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THE DETERMINANTS OF NON-PERFORMING LOANS AND THEIR EFFECTS ON THE PERFORMANCE OF COOPERATIVE CREDIT UNIONS IN BAMENDA

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ABSTRACT

The main objective of this study is to assess the determinants of non-performing loans, and the effect of non-performing loans on the performance of Cooperative Credit Unions (CCUs), in Bamenda. The study adopted the descriptive and inferential research design. The target population of study consists of CCUs in Bamenda. Data for this study was collected, firstly using structured questionnaires for the primary data, and then audited CCUs financial statements for the year 2022, with respect to secondary data. The study made use of convenience sampling and a sample of twenty three (23) CCUs were selected from the target population. Data was coded and analysed with the aid of SPSS, using simple linear regression analysis, precisely Ordinary Least Squares (OLS) to test the hypotheses. Findings indicate a statistically significant negative relationship between members' education and the volume of non-performing loans in CCUs. Statistically significant and thus inconclusive results are obtained for loan appraisal in the ex-ante lending period, communication, and follow-up on the use of funds in the ex-post lending period, and the volume of non-performing loans in CCUs. Finally, a positive, though statistically insignificant relationship was obtained for the effect of non-performing loans on performance of CCUs, measured using Return on Assets. Again, not much could be drawn from this result due to its statistical insignificance. The study recommended that CCUs should invest more in ex-ante lending activities, client education to be precise. This could take several forms, like financial literacy training, basic bookkeeping skills, capacity building, and technical assistance among others.

KEYWORDS: Client education; Credit Union; Communication; Loan appraisal; Non-performing loans; Performance.

1. INTRODUCTION

1.1 Background of the Study

The history of microfinance can be traced back to the 19th century in Europe with the creation of the Raiffaisen in Germany or the local case of mutual agricultural credit in France (Moody & Fite, 1971). One of the earliest and longest-serving micro-credit organizations providing small loans to rural poor dwellers with no collateral was the Irish Loan Fund system initiated in the early 1700s by Jonathan swift. His idea began gradually in the 1840s and became a widespread institution of about 300 branches all over Ireland in less than one decade. The principal purpose was to advance small loans with interest for short periods (Hollis & Sweetman, 1966; Hollis & Sweetman, 1966). However, the pioneering of modern microfinance is often credited to Dr. Mohammad Yunus, who began experimenting with lending to poor women in the village of Jobra, Bangladesh during his tenure as a professor of economics at Chittagong University in the 1970s (Robinson, 2001)

Microfinance development in Cameroon can be traced back to the 19th Century when moneylenders were informally performing the role of new formal institutions. The first Microfinance Institution (MFI) in Cameroon was created in 1963 by Janson, a Dutch Catholic Father in Njinikom, Bamenda of the North West Region of Cameroon which took the form of a credit union (Tiche, 2023). Since then, credit unions in the country have continued to grow in number, membership, and deposits. Today, there are over 300 credit unions with the three largest credit unions located in Bamenda. In Cameroon, credit unions are under apex organizations; the first being Cameroon Credit Union league (CAMCCUL) created in 1968 (Tiche, 2023). As at 2022 there were three umbrella organizations which are CAMCCUL, Renaissance Cooperative Credit Unions (RECCU-CAM) created in 2013 and RAINBOW COOPERATIVE CREDIT UNION Coop BOD (RAINBOW CAM) created in 2020.

MFIs in Cameroon are divided into 3 categories and each category has its specific way of collecting funds in accordance with Article 5 of Regulation No. 01/02/CEMAC/UMAC/COBAC of April 13th 2002. As prescribed by the Banking Commission of Central Africa, Category 1/Class one Micro-Finance Institutions are those which have members and accept deposit from and grant loans only to members. This category includes associations, cooperatives and credit unions. Category 2/Class two Micro Finance Institutions are those which accept deposits from members and third parties (customers). This category groups limited liability companies that function like micro banks, and Category 3/Class three Micro Finance Institutions are those engaged in lending only and they do not collect savings and deposits. They include micro-credit and project financing institutions (Ngema, 2022).

Cooperative credit unions (CCUs) are under category 1 MFIs, which is a cooperative society organized within a group of people with a common intangible bond such as belonging to the same tribe, religion, political party, trade or profession. A credit union provides an outlet for savings

which can be made available as credit at the lowest possible lending rates to people of a common bond (Tiche, 2023). They equally have common share which serves as a bonding factor between them. Deller & Sundaram-Stukel (2012) notes that, credit unions offer high interest rate on members' savings, low interest rate on loans than banks.

Cooperative credit unions like other microfinance institutions have loan granting as their main activity. Income from loans covers more than 70% of their total income, thus the profitability of the institution depends on the performance of the loan portfolio. This income goes to pay interest on the savings of the members and take care of operation expenses. World Council of Credit Unions (2015) states that, the interest rates should cover all financial, operating, loss protection and reserve accumulation costs. They go further to indicate that, interest rates on loans, savings and the dividends should be set based on market conditions and business planning that ensures all operational and financial costs are covered, rates should not be established in the law or bylaws.

Despite these expectations as indicated by World Council of Credit Unions (2015) many CCUs, are constantly faced with high rates of loan defaults resulting to non-performing loans (World Council of Credit Unions, 2015). When loans become non-performing interest collection is low. This challenge of increase number of non-performing loans by credit unions has greatly influenced their profitability.

Loans being the principal activity of CCUs, they all have a procedure for granting these loans which is the loan origination process also known as the loan granting process, which is the process of applying, verifying, and approving a new loan. It involves submitting various types of financial information and documentation to the lender, such as income, credit history, assets, and the purpose of the loan. The lender then uses this information, along with automated or manual underwriting, to determine the type of loan, the interest rate, and the terms for which the borrower is eligible (Kopp, 2023).

Loan origination is also the steps taken from a loan application to disbursement or decline of a loan facility (Leavitt, 2022). These steps include; the prequalification process. In this process the borrower indicates his intention and the lender presents the products that meet their need. At this stage member education by CCU is very important. It helps the potential borrowers to understand the requirements and expectations of the lenders, as well as the benefits and risks of different loan products. Member education by CCU can also improve the financial literacy and creditworthiness of the borrowers (Jotform Blog, 2023). It then moves to the next step which is the application. The borrower submits all documents requested by the lender. Next is the application processing step. Here verifications are done, field visits are done to authenticate the information provided by the borrower, inspect the business or project site to know the present state.

This is followed by the appraisal step where facts gathered are used to evaluate the member's credit worthiness with the help of appraisal tools like 5C's of credit granting which is a common framework that lenders use to assess the creditworthiness of a borrower and the quality of a borrowing request is the 5 Cs of credit. The 5 Cs are character, capacity, capital, collateral, and conditions. Character is the borrower's reputation and history of repaying debts, which can be evaluated by credit history and credit score. Capacity is the borrower's ability to generate cash flow and meet debt obligations, which can be calculated by financial ratios such as debt service coverage or total debt service. Capital is the amount of money that the borrower has invested in the business or project, which shows the level of risk-sharing and commitment. Collateral is the assets that the borrower can offer as security for the loan, which can lower the lender's exposure to loss in case of default. Conditions are the purpose of the loan, the amount involved, and the prevailing interest rates, which can affect the viability and profitability of the loan (Rose & Hudgins, 2013). The credit decision step comes next, where the loan is to be approved or rejected by the competent authorities. The final step is the disbursement of funds to the borrower. This only done when the approval conditions have been respected.

Loans are not abandoned after disbursement but rather the CCUs do follow-up to ensure the funds are properly used and to ensure the loans are repaid. This is a post granting process known as loan monitoring. Fringuellotti & Santos (2022) looked at loan monitoring as all supervising activities aimed at verifying and improving the likelihood that a borrower complies with its loan obligations, they found that bank monitoring reduces delinquency rates and increases loan repayment. A fact sheet by the USAID, (2003) highlighted the importance of loan monitoring in microfinance, where frequent site visits help to verify the use of loan funds and reinforce the borrower's commitment towards the loan repayment and educate the borrower on financial principles to hedge against the loans becoming non-performing.

According to Caprio & Klingebiel (1996), non-performing loans are loans that fail to produce income for a prolonged period of time, meaning that the borrowers have not paid back the principal and or interest on these loans by the deadlines of repayments. The term non-performing loan is used interchangeably between bad loans and impaired loans as identified in (Fofack, 2005). According to Berger & De young (1997) NPLs are described as "problem loans". In a broader context, loans that are outstanding in both interest and principal for a period of time contrary to terms and conditions spelt out in the loan agreement are considered as non-performing loans (Bloem & Gorter, 2001). The unproductive nature of non-performing loans might affect the profitability of the CCUs.

Profitability is the company's strength to generate profits every year which shows the company's success in running its business (Menicucci & Paolucci, 2016). Profitability is also interpreted as an assessment of the company's ability to obtain profits by comparing the income generated and costs incurred by the company in a certain period (Haidary & Abbey, 2018)]. CCUs profitability can be

measured with the use of Return on Asset (ROA) taking in to consideration interest on loans and the loan portfolio.

1.2 Statement of the Problem

Lending money is very relevant for any industry that deals with any kind of monetary investment (Shekhar, 1985) and CCU's being one of these types of institution has a principal activity giving out loans to its members. The main assets for CCUs are loans, and most of their income comes from the interest they generate from these loans. CCUs, being member owned financial institutions provide savings and credit services to their members who look forward to benefiting from their profitability. CCUs also play a vital role in promoting financial inclusion and economic development in where ever they are found and in this case the city of Bamenda, Cameroon. The profitability will not only affect the dividends of member but also affect the rate of financial inclusion and development in Bamenda. Hence clearly understanding the determinants of NPLs and the effects of NPL on performance will go a long way in designing processes and procedures that mitigate these effects and guarantee the sustainability of the CCUs.

Loans are the biggest part of the assets and revenue of most financial institutions (Proctor, 2003). It is expected that borrowers from CCUs must abide to the contracts the signed when acquiring the loans. However very often it is seen that they do not follow these contracts as stipulated and sometimes even default on the loans altogether. Such loans are considered as non-performing loans (NPLs). Non-performing loans (NPLs) are a challenge for financial institutions and cooperative credit unions in Bamenda Cameroon, especially as they serve most of the poorer population. There is thus needs to address this issue urgently to sustain economic growth and reform. This research focuses on examining the determinants of NPLs basing on variables from loan origination and loan monitoring processes and to assess the effect of NPLs on the profitability of CCUs in Bamenda. It also explores how these factors can help reduce NPLs and improve the quality of the credit union's assets. The research aims to provide insights into the management and measurement of NPLs and their impact on CCUs profitability.

The rate of occurrence of NPLs in CCUs in Bamenda and its effect of their performance is not well known. In Bamenda like in most other places in the developing world, there seem to be varied reasons for the existence of NPLs. These include members' education on the products and services, poor loan appraisal, poor credit management, poor communication between members and the CCUs, poor supervision of use of funds, weak regulations, and external factors such as political instability (Ameyaw-Amankwah, 2011). These factors that affect the occurrence of NPLs do so at various stages in the loan granting process and to different degree with the main stages being loan origination and loan monitoring. The soundness of these stages would reduce the occurrence of NPLs. For example, the need for a sound loan granting procedure that can identify and mitigate the risks involved in lending activities has been emphasized (Churchill & Coster, 2001). CCUs in

Bamenda do not seem to lay sufficient emphasis on the established loan granting procedures. Some of these procedures do not even include the entire loan origination and loan monitoring. The lack of soundness of these procedures has an effect on the occurrence of NPLs. However, the degree to which these affect the NPLS and consequently the profitability of the CCUs in Bamenda has not yet been studied.

1.3 Research Questions

This research seeks to answer the following questions:

1.3.1 Main Question

What are the determinants of non-performing loans in CCUs, and how do non-performing loans affect CCU performance?

1.3.2 Specific Questions

- i. What is the effect of client education on the volume of non-performing loans in cooperative credit unions in Bamenda?
- ii. What is the effect of loan appraisal on the volume of non-performing loans in Cooperative credit unions in Bamenda?
- iii. What is the effect of communication between the union and the clients on the volume of non-performing loans in cooperative credit unions in Bamenda?
- iv. What is the effect of follow-up of the use of funds on the volume of non-performing loans in Cooperative credit unions in Bamenda?
- v. What is the effect of non-performing loans on the performance of cooperative credit unions in Bamenda?

1.4 Objectives of the Study

1.4.1 Main Objective

To assess the determinants of non-performing loans in CCUs, and the effect of non-performing loans on CCU performance.

1.4.2 Specific Objectives

- i. To assess effect of client education on the volume of non-performing loans in cooperative credit unions in Bamenda
- ii. To assess the effect of loan appraisal on the volume of non-performing loans in Cooperative credit unions in Bamenda
- iii. To assess the effect of communication between Unions and their clients on the volume of non-performing loans in cooperative credit unions in Bamenda.
- iv. To evaluate the extent to which verification of the use of funds contribute to frequency of non-performing loans in Cooperative credit unions in Bamenda.

- v. To establish the relationship between non-performing loans and performance of the cooperative credit unions in Bamenda

1.5 Hypotheses

H₀₁: Client education has no effect on the volume of non-performing loans in Cooperative credit unions in Bamenda.

H₀₂: Loan appraisal has no effect on the volume of non-performing loans in Cooperative credit unions in Bamenda.

H₀₃: Communication has no effect on the volume of non-performing loans in Cooperative credit unions in Bamenda.

H₀₄: Follow-up of use of funds has no effect on the volume of non-performing loans in Cooperative credit unions in Bamenda.

H₀₅: Non-performing loans has no effect on the performance of the cooperative credit unions in Bamenda.

1.6 Significance of the Study

This study on the determinants of non-performing loans and the effects of (NPLs) on the performance of cooperative credit unions in Bamenda, is important to CCUs because it tackles a serious problem that has implications for the financial sector and the economy in general. The study also finds out and suggest possible solutions and strategies to lower the volume of non-performing.

