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ABSTRACT

Most financial institutions, especially the microfinance, over the years have been experiencing increasing loan delinquency, which has greatly caused their asset portfolios to be highly non-productive and very poor in quality. This situation has been very disturbing as little or no attention is paid to this phenomenon by the stakeholders. The main objective of this paper was to identify credit risk factors and their effects on the financial performance of MFIs in Cameroon. Specifically, the study sought to determine the extent to which credit risk identification, credit risk assessment, risk relationships in microfinance institutions have affected financial performance. The paper adopted a descriptive and a causal research design to provide answers to the research objectives of interest. The descriptive results revealed that credit risk elements or factors like poor monitoring of loans, management influence in lending activities, improper credit and credit risk analysis during underwriting, poor or non-segmentation of loan portfolio into smaller loans to a large portion of the membership, non-respect and no review of credit policies as well as little or no perfection of collateral security do lead to credit risk. The study showed that credit risk relates negatively with financial performance at the 1% level of significance. This implied that credit risk significantly and negatively affects financial performance of MFIs in Cameroon. The paper therefore recommended that accurate and holistic measures be put in place to curb credit risk in order to improve on financial performance and improve on asset quality. Also, management should empower employees through capacity building trainings, employ and put to use recent technological software for credit risk monitoring and reporting.

Keywords: *Credit risk management, Financial performance, Microfinance institutions, Cameroon*

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INTRODUCTION

For more than two decades, there has been significant growth of the microfinance sector or industry in most developing countries with Cameroon being one of them. There has been a very high growth rate of credit unions in the Cameroon cooperative credit Union Leaque (CamCCUL) network since 1968 when credit unions started in Cameroon. As at date, more than eighty six percent (86%) of the credit unions are spread over the French and English-speaking parts as well as rural and urban areas in Cameroon, serving as a platform of support for individuals, groups and small-scale businesses in terms of micro-credit financing for sustainability (Fotabong, 2012). In Cameroon, the credit unions have grown tremendously from a small informal industry to become one of the key components of the country's emerging financial sector providing highly needed financial services to a significant cross section of the population mostly from the rural and informal sectors.

According to Asiama and Osei (2007), microfinance has emerged as an important instrument in many African countries particularly in the quest to reduce poverty and achieve sustainable and equitable growth. Microfinance Institutions (MFIs) are not only for the provision of capital funds to the poor who are generally excluded from the financial services by most conventional Banks, but also an integral part of the country's overall national development strategy. Therefore, the role of microfinance as a source of capital funds and overall national economic development and poverty reduction cannot be overemphasized.

In today's microfinance business therefore, managing credit risks associated with such business is more challenging than ever before. This situation brings about educated decisions as to how much risk or credit risk tolerating, mitigating if not tolerated and how to manage the real risks that are part of business. A risk management platform put in place will allow Managers and Directors of businesses to make conscious decisions about risk and to adopt the most cost-effective approaches to manage those risks and to cultivate an internal culture that rewards good risk management while not discouraging risk taking. Fotabong (2012) indicated that as MFIs continue to grow and expand rapidly, serving more customers and attracting more mainstream investment capital and funds, they need to strengthen their internal capacities to identify and anticipate potential risks to avoid unexpected losses and surprises like internal control mechanisms and processes, risk identification assessment platforms.

Banking firms are expected to have a culture that supports their prudent management. Boards and management need to clearly understand the circumstances in which firms' viability would be under question, make sure that accepted orthodoxies are not challenged. This action addresses risks on a timely basis and ultimately, that designated risk management and control functions carry real weight within firms. In Cameroon and world at large, good governance in MFIs has been greatly criticised as non-respect of Credit policies and poor governance practices have led to deteriorating credit standings thereby making it difficult for MFIs to fall with resolvability.

The riding aim of good credit management in any micro-financial institution is to ensure sound financial performance of the institution so as to continue promoting micro-credit in order to encourage small businesses and alleviate poverty. Most MFIs and other financial institutions have faced a lot of risks that directly affect the proper functioning of the organization like governance risk, liquidity risk, transaction risk, environmental risk, and importantly, credit risk has been one of the greatest risks faced by the microfinance institutions (Geitangi, 2012). This stems from the problem of lax credit standards or policies for borrowers, poor individual and portfolio credit risk management or non- payment of attention to changes in the business environment as well as the socio-economic and political environment or circumstances leading to the deterioration in credit standing of

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counterparties (Basel, 2000). In Cameroon, most or all MFIs are currently experiencing serious socio economic and political ramifications as a result of the current crisis which downplays greatly on their credit quality and financial performance.

