
Management as loans within savings	60	3	5	4.20	0.712
Outsourcing as a means of Managing Credit Risks	60	3	5	4.14	0.733
Can the government play a major role in reducing credit risk,	60	1	5	3.74	1.244

Source: Fieldwork, 2018

Among the approaches used in managing credit risk, the government role has the lowest mean of 3.74 followed by the interest rate with a mean value of 3.93. All the others have closely related mean of more than 4.1 indicating high indicators that can be used to properly manage risk.

4. DISCUSSION

The study found that the causes of credit risks in credit unions are varied. The paramount causes of credit risks were identified as large amounts of loans granted to customers causing credit risk; a poor collection of loans increasing credit risk; poor assessment of borrowers before loans are given increasing credit risk; poor governance and management control increasing credit risk; poor lending practices of the Credit Union causes credit risk; interference of the government has led to credit risk and the high interest rate has led to credit risk. The study also revealed that the occurrence of credit risks affected the financial performance of the credit unions. It has retarded the financial progress of the Credit Union, spending more than it earns and discouraging customers from saving with the Credit Union.

Credit Unions have loan policies that guide them anytime a customer applies for loans. The policy helps Credit Unions to access and evaluate loan procedures from the collection period by the customer to the payment period to the institution. Credit Unions keep track of customer records to minimize credit risk (loan default). The records of the customer regarding the frequency and number of loans obtained and repaid and the quantum of the loan are assessed. This helps the institution to track the ability of the borrower to pay back the loan and interest. The study revealed that management of the Credit Unions must have measures in place to ensure that loan defaults are reduced.

5. CONCLUSION

This section presents a summary of the major findings from the study. It also presents the conclusion and recommendations for the study. It is recommended in this study that the management of the Credit Unions should have good measures in place to recover their loans from customers. This will help to reduce the non-performing loans and improve profitability. The Credit Unions should devise plausible means of monitoring the loans and recover them to reduce default. This can be done through policymakers responsible for the management of credit unions. The study recommends that management should employ a fresh team on a contract basis purposely for loan recoveries and the team should be given targets and achievements that would earn them a renewal of their employment contracts. Future researchers must come out with practical models that will be followed by credit unions to achieve their goals.

The Credit Union Association (CUA) would benefit from this study. The findings of this study can be considered by the association to shape the policy formulation that regulates the performance of Credit Unions in reducing credit risks. The study would also benefit the management of Credit Unions in Ghana in adopting management by exception where management can focus on areas that need much attention. The findings can also serve as a blueprint for the management of the Credit Unions and stakeholders to make important decisions. The study would also benefit students and researchers in Ghana. That is findings from this study would form data for academicians and future researchers.

This study is limited geographically to the few but top-level credit unions in the Ashanti regions of Ghana. Even though these samples are representative time and resources do not allow for covering all the credit unions within the Ashanti region of Ghana.

Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: No human subjects were harmed in this study. Every participant maintained their anonymity. Before beginning the trial, each participant gave their informed consent.

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