The study also has practical implications for policy makers, regulators, managers, and members of CCUs, as it provides insights and evidence on how to improve the credit management and their risk management, and boost their financial performance and resilience

The study is important to other researchers as it adds to the existing literature and knowledge on the topic of the determinants of non-performing loans and the effect of NPLs on the performance of CCUs. Moreover, the study has potential impacts for future research, as it creates new opportunities and directions for further investigation and exploration on the topic of non-performing loans and credit unions, both in Bamenda and beyond.

2. LITERATURE REVIEW

2.1 Conceptual Literature

2.1.1. Loan Origination

Origination is the multi-step process that every individual goes through to obtain a loan (Kopp, 2023). The term loan refers to a type of credit vehicle in which a sum of money is lent to another party in exchange for future repayment of the principal amount. In many cases, the lender also adds interest or finance charges to the principal value, which the borrower must repay in addition to the principal balance (Kagan, 2023). Loans may be for a specific duration, one-time amount, or they

may be available as an open-ended line of credit up to a specified limit. Loans are in many different forms which include the purpose of the loans and level of security of the loans (KAGAN, 2023). This process of obtaining a loan is referred to as the loan origination process, which are the steps followed by a lender to give out loans. The process varies with the institution and loan type. These steps rang from pre-qualification, loan application, application processing, underwriting, credit decision and loan funding.

2.1.2. Pre-qualification Step

This is the first step in the loan origination process. The borrower supplies the lender with his detailed information pertaining to account number, address, loan history, assets, amount of loan required, and purpose for the loan. Based on information provided, the loan officer will educate the member on the products available and state which can best suit their needs. This step is of utmost importance, poor education of client on the products and service can lead to wrong decisions resulting to loan default. Bank rate (2023) describes pre-qualification step as a great way to get personalized loan information without making a formal application. This will help understand loan options and terms suitable to the client's needs.

2.1.3. Loan Application Step

This is the second step in the loan origination process. Here a formal application is done. The member presents documents requested by a loan officer as per the member's request. The loan form is filled and signed by the member. This application and submission of documents can be done online in the institutions web site or onsite in the branches. This step is very important in the origination process. The loan officer has to provide a list of all documents needed to be provided by the member to reduce cost of borrowing. According to Gopal (2023), this step constitutes of filling an application form, proving supporting documents and credit history.

2.1.4. Application Processing Step

This step involves preparing the application for reviewing. The information provided by the member is verified. The loan officer carries out field studies to evaluate the business. This will get more information on member's longevity and experience in the business. Startups are likely to fail in the first twelve months of existence thus the amount of loan for a startup business has to be minimized to reduce risk (Addae-Korankye, 2014). The member's credit history is equally investigated; this can be gotten from credit bureaus or networks black for members who have been delinquent. This step ensures all documents and information provided is complete and verified. According to Muthoni (2016), loan officers should screen loan applications properly before granting to reduce loan default.

2.1.5. Underwriting Step

This is the loan appraisal step. According to Anjichi (1994), loan appraisal is the core of a healthy loan portfolio. Here, a proper diagnosis is done on the member as well as their business. This step is important as it examines character, capacity, collateral, capital, and conditions which are called the 5C's in ensuring detailed information is known to avoid loan default (Moti et al, 2012). The loan officer analysis the income of the member from the business, through the cash flow analysis of the business. This will indicate if the cash flow will be for a short time or over a long period of time. The loan officer will get information on other justified sources of income; at most 30% of the income can be used for loan repayment, there by determining the member's capacity. Poor assessment on the customer's ability to pay led to a crisis in India in 2010 (Rai, 2011). Sheila, (2011) also mention poor financial analysis as a cause of poor portfolio performance and loan default. The character of the member has to be well ascertained. This can be through previous loan repayment history or information from his environment on his attitude towards finances. Costumers with bad characters can get loans at any cost with no intension of repaying them. According to McGoven (1993) in a study on loan loss in the United States of American banks, character has historically been a paramount factor of credit granting. Every business requires capital to operate. Some members expect their bankers to a greater part of their capital in business (Matter, 1972).

Most financial institutions do not provide finances to their customer, more than what they have as capital. The more money a member has in his business, the more committed they are to grow the business and repay the additional capital from loans. Condition also has a great part in loan appraisal. This can be seen on different perspectives; the economic, climatic, political and cultural. The business the member is seeking to be financed should be assessed from afore mentioned points. There are businesses which are seasonal, thus should not be financed during the off season. There is equally a business which does not suit the culture of the people in the area of operation; such businesses should not be financed as there will be no consumers of the product. The last factor of assessment being collateral is guarantees collected by the institution against unforeseen circumstances of non-repayment. These can be surety; cash guarantees or assets which ensure the funds are secured in event of business failure or bad fate by the member in loan repayment. The collateral should have a value greater than the loan amount to ensure both capital and interest is covered. Some institutions have other appraisal tools, such as the credit score card which they use.

2.1.6. Credit Decision Step

The decision in this step is based on the results of the underwriting process. The application is approved by the competent authorities as per the lending procedure of the institution. This loan application can be approved, declined or sent back for additional information.

The loan policies and procedures are taken into consideration during decision making. This policy states the interest rates, the loan duration, the maximum loan to be granted, the type of acceptable

securities, the approval authorities with respect to the loan amount. All these components of the policy affect the quality of a loan portfolio. High interest rate charged by microfinance institutions increase borrowing transaction cost and can affect loan repayment adversely, thus result to non-performing loans (Olomola, 1998; Okpugie, 2009; Vandel, 1993). For the institution to control repayment performance, reasonable interest rates should be charged to reduce cost of borrowing. The repayment periods of loans have an impact on loan repayment. On approval the period should be guided by the life cycle of the business. Yehuala (2008), found that loan repayment period has a negative effect on access to credit as it has a major bearing on the total amount to be repaid. This longer the loan duration the more the total amount to be repaid. Mutesasira & Wright (2001) also found that the short-term repayment period does not meet the businesses' long term financing needs and as a result, they will take any amount of loan that the financial institutions are willing to offer them.

The terms of the loan should reduce cost associated with lending thereby making the institution and member derive maximum benefit from the loan (Anderson, 2002). George (2008), also mentions that it is important for every organization to match the loan terms to the borrower's needs, thus making it easier for them to access loans and provide friendly terms for them to repay the loan on time. Regular checks should be done on the activities of the loan officers to ensure they follow the lending policies and procedures. This is confirmed by Appiah (2011), as he mentions that at times microcredit lending decisions made by loan officers are based on loan officer's experience and his feelings over the market at that point in time. Taking into consideration the analysis in the underwriting step and the loan policies and procedures the loan decision will be taken. The amount granted is of great importance for certain projects. Under financing of certain project will influence the repayment of the loan.

2.1.7. Loan Funding Step

This is the step where the funds are made available to the member. This can only be done when approval conditions have been met. Loans backed by securities fully mortgaged and signed by all parties concern. The method of disbursement depends on the purpose of the loan. Real estate loans are to be disbursed in installments to monitor the evolution of the project. According to (Olomola, 1998), loan disbursement time frame can adversely affect repayment performance.

2.1.8. Loan Monitoring

The lending banks' function of loan monitoring plays an important role in sustaining quality loan portfolios and protects risk assets against deterioration thereby keeping non-performing loans within acceptable standards (Idris & Nayan, 2016). Monitoring entails all supervising activities aimed at following-up and improving the possibility that a borrower complies with its loan repayment (Nicola & Fringuellotti, 2020). From a conceptual perspective, loan monitoring can take the form of "ex ante moral hazard prevention" or "ex post costly state verification". The former

constitutes a series of actions aimed at reducing the borrower's incentive to select a bad investment which might lead to a failure, hence inability to repay the loan (Holmstrom & Tirole, 1997). The latter refers to a control mechanism that allows a lender to enforce loan repayment, which entails constant follow-up of borrowers before and after disbursement of funds to ensure the funds are used for the purpose it was given (Krasa & Villamil, 1992).

The need to give due attention to borrower thus need not be overemphasized in order to ensure loan performance. There is a tendency by borrowers to give better attention to their loans when they perceive they got better attention through regular communication with their bankers. Some of the loan's defaults ascribe to lower level of attention given to borrowers. It is advised that CCUs keep up with their loans timely. Financial institutions lose money because they do not monitor their borrowers' property, and fail to recognize warning signs early enough (Mucheke, 2011). When CCUs fail to give due attention to the borrowers and what they are doing with the money, then they will fail to see the risk of loss. The objective of supervising a loan is to verify whether the basis on which the lending decision was taken continues to hold good and to ascertain the loan funds are being properly utilized for the purpose they were granted. In order to meet these objectives financial institutions, need to see whether the character of the borrower, its capacity to repay the loan, capital contribution, prevailing market conditions and the value of the collateral that was taken during loan approval time remains the same (Mucheke, 2011).

It is worth noting that, microloans are often monitored with greater frequency and attention to detail than long-term loans for much larger amounts. These loans are commonly made to business owners operating in highly volatile, sometimes distressed economic and political conditions, as such loan officers who visit clients weekly are monitoring environments in which changes can come swiftly and can only be properly assessed first-hand. However, many skilled loan officers who are new to the field of micro lending sometimes find this situation counterintuitive. Why spend so much time monitoring small loans?

2.1.9. Importance of Loan Monitoring

Lenders conduct regular loan monitoring to protect their interest. Loans are investments to the CCU and they would not want to lose out on their investment. Hence, a good monitoring assessment will be done to instantly detect and highlight any red flags that will suggest that a borrower's finances are unfit to repay a loan. It is important for CCUs to be able to detect these warning flags early because it allows them to make quick decisions concerning their investment and seek a viable solution.

Also, CCUs conduct this process to maintain the loan underwriting standards, as regulatory bodies demand that the standards remain strong. This is critical to the future running of the institution. Furthermore, through monitoring any changes in the behavior of the borrower towards

the loan and the institutions will be dictated. However, the most apparent reason for monitoring is that Credit Unions are trying to avoid loss as much as possible. Hence, it is important to execute the monitoring process effectively to know which loans are likely to default, leading to financial loss.

2.1.10. Non-Performing Loans

Non-performing loans are referred to as those financial assets from which financial institutions no longer receive interest and/or installment payments as initially. According to Choudhury & Adhikary (2002) non-performing loan is not a multiclass concept. This is mainly because non-performing loans can be classified into different varieties usually depending on the duration it has been overdue. Non-performing loans are considered as a by-product of a financial crisis, they are not a core product of the lending function but a likely occurrence of the lending process, one that has potential to aggravate financial crisis and to complicate macro-economic management (Woo, 2000). This is because non-performing loans can bring down investors' confidence in the banking system.

In a bank-centered financial system, non-performing loans can further discourage economic recovery by shrinking operation margin and eroding the capital of the banks to advance new loans. This is sometimes referred to as credit crunch (Bernanke, Lown, & Friedman, 1991). In addition, non-performing loans if created by the borrowers willingly and left unresolved, might become contagious there by driving good borrowers out of the financial market. Muniappan (2002) indicates that a bank with high level of non-performing loans do incur carrying costs on non-income yielding assets which does not only affect profitability but also at the capital of a bank and thus, the bank faces difficulties in generating capital resources. With this crisis over the last few years the literature that examines non-performing loans has expanded in line with understanding the factors responsible for financial vulnerability.

2.1.11. Factors Influencing Non-Performing Loans in Credit Unions

2.1.11.1 Member Education

Borrowers' knowledge on record keeping, products and services of the CCU and the business environment may help them to manage their cash flows and make better business decisions, this is essential for borrowers who are restarting new businesses. According to Bhatt (2002) training and education level are believed to affect the business performance of borrowers. However, he also indicates that training for borrowers could be costly for borrowers who need the loans at short notice to capture the opportunities.

2.1.11.2. Loan Appraisal

Loan appraisals in CCUs are done with the help of the 5Cs of credit which are used to evaluate the creditworthiness of potential borrowers (Muhammad & Melemi, 2021). The 5Cs of credit contribute to non-performing loans when they are not properly assessed or monitored by the CCU.

For example, if the lender does not verify the borrower's character or capacity, they may end up lending to someone who is dishonest or unable to repay. If the lender does not consider the conditions or collateral, they may expose themselves to higher risks or losses in case of adverse events or default (Peprah & Oteng). Therefore, it is important for lenders to use the 5Cs of credit as a comprehensive and dynamic tool to evaluate and manage their loan portfolio.

2.1.11.3.Loan Amount

The bigger the loan amount the riskier the loan is. The lender needs to take extra care these situations as default rate are higher. Although bigger loans mean more profit for the lender (Schreiner, 2002). The amount of loans could be a factor causing NPLs, as it directly relates to risk. Many MFIs have had problems with the repayments of clients whose loans issued exceed their capacity to repay (Wright, 2000). Higher loan size on the average may imply the overestimation of borrowers' repayment capacity. On the other hand, higher loan size could mean that the borrowers have higher capacity to earn and to repay the loans. Loans bigger than the business needs may result in diversion of the loans for personal needs and it will results in the inability of the business to pay from income generated (Norell, 2002). This over financing is common with friends of credit officers or privileged figures who receive large size loans based on favoritism, thus overlooking the capacity to pay back. According to Khandker (1998) loan recovery rate for larger loans may be lower than small loans. One of the reasons of the possible relationship between high repayment rate and the small loans could be the spread of risk as funds are granted to several borrowers.

2.1.11.4.Policy and Objectives

The loan policies and objectives of the institution has to be clearly stated. This is supposed to be communicated amongst staff and members in the form of a written document. Without this the objectives will not be taken seriously and it will result to low quality portfolio. Without clear objectives of outreach, loan officers may not concentrate on serving the target group (Holt and Ribe, 1991).

2.1.11.5.Diversion of Funds

Diversion of funds is one of the factors that can contribute to non-performing loans (NPLs), which are loans that are not repaid according to the agreed terms. Diversion of funds occurs when borrowers use the loan proceeds for purposes other than those specified in the loan agreement, such as personal consumption, investment in other businesses, or repayment of other debts. This can reduce the borrower's ability and willingness to repay the loan, and increase the risk of default (Mucheke, 2011).