A key requirement to better financial performance is the ability to efficiently manage credit decisions, have greater insight into customer or member financial strength, credit score history and changing payment patterns. To ensure good financial performance, credit once granted must be well followed up until full recovery. Maintaining a good credit policy to ensure financial performance might be difficult as there exist changes in the economy that may warrant adjustments and stress testing. Firm's credit policies are largely influenced by economic conditions (Pandey, 2008). As economic conditions and atmosphere change, so also do credit policies of financial institutions.

Micro-financial institutions generate more than 80% of their income by extending credits or loan to their members or customers who most often are low income earners in the form of interest charged on the loans or funds granted (Central Bank Report, 2010). The success of lending or credit creation largely depends on the methodology applied on credit underwriting. The appraisals of credit files need to be conducted professionally without bias taking into consideration all the technical aspects and particularly the portfolio risk analysis of individual and general portfolios.

The success and financial performance of credit unions largely depend on the effectiveness in the management of their credit risk. These institutions generate more than 80% of their income from loans extended to small and medium size entrepreneurs. The Central Bank Supervision Report (2010) showed a high incidence of credit risk which was reflected in the increasing amount and number of nonperforming loans by the MFIs in the past ten years. This situation has adversely affected or impacted on their profitability or financial performance. This situation therefore threatens viability and sustainability of the MFIs. While some researchers have carried out studies on the causes of credit risk and effects on banking crisis especially in Europe, Asia and Africa, studies in Cameroon that address these issues are yet to emerge. To bridge this gap, this study focuses on the causes of credit risk and its resultant effect on the financial performance of credit unions in Cameroon.

While some credit unions have succeeded in managing their credits and bringing down loan delinquency, others continue to face greater challenges in controlling their delinquent credit portfolios, some of the challenges coming from competition in the market, addition of credit products with long term structures, environmental factors, and geographical expansion. After consulting the annual reports of some MFIs in Cameroon and Bamenda in particular, we observed that most credit unions have been facing credit risk situations and this situation has enormously affected their financial performances. We equally found out that some of the resultants of credit risk are increased loan delinquency rate, poor liquidity holding rate, poor income realisation, poor net results, drop in the level of interest provision to net savers as well as increase in provisions for bad and doubtful debts. Given the poor situation of the aforementioned variables it leads to the pertinent question of what are the reasons for poor credit risk management of MFIs in Cameroon.

Most studies that have attempted to investigate the nexus between credit risk management practices and financial performance of microfinance institutions are based in developed countries. Very few of such studies exist in developing countries. For instance, Ndiviga (2012) investigated the relationship between credit risk management practices and financial performance of microfinance institutions in Kenya. To our knowledge, no study has addressed directly the role of credit risk management in relation to financial performance of MFIs in Cameroon. This study seeks to bridge this knowledge gap in Cameroon. Credit risk management is therefore essential in optimizing the financial performance of microfinance institutions.

This way, some of the questions that can be raised include; what are those risks faced by MFIs particularly credit unions? How are these risks managed or mitigated to ensure that while the needs of the population are met, the interests of stakeholders are also protected and sustained? This situation now leaves us with the need to have informed knowledge on the following research objectives. The main objective of this study is: To investigate the role of credit risk in explaining the financial performance of MFIs

This main objective was guided by the following specific objectives:

- To analyze the situation of nonperforming loans as well as the real written off loans;
- To investigate the situation of some credit risk identification and assessment factors in the sampled MFIs;
- To assess the effect of credit risk on financial performance while controlling for other correlates of financial performance;
- To assess the effect of the current socio-political crises affecting our country on financial performance of MFIs; and
- To come out with risk mitigating factors and procedures to limit and prevent the collapse of MFIs due to credit risk.

LITERATURE REVIEW

Many researchers and authors have carried out varied studies in the field of microfinance and some of the studies directly or indirectly touch on the issues of risk and the financial performance or general performance of financial institutions. Those linked to credit risk and credit risk management and financial performance will be reviewed to better understand the methodologies, findings as well as recommendations adopted and put forth.

Sound credit Management is a prerequisite for a financial institution's stability and continuing profitability while deteriorating credit quality is the most frequent cause of poor financial performance and condition. The biggest risk in microfinance is lending money and not getting it back. Gatuhu (2011) used descriptive statistics of 59 MFIs in Kenya to analyze questionnaires administered on the study of "the effect of credit management on the financial performance of microfinance institutions in Kenya" and found out that client appraisal, credit risk control, and collection policy had effect on financial performance of MFIs in Kenya. The study further holds that there was strong relationship between financial performance, client appraisal, credit risk control, and collection policy. Client appraisal has a higher effect on financial performance and that a stringent policy is more effective in debt recovery than lenient policy. The study of Gatuhu (2011) though very interesting is limited because the study only focused on descriptive statistics. The study did not go further to use an inferential method to investigate the relationship between credit risk and financial performance. Our study goes further to employ a regression approach to investigate the relationship

Achou and Tenguh (2008) conducted a research on Bank performance and credit risk management and found out that there is significant relationship between financial institutions performance (in terms of profitability) and credit risk management (in terms of loan performance). Better credit risk management results in better performance. Thus, it is of crucial importance that financial institutions practice prudent credit risk management and safeguarding the assets of the institution and protect the investor's interest. In this regards profitability and sustainability would be attained.

Soke Fun Ho and Yussof (2009) in their study on credit risk management strategies of selected financial institutions in Malaysia found out that the majority of financial institutions and bank losses stem from outright default due to inability of customers to meet obligations in relation to lending, trading, settlement, and other financial transactions. Credit risk emanates from a bank's dealing with individuals, corporate, financial institutions or sovereign entities. A bad portfolio may attract liquidity as well as credit risks. They held that effective management of risk is an essential component of a comprehensive technique to risk management and critical to the long-term success of all banking institutions.

When a company grants credit to clients, it incurs the risk of non-payment on the part of the client. This risk of non-payment constitutes credit risk. Credit risk adversely affects financial performance of MFIs more than any other factor. In the event of a default, the company faces a risk of losing part or whole of the principal amount plus the interest accrued on the loan. This calls the need for MFIs to control credit in order to minimize this loss. Wangechi (2012) in her study on factors influencing sustainability of microfinance institutions in Kenya Women Finance Trust (KWFT) found out that quality service delivered influenced KWFT sustainability by attracting new customers through word of mouth advertising, improving on the reputation of the organization, improving on the financial performance and profitability, lowering operating costs and also increased customer retention rates, hence boosting the overall quality of the organization.

Kombo et al. (2010) argues that strategic risk, credit risk and liquidity risk are the most frequent risks faced by MFIs in Kenya. He further says that, whereas reputation and subsidy dependence risks occur at a very low incidence for Micro Finance Institutions (MFIs) in Kenya, this does little to influence negatively the profitability of these institutions. He further points out that to tune down these risks, the microfinance institutions (MFIs) employ various management strategies, which include risk avoidance, transferring of risk and mitigating risks and also regard mitigation of risks as the most effective risk management strategy.

Mokoro et al. (2010) in an investigation of the various challenges facing the transition of informal MFIs into formal MFIs recognize the existence of risks emanating from both the external and internal stakeholders. According to Diamantini (2010), MFIs are particularly vulnerable to foreign exchange rate risk, since they operate in developing countries where the risk of currency depreciation is high. This is true because currency depreciation tends to be highly correlated with a general deterioration of local economic conditions, which can cause higher loan delinquencies and a reduction in profitability of financial activities. He goes further to give a remedy to this that hedging can mitigate this risk and contributes greatly to an MFI's success and sustainability. Through an appropriate hedging policy, the MFI can reduce or even eliminate the uncertainty of mismatches between local currency receivables and foreign currency repayments.

O'Brien (1983) theoretical models and recent modifications to reflect current practices, has given a clear set of guidelines to promote better understanding of credit agreements to assist the banking industry to improve their services while minimizing risk. These guidelines include full disclosure of credit history, Independent credit analysis, Legal considerations, and sharing credit information among agents and prompt response to problems. The implication of O'Brien's theories is that the MFIs must adopt a pro-active approach to credit risk management in order to ensure a long-run sustainability. Unfortunately, many MFI Stakeholders in Kenya are unaware of the various components of a comprehensive risk management regiment.

Hudon (2010) analyzed the relationship between financial performance of MFIs and their management mechanisms based on three financial indicators Return on Asset (ROA), Adjusted Return on Asset (AROA) and (Financial Self Sufficiency) FSS and four management dimensions like decision making, board governance competencies, Accounting and control, planning budgeting and reporting competences like competencies of the top managers and competencies of HR management. The results of Hudon (2010)'s analysis show that management ratings influence drastically the MFI financial performances. According to him, however, except for the cooperatives where the management variable (specifically human resources management) has a negative impact on the ROA, no organizational structure exhibits better results for the three financial indicators. He underscored that regulated MFIs have significantly better management ratings than non-regulated ones.

Banks employ several concepts which have been built to address credit risk and analysis. The banks mainly use portfolio theory in order to reduce the risk on the loans they offer. The idea here is that a group of assets held together is less risky than the risk of the individual assets making up the portfolio. Thus, the principle of portfolio analysis plays a very important role in management of credit risk. According to Harry Markowitz (1952) and William Sharpe (1964), the effect of concentrating risk has led to banks diversifying their exposure limits across the borrowers and among various types of debt facilities. William Sharp developed the CAPM model which, according to Markowitz (1952), is well applicable in investment decisions.