2.1.11.6.The Schedule and the Amount of Loan Installments

Many successful MFIs require small regular repayment from borrowers, which may make it easier for small borrowers to manage the cash. Wright (2000) claims that farm households have many and

varied sources of income and types of expenditure thus small regular repayment will be appropriate for them. Terms of loan repayment should be determined by the borrower's needs. According to Wright (2000), institutions with short-term loan products and technologies may be more competitive to informal lenders. Branches with a higher ratio of short-term loans may be doing better financially with low rates of non-performing loans.

2.1.11.7. Staff Training

Training of credit union staff affects the loan portfolio performance. Unqualified loan officers will not have a good mastery of the loan origination and monitoring process. As a result bad loans will be granted and poor monitoring will be done hence a high rate of non-performing loans. Yaron, et.al (1998) states that, poor screening and insufficient monitoring of loans affect the quality of loans.

2.1.11.8. Interest Rates

Interest rates are critical in the mobilization, and allocation of resources (Yaron, et al 1998). The demand and repayment of loans is greatly influenced by the interest rates, although Rhyne (1998), thinks otherwise as he says the demand for loans may not be significantly affected by the level of interest rate. Restrictions are being put on interest rates either by market forces or the government. Restricting interest rates discourages savings and may discourage lending to small borrowers. Borrowers check the return on investments before considering the interest rate offered, as more promising projects might be selected at reasonable market rate. Loan collection performance might be better if poor projects are not selected whose returns can take care of the interest and still make profits. However, lower interest rates may be helpful for small borrowers who may not know many high return investment opportunities.

2.1.11.9. Income of Households

Household income represents the capacity to pay back the loan. Although incomes from other jobs or from other family members may be used for loan repayments and thus increase the capacity of loan payment (Bhatt, 2002). Since a goal of credit unions is usually to help the poor discriminating those with lower household income by using income as a criterion for credit may seem unsuitable. In trying to reduce non-performing loans, the credit officers turn to consider income of the households as a major criterion for loan appraisal and approval. Income of the borrowers may be a major factor affecting the ability to repay the loans but may not necessarily affect the willingness to pay. According to Copestake, et.al (2001) income fluctuation from ill-health, theft and job loss.

2.1.11.10. Location

Location of institutions may have an impact on the performance of loans granted. According to Bhatt (2002) location of lending institutions affect transaction cost of borrowers and lenders. It is easier for lenders to acquire information and provide assistance to the borrowers and easier for the

borrowers to travel to the lenders with shorter or more convenient routes of transportation. Many financial institutions turn to located their branches in area where their members are located for easy accessibility. Branches with poor locations may cause inconvenience in communication and access for members to repay their loans resulting to non-performing loans.

2.1.11.11. Group Pressure

Peer pressure can be an important factor that encourages loan repayment (Khandker, 1998). Dealing with credit groups may reduce transaction costs Bhatt (2002) and risks of lending. Borrowers tend to be more willing to pay back if pressured by their peers. Group lending has a higher repayment rate compared to individual lending because the groups help take care of the screening and follow up. Rahman (1999), in his study on Grameen Bank, reported that 98 percent of the repayment rate of a local bank was achieved with the help of peer pressure along with institutional and moral coercion.

2.1.11.12. Government Policy

Macroeconomic variables such as national income, inflation and interest rates affect the performance of credit unions' directly. The uncertainty in the domestic economy may lead to liquidity crises and increases in the cost of funds for financial institutions, which results in increase in interest rate, consequently the performance to the loans are affected. In such situations political interventions are may be done. Interest payments or loans are written off for political reasons and may create a culture of default (Khandker, 1998). Direct interventions should be implemented either to address specific market failures or to reduce poverty; furthermore, the effectiveness of the intervention should always be measured against the objective (Yaron, et al, 1997). Government interventions could reduce the autonomy of micro finance institutions since they have to comply with the government's policy (Sacay & Randhawa, 1995).

2.1.12. Profitability

Profitability measures the ability to generate profits by using the available resources. According to Kasmir (2010) as cited by Wijayanti & Mardiana (2020) profitability is a ratio to assess the company's ability to generate profits. This ratio also provides a measure of the effectiveness of the management of a company. This is indicated by the profits generated from sales and investment income. Profitability ratio is not only a point of interest to the business owner or management but also for parties outside the company, especially those who have a relationship or interest with the company (Kasmir, 2010).

Profitability can be measured in several ways, namely the Return On Assets (ROA), Return On Equity (ROE), Net Profit Margin, Operating Profit Margin, and Gross Profit Margin. For this study, the measure of profitability used is Return on Assets (ROA) and Return On Equity (ROE). Return On Assets (ROA) determines the ability of a Credit Union to use all assets owned to generate

profits after tax. This ratio is important for management to evaluate the effectiveness and efficiency of Credit Unions management in managing all company assets especially loans which constitute a greater percentage of the assets. The greater ROA means more efficient the loan portfolio and vice versa. According to Prihadi, (2008), Return On Assets is to measure the rate of return on assets used in generating profits. Many regulators believe that ROA is the best measure of bank efficiency. This is reinforced by studies carried out by Bilal et al (2013) that ROA explains better profitability in the banking sector compared to other calculations, and ROA also measures the ability of the Bank's management to obtain profitability and manage the overall level of efficiency of the Bank's business.

ROA can be assessed in terms of income from interest and the loan portfolio. The charge and the interest banks put on loans given to their clients may determine the amount of income received. Interest is one of the main sources of income to financial institutions. The bank's ability to grant more loans to its clients and charge interest on them means they stand a chance of getting back more profit (loan interest). Thus, the profitability of financial institutions depends on the capacity of the institution to grant more loans to people at an interest rate to cover all its costs (Armendáriz & Morduch, 2007). (Shankar, 2007) argued that high interest rates on loans is directly related to the profitability of financial institutions. However, the economic point of view explains that, the higher the interest rate, the less attractive the loans product to clients except under critical conditions. This will negatively affect the profit of the bank (Nyamsogoro, 2010) . (Armendáriz & Morduch, 2007) further suggested that interest rate on loans must be incentive in itself. That is, the interest should be less than what the borrower will benefit from investing the borrowed loans from the banks. According to (Nyamsogoro, 2010), higher interest rate and loan amount are not enough to determine the profitability of financial institutions if the rate of loan repayment is very low, leading to low-income collection from the loans granted. Thus, ROA of the financial institution can be determined by the interest collection on the loans granted which is influenced by the repayment rate of the portfolio.

2.1.13. Conceptual Framework

Figure 2.1, indicates the conceptual framework used in this study.

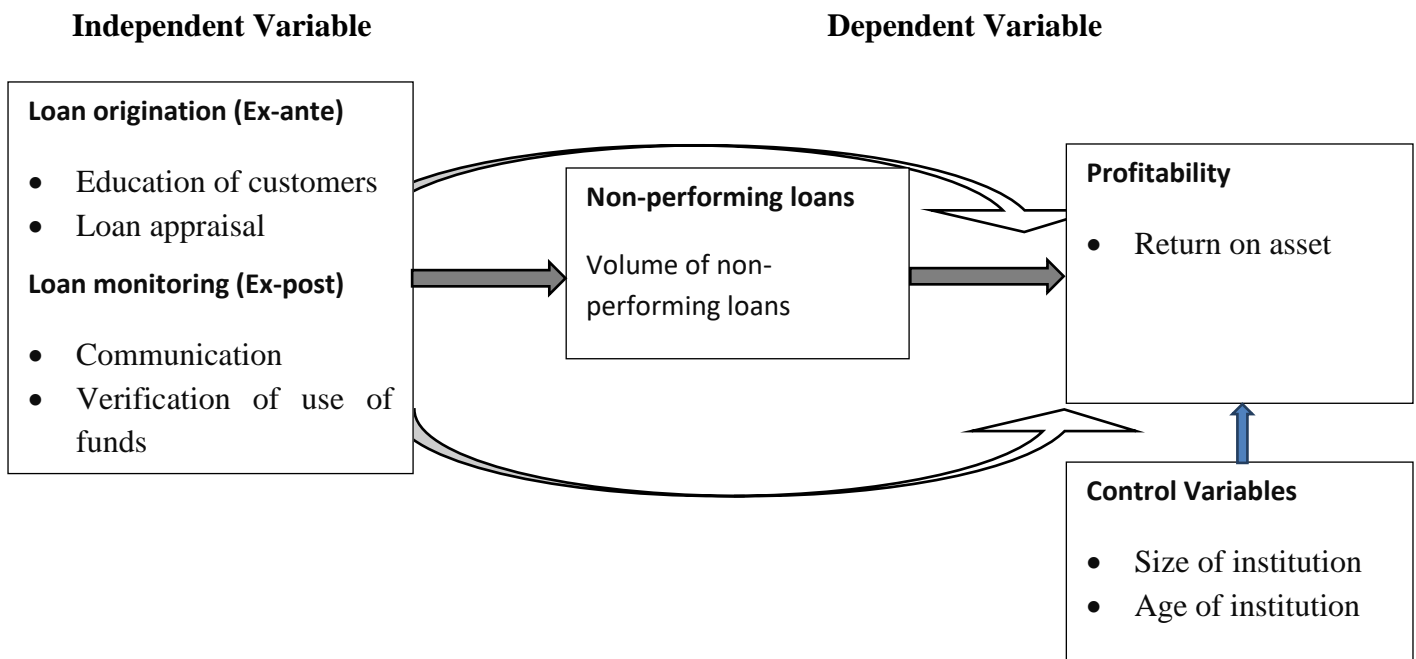


Fig 2.1 Conceptual Framework

Source: Visemih and Azie, (2023), Based on the Discussed Concepts

The dependent variables are non-performing loan which is hypothesized to have an effect on profitability of CCUs. Further controls will be made for the size and age of institutions. The independent variables are loan origination (education of customers and loan appraisal) and loan monitoring (communication between lender and borrower and follow-up of use of funds). These are the factors that the researcher manipulates or controls to see how they affect the dependent variables.

2.2 Theoretical Literature

2.2.1 The Grameen Solidarity Group Theory

In this model, peer pressure was the driving force. This concept was introduced by Muhamed Yunus in 1976 and was formalized in 1983 with the creation of the Grameen Bank in Bangladesh. Following this model loans were given to the poor who could not be financed by the conventional banks. These people needed small financing ranging from \$25 to \$100 to set up small businesses like vegetable farming and animal rearing. Here a groups of 5 persons was formed and the loan granted to the group as a whole though not everyone in the group benefited at once. They granted loans to the members two at a time. The repayment by the previous two members will influence the chance of the other three members to contract a loan. The other group members will thus do follow up to ensure the members repay their loans for them to be able to get loans.

These groups did not go to the bank to contract or repay loans. Weekly meets were held in locations selected by the member. The bank staff attended the meeting where the state of each business finance was evaluated and monitoring of the borrowers activates done. In these meeting these women had rules and regulations which did not guide just the credits but also their hygiene and health. All these instilled a strong bond among the members of the group, thus making follow up of loan repayment easy and effective

The members of the group were expected to repay all their loans and at the end an interest which was slightly higher than commercial rate, only then can they be eligible to take another higher amount. If a member in the group defaults, the entire group is expected to repay the loan. The effectiveness of this model resulted in the creation of 39,000 of such village centers and 2.4 million borrowers 94% who are women. Though these loans were granted without collateral their repayment rates of loans varied between 96 to 100%. According to Armendariz and Morduch, (2005) solidarity groups have proved effective in deterring defaults as evidenced by loan repayment rates attained by organizations such as the Grameen Bank.

2.2.2 Information Asymmetry Theory

The economic theory of asymmetric information was developed in the 1970s and 1980s as a plausible explanation for market failures (Akerlof et al., 2001). Information Asymmetry Theory deals with the study of decision making in transactions where one party has more information than the other, thus creating information imbalance among the parties. This often leads to undesirable outcome for one of the parties. In this case the different levels of information between borrowers and lenders affect the outcomes of financial transactions. According to this theory, borrowers have more information about their financial situation, risk profile, and future prospects than lenders. This results to an imbalance of information that can lead to adverse selection, moral hazard, or market failure (Matthews & Thompson, 2008).

Adverse selection occurs when the lender does not know who is more or less likely to default on a loan, they charge the same interest rate to all borrowers, based on the average risk level. This can make low-risk borrowers reluctant to apply for loans, because they think the interest rate is too high for them. On the other hand, high-risk borrowers are more willing to accept the high interest rate, because they have fewer options. This leads to a decline in the quality of the loan portfolio and a rise in the default rate. (Matthews & Thompson, 2008)

A situation of moral hazard arises when lenders cannot monitor or influence the behavior of borrowers after giving them a loan, and borrowers have a reason to act in ways that are risky or dishonest. For instance, borrowers may divert the loan funds to other uses than those agreed upon, or they may conceal negative information that affects their repayment capacity. This may lower the expected return on the loan and increase the chance of default (Matthews & Thompson, 2008).

Asymmetric information can cause market failure in the financial market by distorting the optimal distribution of capital. This means that some investors or borrowers who deserve funding may not get it because the lenders do not have enough information to evaluate their risk. On the other hand, some lenders or investors who are ready to fund may not find the right opportunities because of asymmetric information. This can lead to either too much or too little investment in some sectors or projects.

In the context of CCUs, information asymmetry can affect the level of NPLs and the profitability of the institutions. For example, if borrowers have private information about their repayment ability or willingness that lenders cannot observe, they may default on their loans or engage in moral hazard behaviors, such as diverting funds or taking excessive risks. This can increase the NPL ratio and reduce the income and capital of CCUs. On the other hand, if lenders have more information than borrowers about the terms and conditions of the loans, they may exploit their market power and charge high interest rates or fees, or impose unfavorable clauses, such as collateral requirements or penalties. This can discourage potential borrowers from accessing credit or cause financial distress for existing borrowers, leading to lower demand and outreach for CCUs. Therefore, information asymmetry can have negative implications for both the financial performance and the social mission of CCUs.