Rosemary Kasyoka Mutua (2014) carried out a study on the Impact of Credit Risk management on Financial Performance of savings and Credit Cooperatives in Kitui County and found out that failures in the financial sector have been caused by Non-performing loans or bad debts which are attributed by poor or ineffective loaning policy. Her research design was descriptive in nature. She used self-administrative questionnaires to get valuable data from SACCOS (Savings and Credit Cooperatives Societies) and quantitative method to analyze data and examine the simultaneous impact of the independent variable on the dependent variable. Findings show that there is a strong positive relationship between credit monitoring and financial performance of SACCOS. There is a very strong relationship between loan policies in mitigation of risk and financial performance of SACCOS. There exists very strong positive relationship between loan defaulters and financial performance of SACCOS. As recommendation, she advised that SACCOS should intensify internal auditor doing verification of the loans as to improve the monitoring of loans, SACCOS should continually review their loan policies so as to be up to date with the current economic trends, and do not grant loans without considering retirement age.

Emenike O Kalu, Bashabe Shieler, Christian U Amu (2018), in their research titled Credit risk management and financial performance of microfinance institutions in Kampala, Uganda. With the objective to evaluate whether relationship exist between credit risk management techniques and financial performance of microfinance institutions in Kampala, Uganda. Specifically, the study examined whether there is a relationship between credit risk identification, credit risk appraisal, credit risk monitoring, credit risk mitigation and financial performance of microfinance institutions in Kampala using sample of 60 members of staff in finance and credit departments of three licensed microfinance institutions in Kampala. The research made use of both primary and secondary data. The Pearson linear correlation coefficient was adopted to examine relationship between credit risk management techniques and financial performance. The findings indicate that credit risk identification and credit risk appraisal have a strong positive relationship on financial performance of MDIs, while credit risk monitoring and credit risk mitigation have moderate significant positive relationship on financial performance of MFIs. The study recommends that the credit risk appraisal process should identify and analyze all loss exposures, and measure such loss exposures. This should guide in selection of technique or combination of techniques to handle each exposure. The study concludes that MDIs should continually emphasize effective credit risk identification, credit risk appraisal, credit risk monitoring, and credit risk mitigation techniques to enhance maximum financial performance.

Solomon Wakaria (2016), in his research titled ‘the effect of credit risk management on the financial performance of micro finance institutions in Kenya’, with main objective to evaluate the effect of credit risk management on the financial performance of non-deposit taking MFIs in Kenya. The research design exploited descriptive research design in this research as it draws in a comprehensive analysis of credit risk management and its correlation with financial performance in micro finance institutions. Secondary data gathered from microfinance institutions yearly reports (2011- 2015) was utilized. The study population was 13 microfinance institutions licensed by Central Bank of Kenya and 22 non-deposit taking MFIs, though data was attained from 27 MFIs. This study depicted that there is a considerable correlation involving financial performance and credit risk management. The study recommended that the MFIs in Kenya must pay constant attention to credit risk being a major risk to Non-Performing Loans. Secondly, the Central Bank of Kenya needs to come up with strong regulations on the unregulated non-deposit making MFIs. Thirdly, the regulators must come up with adequate capital adequacy requirements to shield the MFIs from financial risks.

METHODOLOGY

RESEARCH POPULATION

The research population was that of Category One microfinance institutions in Cameroon. The microfinance landscape in Cameroon which constitutes of three categories as earlier indicated is dominated by category one microfinance institutions that control or occupy over 86% of the market share and number. In 2011 and according to Fotabong (2012), Category One microfinance institutions (credit unions) constituted about 510 MFIs out of 586 MFIs existing in Cameroon at the time. Credit Unions have continued to gain grounds in multiple numbers since then and therefore, using credit unions or category one microfinance institutions as the population in this study will lead to findings whose outcome or result will strongly represent the state of affairs in the microfinance sector in Cameroon. All the key actors like Managers, Credit Officers, Accountants, Internal Controllers and Recovery Officers of all the branch offices as well as those of other credit unions shall be chosen for data collection in order to have a balanced and well represented view on information and findings/results of MFIs in Cameroon. In this regard, our population is close to seventy (70).

SAMPLING TECHNIQUE AND SAMPLE SIZE

The researcher used a stratified and purposive sampling technique or method given that the target population can be classified into groups. The researcher adopted the stratified sampling technique because the respondents can possibly be classified in subgroups (Such as BAPCCUL, MITACCUL, BACCUL, and TADCCUL). We equally employed the purposive sampling because our study required key information that could only be provided by key actors in MFIs such as Managers, Credit Officers, Accountants and Internal Controllers. BAPCCUL on its own had about 22 Branch offices located both in urban and rural areas of Cameroon. Besides BAPCCUL, other MFIs were considered to ensure the representativeness of our sample. The total sample size was 57 respondents; representing 81.43% of the target population.

DATA COLLECTION INSTRUMENT

This study made use basically of primary data.

Primary Data

Structured questions or interviews (Likert scale) were used to collect primary data. Closed ended questions and open-ended questions where necessary and depending on the scenario or situation were used to collect information for primary data for quantitative and descriptive analysis. The questions or interviews were structured to capture and analyse factors that account for credit risk in the microfinance intuitions, the relationship between the variables and risk factors as well as the proxies of financial performance in microfinance institutions. The data collection instrument made it very convenient for respondents to give information needed for analysis.

Audiences were solicited with interviewees in advance and time and venue programmed at their convenience. This was to enable the interviewees prepare well for response as some questions were a bit technical and needed some time for inference.

The structured interviews were actually guided by the research questions and objectives in order to gather appropriate data for analysis.

Model Specification

In this study, the following methods were employed to analyse the data collected; Descriptive and Regression analyses.

Descriptive Statistical model

Descriptive statistics refer to the analysis of data that helps describe, show or summarize data in a meaningful way such that, for example patterns may emerge from the data. In this research we made use of EXCEL 2010 and SPSS 20 to summarise data in frequency tables and Charts.

Regression Model

An ordinary least squares (OLS) regression analysis was employed with the help of STATA 11. To investigate the effect of credit risk on financial performance, we used the following specification:

$$Y = \beta_0 + \beta X + W\gamma + \varepsilon \text{ .... (1)}$$

Where, Y= Financial performance indicator1, X= credit risk indicator2, W is the vector of other independent variables (control variables) including longevity, level of education, socio-political crisis and microfinance governance, β_0, β and γ are the parameters to be estimated and ε captures other variables which relate with Y but which are not included in the model.

Global test of significance (Fisher test)

It is used to show an overall significance of the multiple regression relationship. It is a test of global significance. The statistic is given by:

$$F = \frac{MSR}{MSE}$$

Where MSR = mean square due to regression and MSE = mean square due to error.

Hypotheses for the F test

$$H_0: \beta_1 = \beta_2 = \beta_3 = \cdots \beta_6 = 0$$

H_1: One or more of the parameters is not equal to zero

Rejection criteria

P-value approach: Reject Ho if p-value $\leq \alpha$

α is the level of significance

Individual test of significance (t test)

It is used to test for individual significance of the independent variables. Its statistic is given by:

$$t = \frac{b_i}{s_{b_i}}$$

Hypotheses for the t test

$$H_0: \beta_i = 0$$

$$H_0: \beta_i \neq 0$$

Rejection criteria

P-value approach:

Reject Ho if p-value $\leq \alpha$

RESULTS AND DISCUSSIONS

This section presents the data obtained, needed analyses and discussions of major findings.

[1] *Financial performance indicator (FPI) was constructed through aggregation using seven (7) financial performance factors in Section D of the questionnaire.*

[2] *Credit Risk Indicator (CRI) was built through aggregation using the factors of credit risk in Section B and normalized to fall between 0 and 100.*

Summary Statistics of Sampled Microfinance Workers

Table 1: Distribution of sampled workers by Microfinance Institutions

	FREQUENCY	PERCENT
BAPCCUL	39	68.4
BACCUL	5	8.8
LUCCUL	2	3.5
MITACCUL	5	8.8
NTABENGCCUL	2	3.5
TADKON	4	7.0
Total	**57**	**100.0**

Source: Compiled by authors using field survey 2018

Note: LUCCUL stands for Limbe Urban cooperative Credit Union Limited while NTABENGCCUL stands for Ntambeng cooperative Credit Union Limited.

Table 1 presents the distribution of sampled workers by the microfinance institutions sampled. From the table, it can be observed that majority of our sampled respondents were from BAPCCUL (68.4%), followed by MITACCUL (8.8%), BACCUL (7.0%) and TADKON (7.0%). BAPCCUL has the highest representation because it is the case study of the researcher where questionnaires were administered to over 15 branch offices out of the 21 branches located all over the national territory of Cameroon.

Table 2: Distribution of sampled microfinance workers by position of responsibility

	FREQUENCY	PERCENT
Credit officer	25	43.9
Accountant	11	19.3
Internal controller	3	5.3
Manager	13	22.8
Cashier	1	1.8
Recovery officer	1	1.8
Principal teller	1	1.8
No response	2	3.6
Total	**57**	**100.0**

Source: Compiled by authors using field survey 2018

Table 2 hosts the distribution of sampled microfinance workers by position of responsibility. The table shows that 43.9% of our sampled respondents were credit officers, 19.3% were accountants, 5.3% were internal controllers and 22.8% were managers. This is indication that our sample was made-up of respondents who are versed with the operations of MFIs and situation of credit risk as well as financial performance of their institutions. This provides assurance on the information gathered. Given the category of respondents in table two, we can be assured that the information used in our study is reliable.