2.2.3 Credit Default Theory

Credit Default Theory is a theory that represents a systematic understanding of the causes which directly lead to the effects which are associated with credit defaults. It is studied in the branch of finance that deals with the causes and consequences of default risk in various types of debt instruments. Default risk is the possibility that a borrower will fail to meet its contractual obligations to repay a loan or bond. Credit Default Theory analyzes the factors that influence the probability and severity of default, such as the borrower's creditworthiness, the terms and conditions of the debt contract, the macroeconomic environment, and the legal and institutional framework (SY, 2007). Credit Default Theory also examines the implications of default risk for the pricing and valuation of debt securities, as well as the strategies and instruments that lenders and investors can use to hedge or mitigate their exposure to default risk. This theory portrays the indirect relationship between the effect of nonperformance loans and profitability. Non-performing loans triggers solvency, leading to a situation of liabilities being more than the assets. This theory has a cardinal ratio which is the; loan serviceability ratio (LSR) which measures maximum loan interest a borrower can service a loan from his net disposable income after living expenses (SY, 2007).

There is a complex and dynamic relationship between credit default theory, non-performing loans and profitability of CCUs. On one hand, credit default theory can help CCUs to assess the credit risk of their potential and existing borrowers, using various models and indicators, such as 5Cs of

credit, credit scores, macroeconomic factors, etc. By applying credit default theory, CCUs can reduce the likelihood and impact of NPLs on their balance sheets, and improve their profitability by charging appropriate interest rates, fees and penalties for their loans (Manz, 2019)

2.2.4 The Theory of Delegated Monitoring of Borrowers

Developed by Diamond (1984) where banks provide dedicated services for monitoring the loans and projects with high but risky long-term returns. By using their expertise in evaluating and monitoring borrowers, and by pooling funds from many savers and diversifying across borrowers, financial institutions are able to reduce the aggregate monitoring cost that would have otherwise been borne by the borrowers. This is one of the most influential in the literature on the existence of banks. From a broad point of view, monitoring refers to information collection before and after a loan is granted to a borrower by a lender, including screening of loan applications, examining the borrower's ongoing creditworthiness and ensuring that the borrower complies to the terms of the contract. A bank often has privileged information in this process if it operates the client's current account and can observe the flows of income and expenditure. This is essential in the case of small and medium enterprises and is linked to banks' role in the repayments system (Matthews & Thompson, 2008).

This theory implies that CCUs may face a trade-off between profitability and non-performing loans (NPLs), as they have to balance the benefits of lending to more borrowers with the risks of default and moral hazard. A high level of NPLs can erode the capital and earnings of CCUs, affecting their solvency and sustainability. Therefore, CCUs need to adopt effective risk management practices and prudential regulations to mitigate the adverse effects of NPLs on their profitability.

2.3. Empirical Literature

2.3.1. Determinants of Non-performing Loans

Bridge force (2008) did a study on comprehensive management of financial profitability and credit Risk. The researcher basically analyzed the documents to arrive to the following conclusion that managing credit relationships that are based upon all available customer information and consistent throughout the credit life cycle greatly increases profitability and reduces surprises. It also requires a greater investment of management focus, analytical skills, and technology.

Fidrmuc et al. (2007) sought to find out whether when a lender extends credit to customers it takes in to consideration the possibility that customers will be unable to pay or unwilling to pay as his objective. This study adopted a survey research design targeting all types of lenders. He found out that lenders must establish policies for determining who will receive credit for how long and how much. They also found out that lender should built their credit policy around 5Cs of credit that character capacity capital collateral and conditions for them to be successful. They concluded that

borrowers may sometimes fail to pay back loans due to lack of financial ability and other related factors other than not being willing to pay for credit given.

In like manner Gatimu (2014) sought to find out whether factors such as credit policies and loan appraisal process are viewed as critical drivers of loan delinquency in MFIs in Kenya. The study adopted a descriptive survey design. He found out that all these three factors have a significant impact on the non-performing loans and went further to recommend that micro finance who want to reduce their non-performing loans should pay keen attention to these factors.

According to a study carried out by Yeboah & Oduro (2018), the sustainability of Credit Unions has been threatened by the incidence of loan defaults or non-performing loans. This study diagnosed of the causes of loan defaults in Credit Unions as it paramount toward sound credit risk management practices. The study relied on primary data. Purposive sampling technique was applied to select 244 Credit Union members. Questionnaires were used for data collection and logistic regression model was adopted. The study utilized Statistical Product and Service Solution (SPSS v. 20) and Stata (v.14) as statistical tools for data analysis. The results reveal that education, loan diversion, monitoring, marital status and income are significant factors that influence loan default. Thus, credit education should be intensified and that effective loan monitoring should be vigorously pursued. Additionally, loan appraisal systems should be robust with the application and development of credit scoring systems that will factor in key variables of loan default.

Xu et al. (2015), investigates on how lenders and borrowers communicate on a P2P platform and how it affects the loan outcomes. The authors find that more lender communication reduce the funding chance, while more borrower responses increase it, especially for low-credit borrowers. However, the communication does not affect the interest rate or the default ratio.

Mungure (2015) conducted a study to find out the impact and causes of loan default to MFIs activities using PRIDE Tanzania LTD Pamba branch in Mwanza. The study focused on finding out the impacts of loan default on MFIs operational costs, income, profit and lending, examining extent in which loan supervision, monitoring and control affects loan repayment, identifying whether multiple borrowing by clients leads to loan default, finding out whether the use of funds by clients for unintended purpose contribute to loan default. Research design used was case study design. The results revealed that interest rates charged on loans, diverting funds from its intended use, multiple borrowing has a direct impact on repayment. It further revealed that, some of the causes that contributed to the default by some customers are lack of collateral and high interest rates. The study thus concluded that formation of strong solidarity groups is key to preventing high arrears. They study recommended that, MFIs should provide appropriate training and supervision to clients regarding the use of their loans. Also more MFIs should have clear and effective credit or lending policies and procedures which must be regularly reviewed.

Also, Mnyanghwalo (2015), in his study on delinquency management had four specific objectives; to determine management strategies aimed at reducing delinquency, investigate the root causes of delinquency in MFI, to evaluate the challenges facing MFIs in delinquency management and to assess the determinant parameters to effective delinquency management. He used statistical package for social science (SPSS 11.5) for data management and analysis. The finding from the study reveals that, delinquency management strategies used by MFIs are; education of clients on product features, fees collection and charges. To establish mutually agreeable payment date, ensure quality of client information and determine adequate collection procedures. The study also identified causes of delinquency such as; fraud, theft, government intervention, lack of defined strategy. For parameters of effective delinquency management, knowledge of MFIs staff was identified, securing payment commitments, intensification of collection activities, recording of collection activities and follow up on clients.

Jimmy (2010), also carried out a study with objective to establish the relationship between credit risk management and non-performing loans among SACCO's in Kenya. The study used causal design comprising of a sample of 30 SACCO's. Simple random sampling was used to select two respondents comprising of either Head of department, Credit manager or Credit officers among the candidate SACCO's. Primary data was collected using semi-structured questionnaires. Some of the questionnaires were dropped and picked up later from the respondents, while others were sent and received via electronic mail. Once the relevant data was obtained, the researcher carried out an analysis of the same using mean scores, percentages and standard deviation. Statistical Package for Social Sciences (SPSS version 17.0) was adopted for the analysis while relational analysis was used to analyze the relationship among the variables. The study established that there is a relationship between credit risk management and non-performing loans. Adoption of credit risk management practices results to declining levels of non-performing loans. To avoid loan losses, most SACCO's opt for credit reminders as part of credit monitoring-process.

Richard (2017), examined the CAMEL rating performance of the Credit Unions and the effects of NPL and loan portfolio on profitability of the institutions. The author collected data from the Loan Officers, Branch Managers and Accountants of the Credit Unions on measures in place to reduce credit risks. Data was also obtained from the financial statements of the Credit Unions from 2007 to 2016. The study revealed that management of the Credit Unions conduct pre-assessment, mid-term assessment and post assessment before loans are granted to customers which have helped to reduce credit risks. The study found that the Credit Unions do not have the capacity to relate or use its accumulated capital against credit risks. Also, the study found that the assets of the Credit Unions are not effectively used to generate more income to improve performance. The Credit Unions experienced lower loan growth rate. The Credit Unions do not have enough liquidity to cover any unexpected fund obligations. The regression analysis showed significant effects of NPL and Loan Portfolio on profitability of the Credit Unions.

According to a study carried out by Beni et al. (2023), whose objective was to test and formulate solutions to problems arising from the influence of Outstanding Credit, Loan to Deposit Ratio and Loan Interest Rates on Return on Assets due to Non-Performing Loans. In an attempt to achieve this, the method used was quantitative research with Path Analysis in the data processing. The research population was the CU movement in Indonesia with a sample of 40 CUs under PUSKOPCUINA. The data used was outstanding credit data, Loan to Deposit ratio, non-performing loans, loan interest rates, and return on assets of 40 CU at PUSKOPCUINA in 2015-2019 with the model used to analyze panel data called the panel data model analyzed using Path Analysis. The results of the study showed that the Loan to Deposit ratio, non-performing loans, and loan interest rates had a significant effect on the return on assets of CUs in Indonesia.

Kariuki (2016), examined how the quality of assets affects the financial performance of cooperative societies in Nairobi County, Kenya. The paper used descriptive research design and secondary data from the Sacco Societies Regulatory Authority and the annual financial reports of the cooperative societies. The paper analyzed the data using descriptive statistics, correlation analysis and ANOVA. The paper found that the proportion of investment in an asset to total assets, which was the asset quality factor measured, had a moderate impact on financial performance. The paper also identified other factors that influenced financial performance, such as asset base, liabilities, loan book, corporate governance, staff quality and regulations. The paper concluded that there was a positive relationship between asset quality and financial performance, and recommended a strict assessment of loan asset quality to reduce loan losses.

2.3.2. Relationship between Non-performing Loans and Performance

The relationship between non-performing loans and performance is an indirect one. When the non-performing loan portfolio of a financial institution is high the interest collection is low thus decrease in profits. In like manner when the non-performing loans are less the profit margin will be high as there will be high interest collection rate. In a study carried out by Vong & Chan, (2009) show that a higher loan to total ratio of assets does not essentially indicate a higher profit level. This implies that the size of the portfolio does not determine performance but rather the spread and quality of the portfolio. The elements of performance of financial institutions can be measured with the use of return on assets (ROA) and return on equity (ROE).

Tahir (2014) further describes the effect of the loan loss provision due to non-performing loans on the stability and performance of banks working in Pakistan. He also describes the important factors affecting profitability of banks. He goes further to establish that banks with less loan losses are more profitable although bank deposits and advances also play a vital role in the stability and profitability of banks, in analysis the profitability he used variables like return on assets and return on equity.

Considering previous researches on this relationship, Khalid (2012) examines the effects of loan quality on bank performance. He used multiple regression models to analyze the return on assets and profitability ratios as proxies for banks profitability between the periods of 2006-07 and 2010-11. The results support the hypothesis that the higher the quality of the loan processing activities before loan approval, the lower the level of non-performing loans, and thus the more profitable the bank will be.

Abdullahi (2013) also investigated the efficiency of credit risk management on banks performance, to determine if credit risk has effect on the profitability and examining the relationship between interest income and non-performing loans of Union Bank PLC. The research revealed that credit risk affects the performance of banks and for the banks to maintain high interest income (maximize profit), adequate attention should be given to credit risk management specifically the lending philosophy of banks. The study recommends that bank loans should be adequately reviewed from time to time to assess the level of risk and every loan should be secured with collateral.

Gezu (2014) study shows a downward sloping of non-performing loans for commercial banks in Ethiopia. The finding also revealed as loan to deposit ratio had positive whereas inflation rate had negative, but insignificant effect on NPLs of commercial banks in Ethiopia. However, bank profitability measured in terms of ROE, banks capital adequacy ratio and lending rate had negative and statistically significant effect whereas bank profitability measured in terms of ROA and effective tax rate had positive and statistically significant effect on NPLs of commercial banks in Ethiopia. The finding of this study is significant since once identifying the determinants of NPLs might enable management body to make appropriate lending policies that prevent the occurrence of NPLs. Furthermore, the study recommended as bank managers should emphasize the management of current assets and loans than fixed assets in order to reduce the level of non-performing loans. Besides, it is better for the loan officers to provide financial counseling to the borrowers on the wise use of loan and also to make decision on timely fashion to meet their need.

2.4. Research Gap

Non-performing loans are loans that are in default or close to default, and they pose a serious threat to the financial stability and performance of Cooperative credit union(CCUs). Previous studies have examined the determinants and consequences of NPLs in various contexts, such as banks, microfinance institutions, and rural credit cooperatives. However, there are a few empirical evidence on how NPLs affect the performance of CCUs, especially in the context of Bamenda where CCUs started, where the largest CCUs in the country are located, where the head quarter of many CCUs are found and where CCUs play a vital role in providing financial services to low-income households and small businesses.

3. METHODOLOGY OF THIS STUDY

3.1 Scope and Area of the Study

3.1.1 Scope of the Study

This study investigates how non-performing loans affect the profitability of CCUs in Bamenda. The scope of this study is delimited by three criteria: time, thematic and geographical. The time scope covers the year 2022, the most recent year of business operation and publication of performance figures.

The thematic scope focuses on the relationship between loan origination and loan monitoring, how they affect non-performing loans and the effect of non-performing loans on financial performance which is the profitability measured by return on assets.

The geographical scope is limited to the city of Bamenda, which is the capital of the Northwest region and one of the epicenters of the Anglophone crisis. The study will select a sample of cooperative credit unions operating in Bamenda and collect data from their annual reports and interviews with their managers and loan officers.

3.1.2 Area of the Study

Bamenda, also known as Abakwa and Mankon Town, is a city in northwestern Cameroon and capital of the Northwest Region. The city has a population of about 2 million people and is located north-west of the Cameroonian capital, Yaoundé. The history of Bamenda can be traced back to the settlement of the Tikar people, who established cultural and political ties with the Kingdom of Bamum in the 1700s. The city was colonized by Germany in 1884, and then divided between Britain and France in 1916 after World War I. In 1919, Bamenda became part of the British Cameroons, and later joined the Republic of Cameroon in 1961. Today, many of the city's inhabitants are English-speaking, and Cameroonian Pidgin English is the main language spoken in the shops and on the streets of Bamenda. Bamenda is composed of three villages: Mankon, Bamendakwe and Nkwen, each with its own traditional ruler or fon.