Credit Risk Identification and Assessment

Table 3a: Opinions of sampled microfinance workers on some credit risk identification and assessment factors.

Credit department exist in the Credit union (a)						
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Frequency	1	0	0	6	50	57
Percent	1.8	0.0	0.0	10.5	87.7	100.0
There exist a credit policy to guide the lending activities (b)						
Frequency	0	1	0	11	45	57
Percent	0.0	1.8	0.0	19.3	78.9	100.0
There exist a good management information system (software) to tract and report the loan portfolio and loan delinquency (c)						
Frequency	1	1	5	25	25	57
Percent	1.8	1.8	8.8	43.9	43.9	100.0
The credit union hires qualified staff to handle lending activities (d)						
Frequency	1	5	11	28	12	57
Percent	1.8	8.8	19.3	49.1	21.1	100.0
The staff are trained on credit management for proper analysis and decision making (e)						
Frequency	0	3	8	39	7	57
Percent	0.0	5.3	14.0	68.4	12.3	100.0

Source: compiled by authors using field survey 2018

Table 3a presents the appreciations of sampled microfinance workers on some credit risk identification and assessment factors. With respect to statement (a), Credit department exist in the Credit union, it can be observed that 98.2% (that is 87.7% for strongly agree and 10.5% for agree) indicated that credit department exist in their credit unions. Only one respondent claimed that there is no credit department in his/her credit union. Concerning statement (b), there exist a credit policy to guide the lending activities, 98.1% (78.9% for strongly agree and 19.3% for agree) opined that there exists a credit policy to guide the lending activities of credit unions, as opposed to only 1 respondent out of the 57 (corresponding to 1.8%) who disagreed to this statement. Concerning statement (c), there exist good management information systems (software) to tract and report loan portfolio and loan delinquency, 87.8% (43.9% for strongly agree and 43.9 % for agree) opined that there exists such a software for tracking and reporting or loan portfolio and delinquency as opposed to 3.6 % that disagree and strongly disagree on the statement. 8.8 % of the respondents were neutral on such a situation. Looking on point (d), credit unions hires qualified staff to handle lending activates, 70.2% accepted the fact that they hire qualified staff as opposed to 10.6% who do not think that credit unions do hire qualified staff. With respect to point (e), the staff are trained in credit management for proper analysis and decision making, 80.7% are in favour of the statement (12.3% strongly agree and 68.4% agree) while 5.3% are not in favour of the statement that staff are trained in credit management.

Table 3b: Opinions of sampled microfinance workers on some credit risk identification and assessment factors.

The credit Union has a sub unit specialized in portfolio and risk analysis during underwriting or appraisal (f)						
	strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Frequency	3	17	9	20	8	57
Percent	5.3	29.8	15.8	35.1	14.0	100.0
Credit officers use the cardinal principles of 5Cs in lending activities (g)						
Frequency	2	1	6	25	23	57
Percent	3.5	1.8	10.5	43.9	40.4	100.0
Credit officers' analysis and recommendations are taken into consideration by the approval authorities (h)						
Frequency	0	3	16	28	10	57
Percent	0.0	5.3	28.1	49.1	17.5	100.0
There is regular review of loan policy to live with changing environment (i)						
Frequency	2	3	12	31	9	57
Percent	3.5	5.3	21.1	54.4	15.8	100.0
Credit officers have the necessary equipment or tools to follow up delinquent loans in the field (j)						
Frequency	1	8	13	31	4	57
Percent	1.8	14.0	22.8	54.4	7.0	100.0
There exist good reward and sanction motivational polices for credit officers (k)						
Frequency	3	13	22	16	3	57
Percent	5.3	22.8	38.6	28.1	5.3	100.0

Source: compiled by author using field survey 2018.

Table 3b continues to present the appreciations of sampled microfinance workers on some credit risk identification and assessment factors. With respect to (f), the credit union has a sub unit specialized in portfolio and risk analysis during underwriting or appraisal, 49.1% opined that such a unit exist, while 35.1% say it does not exist in the credit union while 15.8% are indifferent of the situation. Concerning point (g), Credit Officers use the cardinal principles of 5Cs in lending activities, 84.3% accepted the use of 5Cs in lending while 5.3% reject the use of 5Cs in lending. 10.5 % of the population was neutral. On point (h), Credit officers' analysis and recommendations are taken into consideration by the approval authorities, 66% hold that credit officers' analysis and recommendations are considered by approval authorities while 5.3% say they are not considered by the approval authorities and 28.1% are neutral. With respect to statement (i), there is regular review of loan policy to live with changing environment, 70.2% (15.8% strongly agree and 54.4 agree) agree that loan policies are reviewed regularly to reinforce lending activities while 8.8% disagree that they are not reviewed regularly. Concerning point (j), Credit officers have the necessary equipment or tools to follow up delinquent loans in the field, 61.4% uphold that the necessary equipment are provided for follow up of delinquent loans in the field while 15.8% say Credit Officers do not have tools to follow up delinquent loans in the field. On point (k), there exist good reward and sanction motivational polices for credit officers, 38.6% are neutral on motivational policies for credit officers, 33.4% agree there exist while 28.1% do not agree that such motivational policies do exist in the credit union. The reason for high percentage for neutrality is because motivational polices embody sanctions and rewards on credit officers which to a greater extend are not really in practice but to and extend some rewards are done after recovery as motivation, reasons why the percentage of agree is more than disagree following follow up questions asked by the researcher.

Table 3c: Opinions of sampled microfinance workers on some credit risk identification and assessment factors.

Credit union staff and elected officials have no facilitating influence in lending activities (l)						
	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Total
Frequency	7	20	14	11	5	57
Percent	12.3	35.1	24.6	19.3	8.8	100.0
The Judiciary or the legal systems and structures favour the recovery of loans in the union or country (m)						
Frequency	1	19	12	23	2	57
Percent	1.8	33.3	21.1	40.4	3.5	100.0
Diversification of products and services help to minimize credit risk (n)						
Frequency	1	4	3	37	12	57
Percent	1.8	7.0	5.3	64.9	21.1	100.0
Governance in the Credit Union reduces credit risk (o)						
Frequency	0	9	13	26	9	57
Percent	0.0	15.8	22.9	45.6	15.8	100.0
The Credit union does not have huge amounts of non-performing loans and written off loans (p)						
Frequency	4	20	16	14	2	57
Percent	7.0	35.1	28.1	24.6	3.5	100.0

Source: compiled by authors using field survey 2018

Table 3c continues to present the appreciations of sampled microfinance workers on some credit risk identification and assessment factors. Concerning point (l), Credit union staff and elected officials have no facilitating influence in lending activities, 28.1% hold that the staff and elected officials do not have facilitating influence in lending while 47.4% hold that they do influence the granting of loans in the credit union while 21.1 are neutral. On point (m), the Judiciary or the legal systems and structures favour the recovery of loans in the credit union or country, 43.9% hold that the judiciary (litigation and foreclosure of loans) facilitates loan recovery while 35.1 do not think the judiciary system facilitate loan recovery. With respect to statement (o), Governance in the Credit Union reduces credit risk, 61.4% opined that Good governance can help to reduce loan delinquency while 15.8% of the population do not think that credit union Governance can reduce loan delinquency. Concerning statement (p), the credit union does not have huge amounts of non-performing loans and written off loans, 28.1% opined to that fact while 42.1% oppose the fact that there are low amounts of nonperforming loans and written off loans in the credit union systems. 28.1 % are neutral on that statement.

Table 3d: Opinions of sampled microfinance workers on some credit risk identification and assessment factors

There is low rate of rescheduling of delinquent loans (q)						
	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Total
Frequency	5	18	10	20	4	57
Percent	8.8	31.6	17.5	35.1	7.0	100.0
The Credit union does not spend so much on loan recovery follow up and litigation (r)						
Frequency	4	26	12	12	3	57
Percent	7.0	45.6	21.1	21.1	5.3	100.0
The Credit union has low accumulated provisions on bad and doubtful loans (t)						
Frequency	3	26	9	15	4	57
Percent	5.3	45.6	15.8	26.3	7.0	100.0

Source: compiled by authors using field survey 2018

Table 3d continues to present the appreciations of sampled microfinance workers on some credit risk assessment factors. The statement (q), there is low rate of rescheduling of delinquent loans, 42.1 % agree to the fact that there is low rate of loan restructuring while 40.4 % uphold the fact that there is high rate of loan rescheduling in credit unions. Analyzing statement (r), the credit union does not spend so much on loan recovery follow up and litigation, 26.4% opined that credit unions do not spend much on loan recovery follow up and litigation while 52.6% say the credit unions spent very high in the follow up of loans and legal actions to recover loans. concerning statement (t), the credit union has low accumulated provisions on bad and doubtful loans, 33.3% opined that there are low provisions on bad and doubtful loans in credit unions while 50.9% hold the fact that the rate of accumulated provisions on bad and doubtful loans are high.