Bamenda occupies an area of around 290 square kms at a height of 11,600 metres above sea level, and it lies along 05° 58'N latitude and 10° 11'E longitude. The Bamenda escarpment, which runs from east to west, divides the town into two parts. The lower and larger part covers the rolling plain that extends from the original Abakwa village in the south to parts of Mankon, Nkwen, Chomba, Mbatu and Nsongwa. The upper part includes parts of the highland villages of Njah and Mendankwe, also known as the Station, and it overlooks the lower part. Bamenda has a cool and pleasant climate for most of the year, like most places in the Northwest Region. It has two main seasons: a six-month rainy season with about 200 mm of annual rainfall, and a six-month dry season. The vegetation consists mostly of savannah with some areas of deciduous forest. Raffia

palms grow along the riverine slopes and eucalyptus trees have been planted to reduce the savannah.

Bamenda is one of the most populous and culturally diverse cities in the country. The city has witnessed several episodes of political unrest and violence, such as the 1992 presidential election, the Anglophone Crisis. Despite these challenges, Bamenda has also achieved remarkable feats of development and innovation, such as hosting the first All-Africa Conference of Churches in 1974, launching the first community radio station in Africa in 1996, and becoming a pioneer of bilingual education and decentralization in Cameroon. Bamenda is home to several educational, cultural and religious institutions, as well as a vibrant civil society and media sector.

The history of credit unions in Cameroon can be traced to the Northwest region in Njinikom which is located *north side to Bamenda*. Credit union came to Cameroon through Rev.Father Antony Jansen, a Roman Catholic Priest from Holland 70 who established the St.Anthony discussion group in 1963. According to Cameroon Co-operative Credit Union League (1993), this group was later registered in 1964 as Njinikom Credit Union Limited. Today Bamenda has over 55 CCUs either having head offices or branch offices. Some are; Ntarinkon Cooperative Credit Union(NTACCUL), Azire Cooperative Credit Union(AZICCUL), MITANYEN Cooperative Credit Union (MITACCUL), Ayembe Cooperative Credit Union(AICCUL), AGYATI Cooperative Union LTD (AGYACCUL), AKUM Zone Cooperative Union (AZCCUL), ANDEK Cooperative Credit Union, ANINGDOH Cooperative Credit Union (ANICCUL), ASHING Cooperative Credit Union, ASHONG Cooperative Credit Union (ASCCU LTD), AWING Cooperative Credit Union (ACCUL), BALI Central Cooperative Credit Union LTD (BACCUL), BAMBUI Cooperative Credit Union (BAMCCUL), BAMENDA Business Women Cooperative Credit Union (BWSCC), BAMENDA Police Cooperative Credit Union (BAPCC), BANSO Baptist Hospital Credit Union (BBHCCUL), BATIBO Cooperative Credit Union (BATCCUL), BAYELLE Cooperative Credit Union (BACCUL), CCAST Agricultural Cooperative Union (CCAST), CHOMBA Cooperative Credit Union (CHOCCUL),DJOTTIN Cooperative Credit Union, DUMBO Ranch Cooperative Credit Union (DURCCUL), FUNDONG Cooperative Credit Union, GUZANG Cooperative Credit Union LTD (GUZCCUL), JAKIRI Cooperative Credit Union (JACCUL), MANCHOCK Cooperative Credit Union MANCCUL, MBENGWI Central Cooperative Credit Union, MMEN Cooperative Credit Union, SHISONG Cooperative Credit Union (SHICCUL), TADKON Cooperative Credit Union (NTACCULL), TIKAR COOPERATIVE CREDIT UNION LTD T-CCUL), WIDIKUM Cooperative Credit Union WIDCCUL. Table 1 shows the various credit unions in Bamenda and the number of branches, which each of them have opened to help mobilise funds for the various communities in Bamenda and its environs.

Table 1: List of Cooperative Credit Unions Used for the Study

SN	NAME	HEAD OFFICE LOCATION	No. OF BRANCHES
1	AZIRE	Bamenda II	13
2	NTARIKON	Bamenda II	14
3	BAFUT	Bamenda II	14
4	BAMENDA POLICE	Bamenda II	23
5	MITANYEN	Bamenda II	7
6	AYEMBA	Bamenda - Santa	4
7	NTAMBENG	Bamenda II	10
8	AWING CENTRAL	Santa	5
9	TADKON	Bamenda II	6
10	SANTA CENTRAL	Santa	7
11	CCAST AGRIC	Tubah	5
12	BAMBUI	Tubah	6
13	HOPE FOR ALL	Bamenda II	3
14	MBAMBA	Bamenda II	5
15	NJINDOM	Bamenda II	5
16	BAMENDAKWE	Bamenda I	3
17	MBATU	Bamenda II	6
18	ANINGDOH	Bamenda I	7
19	BAMBILI	Tubah	5
20	BALI CENTRAL	Bamenda II	8
21	SHISONG	Kumbo	6
22	BAYELLE	Bamenda III	7
23	NKWEN	Bamenda III	6

Source: Visemih and Azie, (2023)

3.2 Research Design

The research design is the overall strategy that the researcher has chosen to integrate the various components of the study in a coherent and logical manner. This study adopted a descriptive and inferential design which sought to describe and determine the relationship between the independent and dependent variables. Descriptive research helps to describe a clear picture of a problem, in the way it is at the time of the study. This implies the researcher has no control over the phenomenon being studied (Krishnaswami & Satyaprasad, 2010).

3.3. Data Collection

3.3.1. Nature and Sources of Data

Ngechu (2004) states that different tools and instruments can be used to collect data. The selection of a suitable tool or instrument depends on various factors, such as the characteristics of the subjects, the topic, problem, objectives, design, and expected data and results of the research. This is because each tool or instrument collects specific data.

Primary and secondary data will be used in this research. Primary data is data collected for the first time Kothari (2006). It can equally be referred to as data collected directly from the field and it is usually collected personally by the researcher. Primary data collection is the process of collecting data from a live source, like a human being that is either a customer or user. This can be done manually or through automated means, like the online, offline, and self-collection. It is achieved through online or offline surveys, interviews, online or offline quizzes, the Delphi technique, focus groups and observations (Clickworker, 2022). The goal of primary data collection is to obtain data that is accurate and complete also data that has been generated by the researcher himself/herself through surveys, interviews, experiments and others are always specially designed for understanding and solving of the research problem at hand.

Primary data for this study will be collected using questionnaires. Using questionnaires is good because it improves response rate, and is quick and limited to answers relevant for the study. The questionnaires comprise of both closed-ended questions, with predefined responses, and open-ended questions, which allow respondents to provide answers in their own words. Closed-ended questions make the interpretation and tabulation of responses easier. In contrast, open-ended questions provides an understanding of participants' thoughts and opinions rather than just simply quantifying the number of participants who adhere to a particular viewpoint.

The self-administered questionnaire used in this research is a simple form with questions to be answered by a respondent providing information on a specific issue. The questionnaire will be designed based on the specific objectives and research variables. The effects of the independent variable on the dependent variable will be assessed by the 5-point Likert scale ranging from Strongly agree (1), agree (2), disagree (4), strongly disagree (5) to undecided or neutral (3). This will enable the researcher to determine the respondent's degree of agreement or disagreement with respect to the statement provided. The questionnaires were administered to the credit managers/officers using multiple methods, such as drop and pick later method and email. To increase the response rate, telephone calls were used to follow up with the respondents.

Secondary data was collected from the published annual reports of selected CCUs for the year 2022. The data collected had useful information that helped to answer the research questions, the

contribution of member's education, loan appraisal, communication between the CCU and member and verification of funds on non-performing loans and its effect on performance of CCUs.

3.3.2. Population, Sample and Sampling Technique

3.3.2.1. Population of the Study

A population is any group of individuals that have one or more characteristics in common which are of interest to the researcher (Creswell, 2005). The population of this study is CCUs in Bamenda Central, of which there are 55 accredited.

3.3.2.2. Sample and Sampling Technique

The sample design describes the sampling unit, sampling frame, sampling procedure and the sample size for the study. The sample design describes the list of all population units from which the sample will be selected (Cooper & Schinder, 2003). According to Singh & Masaku (2014), there are different approaches to determining the sample size. These include using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas to calculate sample size. In this study, two stages of sampling are done. The first phase relates to the selection of CCUs from the population. Convenience sampling was used for this purpose, wherein potential participants were selected based on proximity to the researcher, data availability, and security in relation to the location of branch offices, given the security situation in Bamenda. A final sample of 29 CCUs were chosen for this purpose. Due however to non-availability of annual reports for the period under study, 6 of the 29 CCUs were further dropped from the study, resulting in a final sample of 23 CCUs, as indicated in Table 1.

In the second stage of sampling, respondents to the questionnaires in CCUs represented in the sample from stage one were selected. Purposive sampling was used for this purpose. As defined by Kerlinger (1986), purposive sampling is another non-probability-based sampling. It is characterized by a deliberate effort to obtain representative samples through the inclusion of groups or typical areas in a sample. Purposive sampling design is usually used when a limited number of individuals possess the trait of interest as in the case of this study. From the selected CCUs, only the staff members involved with lending was considered as respondents. These include the loan officers/managers, branch or general manager. Only one staff per institution of the ranks indicated above took part in the study, and an overall total of 23 questionnaires were sent out, completed and returned.

3.4. Model and Estimation Technique

3.4.1. Empirical Model

A model is a mathematical expression showing the functional relationship between variables in a study. It also represents a system that is constructed to examine some or every aspect of the study (Schindler & Cooper, 2003). It simplifies the story about an imaginary world, enough to be

understood and learn some things about the world we live in. The model used here helps to show the relationship between the dependent variable and the independent variables (Landsburg, 2009). Two models are employed to investigate the specific objectives. The first model deals with the determinants of non-performing loans, while the second deals with the effect of non-performing loans on the profitability of CCUs. The models used are derived from the mathematical functions:

$$\text{Volume of non-performing loans} = f(\text{Educ, LA, Comm, F_UF}) \dots\dots\dots (1)$$

Where:

Educ is the education of clients in the pre-lending period

LA is loan appraisal

Comm is communication with clients in the post-lending period

F_UF is the follow-up on the use of funds in the post-lending period, or monitoring.

$$\text{Performance} = f(\text{NPL}) \dots\dots\dots (2)$$

Where: NPL relates to non-performing loans.

From the functional forms in (1) and (2) above, the econometric models below can be specified:

$$\text{NPL}_{vol} = \beta_0 + \beta_1 \text{EDUC}_i + \beta_2 \text{LA}_i + \beta_3 \text{COMM}_i + \beta_4 \text{F_UF}_i + \varepsilon \dots\dots\dots (3)$$

Where:

NPL_{vol} = Volume of non-performing loans

β_{1-4} = Coefficient of independent variables

ε = error term

$$\pi = \beta_0 + \beta_1 \text{NPL}_i + \beta_2 \text{SIZE}_i + \beta_3 \text{AGE}_i + \varepsilon \dots\dots\dots (4)$$

where:

π = performance of CCUs proxied by ROA

NPL = volume of non-performing loans

Size = Size of CCU, proxied by number of branches nationwide

Age = Age of MFI, measured by number of years in existence

β_0 = Intercept

β_{1-4} = Coefficient of independent variables

ε = error term

3.4.2. Estimation Technique

A multiple linear regression model will be used to assess determinants of non-performing loans, and their effect on profitability of CCUs. Data analysis is a practice in which raw data is ordered and organized so that useful information can be extracted from it (Gall *et al.*, 2017). Quantitative

data analysis, particularly descriptive and inferential statistics, were used in this study. Descriptive techniques like frequency tables and percentages were used to describe the data, or determine frequency and percentage distributions, mean and standard deviation. Inferential statistics refers to using sample characteristics to predict the nature of the population (Singh, 2016). This allows for generalizing from a sample to a population with some degree of confidence and certainty. Inferential statistics entails correlation and regression analyses. Regression analysis was done using ordinary least squares (OLS).

3.5 Validity and Reliability of Research Instrument

Validity explains the extent to which research results can be accurately interpreted and generalized to other populations. It is the extent to which research instruments measure what they are intended to measure (Oso & Onen, 2008). To ensure face validity of the questionnaire, the researcher gave copies of the draft questionnaire to an expert who has a wide knowledge in measurement and evaluations who viewed it before taking it to the supervisors to see if the questionnaire appeared to measure what it intended to measure, after the comments and modifications were done.

The reliability test is an essential criterion since it is the degree of consistency that measures the attribute that was used to access the level of the tools to be used. Reliability can be equated with the stability, consistency, or reliability of the measuring tool. Therefore, the study used Cronbach's alpha coefficient to determine the questionnaire's internal consistency and, hence, the instrument's reliability. The alpha value ranges from 0 to 1 with 0 being the least reliable and 1 as the highest level of reliability. An alpha coefficient of 0.6 to 0.7 is acceptable, while a 0.8 or higher coefficient is indicated as excellent reliability. Multicollinearity is additionally ascertained in this study. This obtains when one independent variable affects or influences other independent variables in a model. The assumption behind regression analysis, is to measure and analyse changes that are caused by independent variables. Therefore, it becomes essential to guarantee that these independent variables do not generate any effect on the other. However, economic variables do interact with themselves in day-to-day economic life, so multicollinearity becomes a matter of degree, or the extent to which the variables affect each other. Consequently, multicollinearity in this study will only be of concern if it is 0.8 and above. The study has utilised the serial correlation matrix to detect possible linear combination among variables.

Finally, the adjusted R-square is used to verify the reliability of the coefficients estimated. The adjusted R-square, measures the extent to which the dependent variable is affected by the changes in the independent variables; in other words, it depicts the percentage of total variation in the dependent variable, caused by the joint variation in the independent variables. According to Koutsoyiannis (1997), it measures the goodness of the regression line to fit. The t-statistics is used to test the significance of the level of coefficients of the regression. This test verifies how truthful or false the null hypothesis may be. It is on this basis that the decision to accept or reject the null

hypothesis is made. This decision rest upon comparison with the tabular or critical value, which if greater in absolute terms, implies the null hypothesis is rejected in favor of the alternative and vice versa. Finally, the F-ratio measures the overall significance of the adjusted R-square. Here the calculated F-ratio value is compared to its critical value at $p < t$ degrees of freedom. If greater, the null hypothesis is rejected in favor of the alternative and vice versa.

3.6. Ethical Considerations

The study will adhere to the ethical principles of research, such as ensuring that the data collection and analysis methods respect the privacy and confidentiality of the credit union members and staff, as well as the financial institutions involved. Second, the study should avoid any potential conflicts of interest or biases that might influence the results or the interpretation of the findings. Third, the study should acknowledge any limitations or challenges that might affect the validity or reliability of the research. Fourth, the study should adhere to the ethical principles and standards of the relevant academic and professional bodies, such as the Association of African Universities and the World Council of Credit Unions. Fifth, the study should disseminate the results in a transparent and responsible manner, ensuring that the benefits and implications of the research are shared with the stakeholders and the public.

4. PRESENTATION AND DISCUSSION OF RESULTS

4.1 Descriptive Statistics

4.1.1 Demographic Distribution of Respondents

The workers who filled the questionnaire (the respondents), were all senior workers, being holders of a Diploma, a First Degree and a Master's Degree. They were workers with at least 4 years of experience at their working positions. Table 2, indicates the demographic distribution of respondents to the study's questionnaire.

Table 2: Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Age Distribution	25 -29 years	3	13.0
	30 -34 years	12	52.2
	35 years & above	8	34.8
Educational Qualification	Diploma	1	4.3
	First Degree	11	47.8
	Post-Graduate Degree	11	47.8
Longevity in Current Position	Less than 5 years	11	47.8
	6 years to 10 years	8	34.8
	11 years to 20 years	4	17.4
Longevity in Credit Union	Less than 5 years	4	17.4
	5 to 10 years	10	43.5
	More than 10 years	9	39.1

Source: *Visemih and Azie (2023), Computation from Field Survey*

Based on the statistics on Table 4.1 above, result on the age distribution of the respondents show that 3(13%) of the respondents were between 25 to 29 years, 12(52.2%) were between 30 to 34 years while 8(38.4%) were between 35 years and above. This shows that the majority of the respondents are youths between 30 to 34 years.

With respect to the educational qualification of respondents, 1(4.3%) were diploma holders, 11(47.8%) were first degree certificate holders while 11(47.8%) again were postgraduate degree holders as their educational qualification. This show that the respondents have the required knowledge to provide enough information for the study.

On their longevity in service as loan officers, 11(47.8%) of the participants indicated that they have been loan officer for a period between 1 to 5 years, 8(34.8%) indicated 6 to 10 years, while 4(17.4%) said they have been in their positions for a period 10 years and above. This shows that the participants have acquired enough experience and will provide reliable data for the study.

Finally, on the longevity in the credit unions, 4(17.4%) said they have been working with their credit union for less than 5 years, 10(43.5%) indicated that they have been in service in their credit union for a period between 5 to 10 years while 9(39.1%) have been working with their credit union for more than 10 years. The respondents therefore have the required experience in their various credit unions to provide the required information for this study.

4.1.2. Loan Origination

4.1.2.1 Client Education

Borrowers' knowledge on record keeping, products and services of the CCU and the business environment may help them to manage their cash flows and make better business decisions. This is essential for borrowers who are restarting new businesses. Table 4.2 below indicates respondent responses relating to client education.

Table 3: Client Education

STATEMENT	SA	A	N	D	SD	TOTAL
I have received adequate training on how to educate members on loan products and service.	13	8	2	0	0	23
	56.5	34.8	8.7	0	0	100
I have received adequate training on how to educate members on the obligation of members' engagement in the activities of the Cooperative credit Union.	9	12	2	0	0	23
	39.1	52.2	8.7	0	0	100

Members' education improves their chances of acquiring a loan	10	10	2	1	0	23
	43.5	43.5	8.7	4.3	0	100
Members' education helps to reduce the default rate.	8	6	1	6	2	23
	34.8	26.1	4.3	26.1	8.7	100.0

Source: *Visemih and Azie, (2023), Computation from Field Survey*

According to the statistics on Table 3, 21(91.3%) of the participants agreed, 2(8.6%) of them were neutral while none of them disagreed that they received adequate training on how to educate members on loan products and service. Also, 21(91.3%) of these participants again agreed, 2 were neutral and none disagreed that they have received adequate training on how to educate members on the obligation of client members engagement in the activities of the Cooperative credit Union. The result also shows that 20(87%) of the loan officers agreed, 2(8.7%) of them were neutral while only 1(4.3%) disagreed that members' education improves their chances of acquiring a loan. Finally, 14(60.9%) of the participants agreed, 1(4.3%) of them were neutral while 8(34.8%) disagreed that members' education helps to reduce the default rate.

4.1.2.2 Loan Appraisal

Loan appraisal in CCUs is done with the help of the 5Cs of credit, which are used to evaluate the creditworthiness of potential borrowers. The 5Cs of credit contribute to non-performing loans when they are not properly assessed or monitored. If the lender does not verify the borrower's character or capacity, they may end up lending to someone who is dishonest or unable to repay. Table 4, indicates respondent responses relating to loan appraisal in CCUs.

Table 4: Loan Appraisal in CCUs

STATEMENT	SA	A	N	D	SD	TOTAL
There is an existing loan appraisal guidelines and procedures manual in my credit union.	13	8	1	1	0	23
	56.5	34.8	4.3	4.3	0	100
I follow the loan appraisal guidelines and procedures of my credit union strictly.	2	16	4	1	0	23
	8.7	69.6	17.4	4.3	0	100
I always use the 5Cs (character, capacity, capital, collateral, and conditions) when appraising a loan.	14	8	1		0	23
	60.9	34.8	4.3		0	100
I sometimes use the 5Cs (character, capacity, capital, collateral, and conditions) when appraising a loan.	10	9	2	1	1	23
	43.5	39.1	8.7	4.3	4.3	100.0
The 5 Cs of credit help me to identify and avoid risky borrowers.	16	5	1	1	0	23
	69.6	21.7	4.3	4.3	0	100

Source: *Visemih and Azie, (2023), Computation from Field Survey*

Based on the statistics on Table 4, 21(91.3%) of the loan officers agreed, 1(4.3%) of them was neutral while 1(4.3%) again disagreed that there is an existing loan appraisal guidelines and procedures in my credit union. Also, 18(78.3%) of the respondents agreed, 4(17.4%) of them were neutral while 1(4.3%) disagreed that they follow the loan appraisal guidelines and procedures of my credit union strictly. In the same light, 22(95.7%) of the participants agreed, 1(4.3%) of them was neutral while none disagreed that they always use the 5Cs (character, capacity, capital, collateral, and conditions) when appraising a loan.

Again, 19(82.6%) of the respondents agreed, 2(8.7%) of them were neutral while 2(8.7%) again disagreed that they sometimes use the 5Cs (character, capacity, capital, collateral, and conditions) when appraising a loan. Finally, 21(91.3%) of the loan officers agreed, 1(4.3%) of the respondents was neutral while 1(4.3%) again disagreed that the 5 Cs of credit help me to identify and avoid risky borrowers.

4.1.2.3 Loan Monitoring

Loan monitoring consists of all supervising activities aimed at verifying and improving the likelihood that a borrower complies with its loan obligations. They found that bank monitoring reduces delinquency rates and increases loan repayment. Two measures capture loan monitoring, namely communication, and follow-up of the use of funds.

4.1.2.3.1. Communication

One of the ways loans can be monitored is through the communication. This is ensured at the level of granting, monitoring and collection. Table 5, show indicates responses relating to loan monitoring in CCUs.

Table 5: Communication

STATEMENT	SA	A	N	D	SD	TOTAL
I give the necessary information concerning the loans with borrowers before, during and after the loan disbursement only on request	4	8	0	10	1	23
	17.4	34.8	0	43.5	4.3	100
I always give the necessary information concerning the loans with borrowers before, during and after the loan disbursement regardless.	8	8	2	3	2	23
	34.8	34.8	8.7	13.0	8.7	100
I use effective communication skills such as active listening, assertiveness and none verbal communication to explain the features and benefits of loan products and service to members.	4	10	3	6	0	23
	17.4	43.5	13.0	26.1	0	100
Giving the necessary information concerning the loans to borrowers encourages them to pay back fully and	9	5	3	5	1	23
	39.1	21.7	13.0	21.7	4.3	100.0

promptly						
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Source: *Visemih and Azie, (2023), Computation from Field Survey*

Statistics on Table 5, indicates that 12(52.2%) of the respondents agreed, none of them was neutral while 11(47.8%) of them disagreed with the statement that they do give the necessary information concerning the loans with borrowers before, during and after the loan disbursement only on request. Still, 16(69.6%) of the loan officers agreed, 2(8.7%) were neutral while 4(21.7%) disagreed that they always give the necessary information concerning the loans with borrowers before, during and after the loan disbursement regardless. Again, 10(60.9%) of the respondents agreed, 3(13%) were indifferent while 6(26.1%) disagreed that they use effective communication skills such as active listening, assertiveness and none verbal communication to explain the features and benefits of loan products and service to members. Finally, 14(60.8%) of the respondents agreed, 3(13%) were neutral while 6(26%) disagreed that giving the necessary information concerning the loans to borrowers encourages them to pay back fully and promptly.

4.1.2.3.2 Follow-up of the Use of Funds

Loans backed by securities are fully mortgaged and signed by all parties concern. The method of disbursement depends on the purpose of the loan. Real estate loans are to be disbursed in installments to monitor the evolution of the project. Table 4.5 indicates responses relating to verification of the use of funds.

Table 6: Follow-up of the Use of Funds

STATEMENT	SA	A	N	D	SD	TOTAL
There is an existing guideline and procedures for the follow-up of the use of funds borrowed in my credit union.	2	3	7	10	1	23
	8.7	13.0	30.4	43.5	4.3	100
I always use the guideline and procedures for the follow-up of the use of funds borrowed in my credit union strictly.	1	7	2	11	2	23
	4.3	30.4	8.7	47.8	8.7	100
In my opinion, the follow-up of the use of funds borrowed from the CCU encourages the borrowers to pay back fully and timely	6	7	5	5	0	23
	26.1	30.4	21.7	21.7	0	100

Source: *Visemih and Azie, (2023), Computation from Field Survey*

Statistics on Table 6, shows that 5(21.7%) of the participants agreed, 7(30.4%) of them were neutral while 11(47.8%) disagreed that there is an existing guidelines and procedures for the verification of the use of funds borrowed in my credit union. When respondents were asked whether they use the guidelines and procedures for the verification of the use of funds borrowed in my credit union strictly, 8(34.7%) agreed, 2(8.7%) were neutral while 13(56.5%) disagreed to this statement.

Finally, 13(56.5%) of the respondents agreed, 5(21.7%) were neutral and disagreed respectively that in their opinion, the verification of the use of funds borrowed from the CCU encourages the borrowers to pay back fully and timey.

4.1.3 Non-Performing Loans and Performance

Table 7, presents respondent responses relating to non-performing loans and CCU profitability.

Table 7: Non-Performing Loans and performance

STATEMENT	SA	A	N	D	SD	TOTAL
Loans granted to the business sector have more frequency of default	5	9	3	2	4	23
	21.7	39.1	13.0	8.7	17.4	100
Non-performing loans negatively affect operating profit of Cooperative Credit Unions.	11	9	2	1	0	23
	47.8	39.1	8.7	4.3	0	100
Non-performing loans negatively affect loanable funds of Cooperative Credit Unions.	11	8	2	1	1	23
	47.8	34.8	8.7	4.3	4.3	100
Loans with bigger amounts have a higher chance of becoming NPLs	4	9	3	3	4	23
	17.4	39.1	13.0	13.0	17.4	100.0

Source: Visemih and Azie, (2023), Computation from Field Survey

Table 7, shows the result on non-performing loans and performance. According to the results, 14(60.8%) of the participants agreed, 3(13%) were neutral while 6(26.11%) disagreed that loans granted to the business sector have more frequency of default. When asked the respondents if non-performing loans negatively affect operating profit of Cooperative Credit Unions, 20(86.9%) of these respondents agreed with the statement, 2(8.7%) of them indicated that they are indifferent while 1(4.3%) of them disagreed. The result also shows that 19(82.6%) of the participants agreed, 2(8.7%) were neutral while 2(8.7%) disagreed that non-performing loans negatively affect loanable funds of Cooperative Credit Unions. Finally, 13(56.5%) of the participants agreed, 3(13%) were neutral while 7(30.4%) disagreed that loans with bigger amounts have a higher chance of becoming NPLs.

4.1.4. Evolution of non-performing loans and profitability of CCUs between 2018 and 2022

In Figures 2 and 3, show the trends of performance and non-performing loans respectively of some of the biggest CCUs in Bamenda over the period 2018 – 2022.

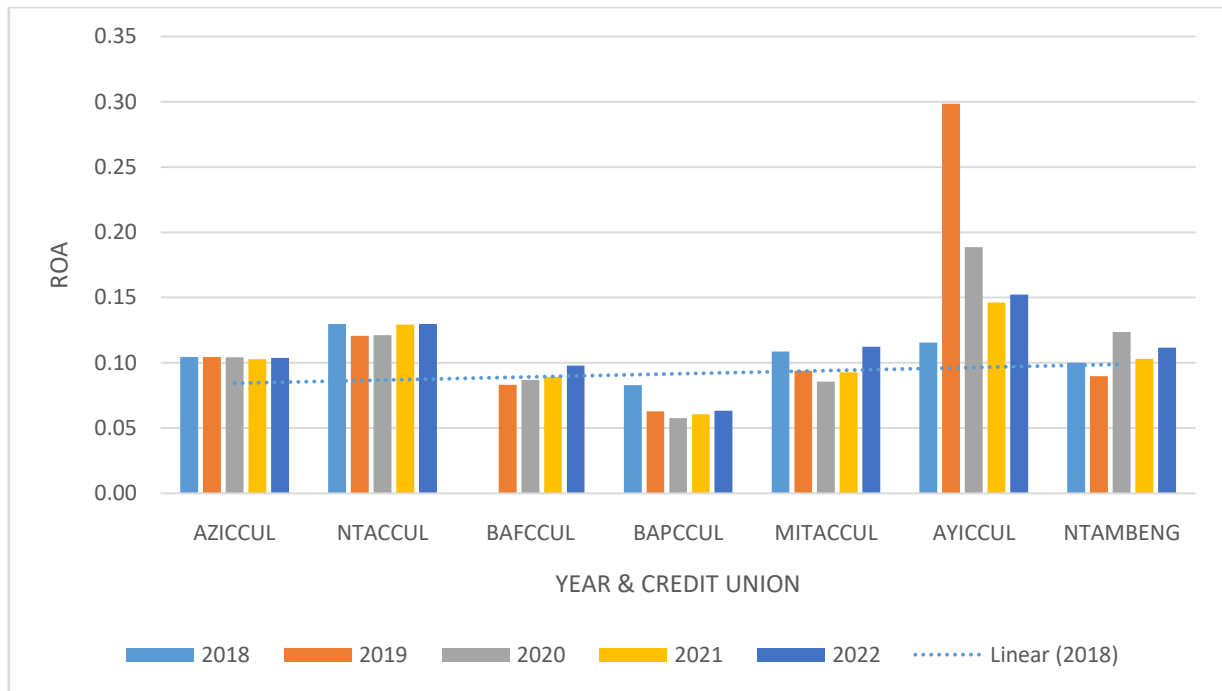


Fig 2. CCU Profitability (ROA) from 2018 to 2022

Source: *Visemih and Azie, (2023), Computation from Credit Union Financial Statements*

Fig 2, shows the trend of ROA within the period 2018 to 2022 for 7 of the biggest credit unions under study. Based on the figure, ROA has witnessed a fluctuating trend in all the credit unions. The most profitable credit union across the period is AYICCUL, followed by NTACCUL. BAFCCUL and BAPCCUL have the lowest earnings across all the periods. ROA in AYICCUL dropped sharply in 2020, most likely due the Covid 19 pandemic. All other credit unions recorded relatively high earnings in that year, indicating earnings were not affected much by the pandemic. Fig 3, presents the trend in the volume of non-performing across the 7 biggest credit unions under study over the period 2018 to 2022.

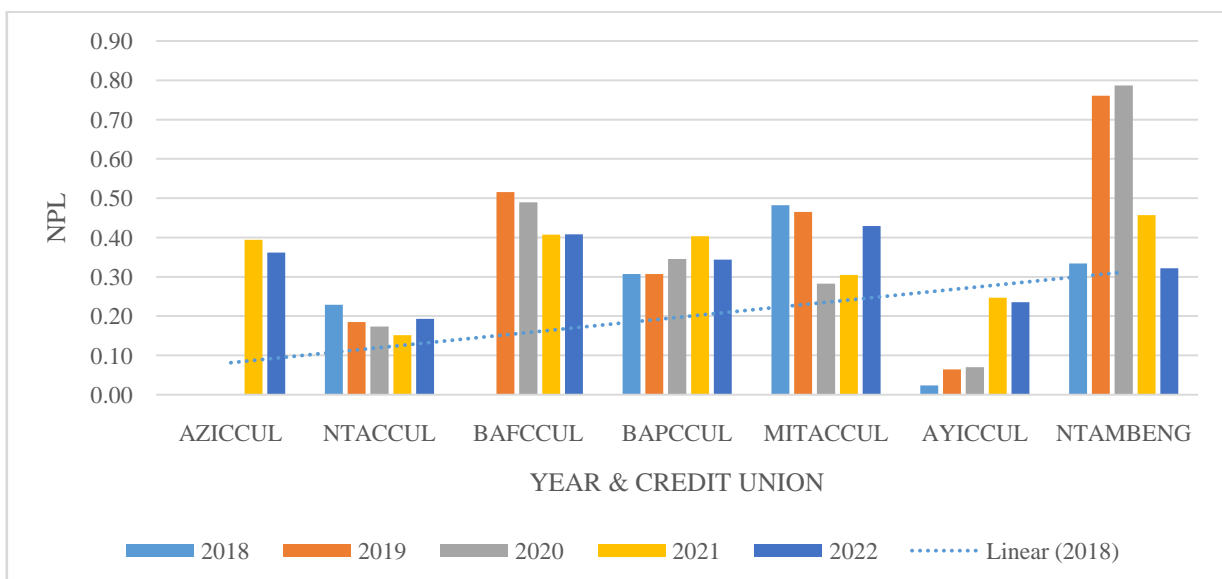


Fig 3: Trend of NPLs between 2018 and 2022

Source: Visemih and Azie, (2023), Computation from Credit Union Financial Statements

Based on the trend of NPL volume depicted in the figure, AYICCUL and NTACCUL consistently report the lowest NPLs over the period of study. Interestingly, these same credit unions recorded the highest ROAs over the period as depicted in Fig 2. Meanwhile, the worse performing credit unions with respect to ROA indicated earlier in Fig 2, namely BAPCCUL and BAFCCUL report equally high volumes of NPLs across the period. These statistics point to an indirect relationship between the volume of NPLS and ROA in credit unions and in more precise terms, a negative relationship. High NPLs will lead to low ROA and vice versa. In 2019 and 2020 where AYICCUL recorded its highest ROA, its NPLs were among the lowest for the period. Though mixed results are obtained for NTAMBENG, the figures largely hold true. In 2019 when the institution records its highest NPL volume, its ROA is equally its lowest over the 5 years period. Most of the institutions recorded their worse NPLs in 2019. This most likely was a result of the political crisis in the North West and South West regions, which in 2019 was at its peak, resulting to a slowdown in business activity across both regions. The effect of the Covid 19 pandemic was however minimal, as NPLs did not rise much in 2020 and 2021. In fact, across most of the MFIs, NPL volumes dropped in 2020. One reason for this could be a total reduction in lending across credit unions. Another however could be better screening by lenders, given the negative effects of the pandemic on firms across the world.

4.2 Inferential Statistics

4.2.1 Descriptive Statistics

A summary of the variables used in the study is presented in Table 8.

Table 8: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ln_npl	23	19.40348	2.216331	13.34	22.94
Roa	23	0.029585	0.02944	0.001	0.095258
Educ	23	2.956522	1.429503	1	5
l_appraisal	23	2.956522	1.580514	1	5
comm	23	2.478261	1.377401	1	5
ver_uf	23	2.652174	1.335144	1	5
num_br	23	7.086957	4.501647	2	23
Age	23	22.78261	14.31768	3	55

Source: Visemih and Azie, (2023), Computation, Based on Survey Data

From table 8, all the variables relating to lending, be they ex-ante or ex-post have a minimum value of at least 1 and a maximum value of 5, following the Likert scale used in the questionnaire, with 1 depicting strongly agree and 5, strongly disagree. Looking these variables, their standard deviations are relatively small, less than half of their mean, indicating that the values of these variables are

clustered around the mean. The normality of the distributions is confirmed by looking at their Skewness and Kurtosis. The best performing CCU has a ROA of 9.53%, while the worse has a ROA of 0.1%. Average performance stands at 2.96%. The smallest CCU has 2 branches, while the biggest has 23. Finally, the youngest CCU is 3years old, while the oldest is 55 years old.

4.2.2. Correlation Analysis

The pairwise correlation was used to ascertain the relationship between the variables used in the model and it also used as a pre-test for multicollinearity. The correlation coefficient expresses the degree of relationship existing between variables. The values of the correlation coefficient will always range from +1 to -1. The sign in the correlation matrix indicates the direction and the degree of the relationship. The pairwise correlation table is as presented below:

Table 9: Correlation Matrix

	educ	l_appraisal	comm	monitor_uf	num_br	ln_ta
Educ	1					
l_appraisal	-0.3228	1				
comm	0.0341	0.0309	1			
monitor_uf	-0.0321	-0.0937	-0.1526	1		
num_br	0.156	0.2817	0.4475	0.0582	1	
ln_ta	-0.0981	0.28	0.3399	0.4567	0.7330	1

Source: Visemih and Azie, (2023), Computed from Data

Based on table 9, close observation at the correlation coefficients suggests that there is no perfect linear relationship among these explanatory variables, or multicollinearity. However, while no clear-cut benchmark exists for multicollinearity, Hsiao (2003) suggests that multicollinearity only becomes a concern if correlation coefficients go above 0.70. As is the case here, total assets (ln_ta) and number of branches (num_br) are highly correlated, and should thus not be in the same model since they effectively will have the same effect on the dependent variable. To cater for this problem, the variable ln_ta is dropped from the analysis and number of branches maintained, as the latter variable serves as a relevant control for CCU size in this study. Further proof of the absence of multicollinearity is indicated in the Variance Inflation Factor results in table 10.

Table 10: Variance Inflation Factor (VIF)

Variables	VIF	Tolerance (1/VIF)
Members' education	1.973	.507
Loan Appraisal	1.179	.848
Communication	1.253	.798
Verification of Use of Funds	2.072	.483
Number of branches	1.340	.746

Source: Visemih and Azie, (2023), Computed from Data

Table 10, shows the VIF result which is used to measure the degree of multicollinearity. If the VIF of a coefficient of a variable exceeds 2.5, then that variable is highly collinear, and multicollinearity becomes a problem (Gujarati, 2004). The VIF test for multicollinearity showed no evidence for the existence of multicollinearity since the VIF coefficients are less than 2.50.

4.2.3 Test for Heteroscedasticity

The Breusch-Pagan test is a statistical test used to detect the presence of heteroscedasticity in a linear regression model. It is based on the idea that if heteroscedasticity is present, the variance of the error term should be related to the predictor variables in the model. The test involves regressing the squared residuals of the original regression model on the predictor variables and testing the significance of the resulting coefficients. If the coefficients are significantly different from zero, it indicates the presence of heteroscedasticity.

Table 11: Breusch-Pagan / Cook-Weisberg Test for Heteroscedasticity

Ho: Constant variance
chi2(1) = 26.02
Prob> chi2 = 0.0002

Source: Visemih and Azie, (2023)Analysis Done

Based on the results in Table 11, shows the Chi-Square test statistic is 26.02 and the p-value is 0.0002, which is statistically significant. Therefore, we reject the null hypothesis of homoscedasticity, and thus conclude that heteroskedasticity is present in the data. To cater for this, key variables in the analysis are logged. Among these are the use of natural logs to rescale variables like the volume of non-performing loans. Additionally, robust standard errors are used in the regression analysis to cater for this heteroskedaticity.

4.2.4 Reliability Test

Reliability is the accuracy and precision of empirical measurement procedure (Thalut *et al.*, 2020). Items that are reliable may be viewed as an instrument's relative lack of error. Ascertaining the validity of the reliability of the instruments or model is a pre-test procedure essential in reducing estimation bias. In the study, reliability is used in assessing the degree to which the indexes reflect the concept being measured. The result of the Cronbach Alpha is presented in Table 12.

Table 12: Reliability Test

Index	Cronbach Alpha	Number of Items
Members' education	.570	4
Loan Appraisal	.767	5
Communication	.642	4
Verification of Use of Funds	.524	3
Performance (ROA)	.746	5

Source: *Visemih and Azie, (2023), Computed*

The result of the scale reliability of the indexes as measured using the Cronbach Alpha revealed strong evidence of internal consistency as it is above the minimum cut off criteria of 0.5 as recommended for new index by Nunally and Bernstein (1994).

4.2.5 Regression Analysis

Table 13, presents the regression results for the determinants of non-performing loans in credit unions. These determinants of non-performing loans (NPLs) in Cooperative Credit Unions, consider two periods in the lending process - the ex-ante and ex-post periods. Education of borrowers (Educ) and Loan appraisal (l_appraisal) make up the ex-ante measures, while Communication with borrowers (Comm) and Monitoring of the use of funds (mon_uf) make up the ex-post measures. Nuber of branches (num_br) is used to control for the size of CCUs. Standard errors are indicated in parentheses.

Table 13: Determinants of NPL Volume

VARIABLES	(1) ln_npl	(2) ln_npl	(3) ln_npl
educ	-0.252 (0.356)		-0.577** (0.245)
l_appraisal	0.168 (0.322)		-0.222 (0.232)
comm		0.479 (0.333)	-0.116 (0.266)
monitor_uf		0.534 (0.344)	0.317 (0.246)
num_br			0.404*** (0.0876)
Constant	19.65*** (1.700)	16.80*** (1.392)	18.35*** (1.516)
<i>Statistics</i>			
Observations	23	23	23
R-squared	0.0535	0.1628	0.6542
Adj. R-squared	-0.0412	0.0791	0.5524

***, **, and * indicate statistical significance at 1%, 5%, and 10% levels respectively.

Source: *Visemih and Azie,(2023),Analysis Done*

Based on the regression results on table 13, the intercept (constant term) is the expected mean value of Y, when all independent variables = 0. The results show that holding all ex-ante and ex-post lending factors constant, the volume of non-performing loans in Cooperative credit unions in Bamenda will have a significant increase of 18.35units. This result thus proves that there is a dire

need for credit unions to adequately appraise and monitor their loans if they want to reduce the volume of loans likely to be defaulted on.

With respect to the determinants of non-performing loans, regression results presented above indicate a statistically significant negative relationship between members' education and the volume of NPLs. In other words, when credit unions educate their members prior to granting them loans, the volume of non-performing loans decreases. Mixed, though statistically insignificant results are found for the relationship between loan appraisal and communication, and the volume of non-performing loans in CCUs. In relation to monitoring in the ex-post period with respect to the use of funds, a positive though statistically insignificant relationship is observed between this measure and the volume of non-performing loans, suggesting that close follow-up of borrowers with respect to their use of borrowed funds will increase the likelihood of non-repayment, and consequently lead to a bigger volume of non-performing loans.

In relation to the effect of non-performing loans on the profitability of credit unions, prior descriptive statistics relating to the evolution of NPLs and ROA in the institutions under study depicted a negative relationship, wherein credit unions which had a lower volume of NPLs were observed to be more profitable or have higher ROA than those which had a higher volume of NPLs. This is however unproven as the regression results presented in Table 14, indicate.

Table 14: Effect of Non-Performing Loans on CCU Performance

VARIABLES	(1) roa	(2) roa	(3) roa
ln_npl	0.0163 (0.0178)	0.0398 (0.0243)	0.0443 (0.0271)
num_br		-0.0166 (0.0119)	-0.0126 (0.0157)
age			-0.00213 (0.00523)
Constant	-0.251 (0.347)	-0.590 (0.418)	-0.656 (0.457)
<i>Statistics</i>			
Observations	23	23	23
R-squared	0.0384	0.1230	0.1306
Adj R-squared	-0.0074	0.0353	-0.0067

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Visemih and Azie, (2023), Analysis Done

Based on the regression results on Table 14, a positive though statistically insignificant relationship is found between the volume of NPLs and the performance of CCUs, measured by ROA. This

implies that as the volume of NPLs in CCUs increase, their performance increases too, which represents an interesting result.

4.3. Discussion of Results

4.3.1. Effect of Client Education on the Volume of Non-performing Loans.

From the findings above, the coefficient of members' education is negative, meaning that members' education negatively affects the volume of non-performing loans in CCUs in Bamenda. Thus, an increase in members' education will lead to a decrease in the volume of non-performing loans in CCUs in Bamenda. The finding concurs with a study carried out by Yeboah & Oduro (2018), on the sustainability of Credit Unions. Thus, credit education to clients should be intensified and that effective loan monitoring should be vigorously pursued. The finding also ties with a study by Mnyanghwalo (2015) who on delinquency management had four specific objectives; to determine management strategies aimed at reducing delinquency, investigate the root causes of delinquency in MFI, found out that, delinquency management strategies used by MFIs are education of clients on product features, fees collection and charges. To establish mutually agreeable payment date, ensure quality of client information and determine adequate collection procedures.

In relation to the above, customer education has several facets whose overall objective is to ensure that borrowers can adequately repay their loans under less pressure and duress. Among these facets are financial literacy skills, technical expertise relating to the customer's preferred business activity, and general skills relating to the management of loans. Without such knowledge as the findings above indicate, borrowers will find it difficult not only to adequately utilize borrowed funds, but also to keep an account of their activities and use of these funds, which will have a direct effect on loan repayment rates in CCUs.

4.3.2. Effect of Loan Appraisal on the Volume of Non-performing Loans

Statistically insignificant and thus inconclusive results are obtained for the effect of loan appraisal on the volume of non-performing loans in CCUs. Prior to the addition of controls, results from the base model indicate a positive relationship between loan appraisal and the volume of non-performing loans in CCUs. In other words, increasing loan appraisal for example by employing the 5Cs of credit, namely character, capacity, capital, collateral, and condition as suggested by Fidrmuc et al. (2007) will lead to an increase in the volume of non-performing loans. This is an interesting finding. A possible explanation for this offered by Gatimu (2014) is that loan appraisal often may require a considerable amount of time for the process to be concluded. In such cases, the applicant's need for the funds may run out, as a result of delays in the loan appraisal process. Once the loan has been granted, the borrower will be less likely to repay. On the other hand, however, making the loan appraisal process less cumbersome and time consuming will rather increase loan repayment rates, and consequently reduce the volume of non-performing loans in CCUs. Overall, thus, the effect of loan appraisal on the volume of non-performing loans in CCUs depends on how

cumbersome and time consuming the loan appraisal process is, as this may have an effect on the timeliness of funds availability for use by borrowers, as well as their overall satisfaction with the lending process.

4.3.3. Effect of Communication in the Ex-post on the Volume of Non-performing Loans

Statistically insignificant and thus inconclusive results are obtained for the effect of communication between CCUs and their customers in the ex-post lending period, through for example instalment repayment reminders and covenants relating to the loan among others. Results from the base model indicate a positive relationship between communication and the volume of non-performing loans in CCUs. In other words, increasing communication in the ex-post period for example through the use of calls, short messages (SMS), e-mail, social media platforms, and even physical delivery of notices will reduce loan repayment rates in CCUs, and overall lead to an increase in the volume of non-performing loans. Though statistically insignificant, this finding goes contrary to that of Jimmy (2010), who found a negative relationship between communication and loan default. The author however fails to advance any reason for this finding. One argument to support the positive relationship between communication and loan default in this study is that borrowers may feel less in control of their activities or feel overburdened by extensive communication in the ex-post lending period, which may lead to dissatisfaction with the services of the lender, and result to unwillingness to repay loans. The direct effect of this will be an increase in the volume of non-performing loans in CCUs.

4.3.4. Effect of Follow-up of the Use of Funds on the Volume of Non-performing Loans

A similar dissatisfaction reason which may lead to an unwillingness to repay loans can be advanced for the positive relationship obtained from the regression results in Table 4.14 above between monitoring or follow up of the use of funds and the volume of non-performing loans in CCUs. Excessive monitoring on how customers use borrowed funds, be it via physical monitoring, through the use of covenants like the requirement to submit periodic financial statements, or otherwise may make customers feel overburdened and insecure, thus increasing the likelihood that they will be unwilling to repay their loans. Little prior empirical evidence exists to support this argument however. Notwithstanding, Mungure (2015) argues that diversion of loan funds remains a major cause on no repayment of loans, implying ex-ante monitoring of borrowers must continue to receive attention from lenders, particularly CCUs. How such monitoring is done however remains the issue here, as its results may go counter to what should obtain under normal circumstances where borrowers are monitored by a lender.

Finally, results from the regression analysis indicate a statistically significant positive relationship between the number of CCU branches used as a proxy for size of institutions, and the volume of non-performing loans. This result suggests that bigger CCUs will have poorer loan portfolios with respect to quality than smaller ones. In other words, CCUs with more branches will have a higher

volume of non-performing loans than those with fewer branches, suggesting that a lending model with a more centralized structure will work best for CCUs.

4.3.5. Effect of Non-performing Loans on the Profitability of Cooperative Credit Unions

The findings in Table 14, indicate that non-performing loans have a positive, though statistically insignificant effect on the profitability of CCUs in Bamenda. In other words, an increase in the volume of non-performing loans in CCUs will lead to an increase in their profitability. Though not much can be drawn from this result due to the statistical insignificance of the result, it remains an interesting result considering that it sharply contrasts those of previous researchers like Khalid (2012) and Abdullahi (2013), who found a negative relationship between the volume of non-performing loans and CCU performance. In their argument, for CCUs to be profitable, they must reduce the volume of non-performing loans by working on the factors affecting loan repayment, some of which are indicated in Table 15. A possible explanation for the relationship obtained in this study is that CCUs with a higher volume of non-performing loans will put more effort in ensuring loan repayment once delinquency begins, or will be more aggressive with their loan recovery efforts, which will prompt them perform better in the long run. Besides, such institutions can levy higher charges on delinquent loans, which will enable them earn more in terms of fees than institutions with a smaller volume of non-performing loans.

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study aimed at examining the determinants of non-performing loans and the effects of (NPLs) on the performance of cooperative credit unions in Bamenda. Precisely, the study was designed to ascertain the effect of ex-ante factors in the lending process, namely client education and loan appraisal, and the ex-post factors in the lending process, namely communication between the lender and the borrower and follow-up of the use of funds, on NPLs and to assess the effect of NPLs on performance of CCUs in Bamenda. Data for the study was obtained from primary sources through the use of questionnaires administered to 23 CCUs which made up the study's sample; and from secondary sources, namely audited financial statements of the CCUs under study for the year 2022. Collected data was analyzed using OLS.

Findings from the empirical analysis indicate a statistically significant negative relationship between client education and the volume of non-performing loans in CCUs in Bamenda. In other words, a one unit increase in client education will lead to a 57.7 units decrease in the volume of non-performing loans. In the ex-ante lending period thus, client education prove to be the most important measure. Mixed and statistically insignificant results were found between appraisal in the ex-ante lending period and the volume of non-performing loans in CCUs. A similar result was obtained for all ex-post lending results, namely communication between the lender and borrowers, monitoring on the use of funds in CCU, and the volume of non-performing loans. No clear

conclusion could thus be drawn for the effect of loan appraisal and both ex-post lending measures on the volume of non-performing loans in CCUs.

5.2 Conclusion

This study focused both on the ex-ante and ex-post lending periods in CCUs in Bamenda, defined with respect to timing, with ex-ante occurring before loans are granted, and ex-post, after loans have been granted. Empirical literature points to the importance of both time periods in the lending process, as loan delinquency and subsequent loan default could arise from weaknesses in either of these timeframes. As the findings in the study indicate, ex-ante lending activities should receive considerably more attention than the ex-post activities. Findings in precise terms point to the importance of client education in the lending process. The importance of the other measures when it comes to CCU lending depends on a number of other factors among which are strategies used by the CCU in loan appraisal for example, which may require considerably much time, and communication and monitoring which borrowers may become overburdened with and thus become less satisfied with the lender's services, which in all may make them less willing to repay loans.

5.3 Recommendations

The finding revealed that members' education has a negative significant effect on the volume of non-performing loans. The study recommended that, CCUs should provide appropriate training and supervision to clients regarding the loan products and how loans are to be repaid. In addition, more CCUs should have clear and effective credit or lending policies and procedures, which must be regularly reviewed and made available to the members.

Still in line with ex-ante lending activities, loan appraisal needs to be considered very closely, with respect to strategies used in appraising clients, and how cumbersome this appraisal process is. Though better appraisal should in principle and based on past findings lead to better loan repayment, appraisal processes which are time consuming, complicated, and frustrate customers will lead to poorer loan repayment instead.

In line with the previous argument on loan appraisal, communication and monitoring in relation to the use of funds, both ex-post activities are important in CCUs. However, the tools and strategies used to carry out both activities must be carefully crafted and watched over to ensure that customers do not feel overburdened as this may lead to dissatisfaction with the lender's services, and thus unwillingness to repay loans. Banking overall is based on relationships and such relationships as is the case with lending need to be nurtured over time strategically.

5.4 Suggestions for Further Studies

This study was limited only to Cooperative Credit Unions. Considering the fact that Microfinance Institutions in Cameroon cut across different categories and ownership structures, there is a need to

consider MFIs of different categories, like shareholder-owned MFIs (Category II). Also, the study was limited in its geographical scope to CCUs in Bamenda only. Future studies should consider extending to other parts of the North West, and other regions of the country, given that CCUs operate throughout the national territory. Finally, the sample of CCUs considered in the study's sample is relatively small, given the large number of CCUs that operate across Bamenda, and the North West Region as a whole. This was due largely to the unavailability of secondary data. Future studies should consider a bigger and broader database with many more CCUs. If secondary data can be readily available, more reliable findings can be obtained in relation to lending in CCUs, and MFIs as a whole.

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APPENDIX

I. Determinants of non-performing loans (ex-ante measures)

. reg ln_npl educ l_appraisal

Source	SS	df	MS	Number of obs	=	23
Model	5.77994765	2	2.88997382	F(2, 20)	=	0.57
Residual	102.286786	20	5.1143393	Prob > F	=	0.5771
				R-squared	=	0.0535
				Adj R-squared	=	-0.0412
Total	108.066734	22	4.91212426	Root MSE	=	2.2615

ln_npl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
educ	-.2521007	.3563593	-0.71	0.487	-.9954531 .4912518
l_appraisal	.168477	.3223108	0.52	0.607	-.5038515 .8408054
_cons	19.65071	1.699578	11.56	0.000	16.10546 23.19597

II. Determinants of non-performing loans (ex-post measures)

. reg ln_npl comm ver_uf

Source	SS	df	MS	Number of obs	=	23
Model	17.5907756	2	8.79538781	F(2, 20)	=	1.94
Residual	90.4759581	20	4.5237979	Prob > F	=	0.1692
				R-squared	=	0.1628
				Adj R-squared	=	0.0791
Total	108.066734	22	4.91212426	Root MSE	=	2.1269

ln_npl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
comm	.4786577	.3331166	1.44	0.166	-.2162113 1.173527
ver_uf	.5340239	.3436597	1.55	0.136	-.1828376 1.250885
_cons	16.80092	1.392334	12.07	0.000	13.89656 19.70527

III. Determinants of non-performing loans (all variables)

. reg ln_npl educ l_appraisal comm ver_uf num_br

Source	SS	df	MS	Number of obs	=	23
Model	70.6920587	5	14.1384117	F(5, 17)	=	6.43
Residual	37.374675	17	2.1985103	Prob > F	=	0.0016
				R-squared	=	0.6542
				Adj R-squared	=	0.5524
Total	108.066734	22	4.91212426	Root MSE	=	1.4827

ln_npl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
educ	-.5767239	.245486	-2.35	0.031	-1.094654 - .0587937
l_appraisal	-.2222391	.2318071	-0.96	0.351	-.7113094 .2668312
comm	-.1161001	.2661938	-0.44	0.668	-.67772 .4455197
ver_uf	.316649	.2461906	1.29	0.216	-.2027677 .8360658
num_br	.4040349	.0876441	4.61	0.000	.2191221 .5889478
_cons	18.35017	1.515675	12.11	0.000	15.15238 21.54796

IV. Effect of non-performing loans on CCU performance (model 1)

. reg roa ln_npl

Source	SS	df	MS	Number of obs	=	23
Model	.028677632	1	.028677632	F(1, 21)	=	0.84
Residual	.718227688	21	.034201318	Prob > F	=	0.3702
				R-squared	=	0.0384
				Adj R-squared	=	-0.0074
Total	.74690532	22	.033950242	Root MSE	=	.18494

roa	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
ln_npl	.0162902	.01779	0.92	0.370	-.0207061 .0532865
_cons	-.2512838	.3473347	-0.72	0.477	-.9736059 .4710382

V. Effect of non-performing loans on CCU performance (model with control variables)

. reg roa ln_npl num_br age

Source	SS	df	MS	Number of obs	=	23
Model	.097536667	3	.032512222	F(3, 19)	=	0.95
Residual	.649368653	19	.034177298	Prob > F	=	0.4357
				R-squared	=	0.1306
				Adj R-squared	=	-0.0067
Total	.74690532	22	.033950242	Root MSE	=	.18487

roa	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ln_npl	.0442512	.0271186	1.63	0.119	-.0125086	.1010111
num_br	-.0126024	.0156748	-0.80	0.431	-.04541	.0202053
age	-.0021266	.0052304	-0.41	0.689	-.0130739	.0088207
_cons	-.6560635	.4573927	-1.43	0.168	-1.613397	.3012703