Credit Risk Relationships

Table 4: Opinions of sampled microfinance workers on credit risk relationships

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Total
Credit risk has negative effect on liquidity of the union						
Frequency	2	1	4	20	30	57
Percent	3.5	1.8	8.0	35.1	52.6	100.0
Interest rate charged increases loan delinquency of the union						
Frequency	9	18	8	15	6	57
Percent	15.8	31.6	14.0	26.3	10.5	100.0
Poor or lack of technological equipment lead to loan delinquency and poor reporting standards						
Frequency	2	15	3	18	19	57
Percent	3.5	26.3	5.3	31.6	33.3	100.0
The prevailing socio economic and political atmosphere has an effect on the performance of loans and income						
Frequency	2	3	1	8	43	57
Percent	3.5	5.3	1.8	14.0	75.4	100.0
The Credit union's governance policy favours financial performance						
Frequency	0	6	15	28	8	57
Percent	0.0	10.5	26.3	49.1	14.0	100.0
Credit union's governance favours return on Asset and Equity						
Frequency	0	5	18	29	5	57
Percent	0.0	8.8	31.6	50.9	8.8	100.0

Source: compiled by authors using field survey 2018.

Table 4 presents the appreciations of sampled microfinance workers on some credit risk relationships with other correlates of variables. The statement, credit risk has negative effect on liquidity of the union, 87.7% opined to the statement that credit risk leads to low liquidity. For these respondents, a high loan delinquency is associated with a very low level of liquidity holding by MFIs. Only 5.3% of the sampled population did not hold to the fact that credit risk can lead to low liquidity holding by MFIs.

Concerning the statement, interest rate charged increases loan delinquency of the union, 36.8% hold that interest rates practice by credit unions increase loan delinquency while 47.4% do not see any relationship between interest rate charges and loan delinquency. This means that for a segment of the credit union members, interest rate charge may not affect the level of loan delinquency. The statement, Poor or lack of technological equipment lead to loan delinquency and poor reporting standards, shows that 64.9% of the sampled population agree to the statement while 29.8% do not agree to it. From further findings, a greater proportion say that loan delinquency is not directly related to technological equipment like the software systems but poor reporting is highly related to lack of such

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tools. This accounts for the increase percentage of 29.8% which is as a result of likening it to loan delinquency.

With respect to the statement, the prevailing socio economic and political atmosphere has an effect on the performance of loans and income, 89.4% (75.4% strongly agree and 14.0%) agree to the fact that the current socio economic and political atmosphere in the North West and South West regions of Cameroon within this period (2016-2018) has greatly affected loan performance and income of MFIs negatively while 8.8% do not actually agree to that fact as a cause to low income realizations by MFIs.

On the statement, the Credit union's governance policy favours financial performance, 63.1 % agree to the fact that good Governance helps to improve financial performance of MFIs while 10.5 % disagree. Concerning the statement, Credit union's governance favours return on Asset and Equity, 59.7 agree to the fact while 8.8% disagree and 31.6 are neutral on the contributions of Credit unions governance to improving return on Asset and Equity of MFIs in Cameroon.

Financial Performance

Table 5a: Appreciation of sampled microfinance workers on the situation of some financial performance factors

Loan delinquency of the union is at the acceptable COBAC standard (a)						
	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Total
Frequency	23	19	7	6	2	57
Percent	40.4	33.3	12.3	10.5	3.5	100.0
The Credit union has adequate cash to meet its obligations at all times (b)						
Frequency	8	18	11	19	1	57
Percent	14.0	31.6	19.3	33.3	1.8	100.0
The Credit union has had positive undivided earnings for the past five years (c)						
Frequency	1	5	10	29	12	57
Percent	1.8	8.8	17.6	50.9	21.1	100.0
The credit union respects the prudential norms and standard of provisioning loans (d)						
Frequency	3	16	16	16	6	57
Percent	5.3	28.1	28.1	28.1	10.4	100.0

Source: compiled by author using field survey 2018.

Table 5a presents the appreciations of sampled microfinance workers on some situations of financial performance indicators. The statement (a), loan delinquency of the union is at the acceptable COBAC standard, 14% of the sampled population hold that delinquency is at the acceptable rate while 73.7% (40.4% strongly disagree and 33.3% disagree) opined that delinquency situation of the credit union is poor and not at the acceptable recommended COBAC standard. With respect to the statement (b), the credit union has adequate cash to meet its obligations at all times, 35.1% opined that there is adequate cash for demand deposits and further credit creation while 45.6% disagree with the statement implying that liquidity in the credit unions are not adequate enough for demand deposit and further investments in loan portfolio. On the issue of the statement (c), the credit union has had positive undivided earnings for the past five years, 72% (50.9% agree and 21.9% strongly agree) opined to the fact that there has been positive undivided earnings realized by the credit unions while only 10.6 % disagree with the statement meaning that credit unions even though experiencing loan delinquency as in point (a) above, could create reserves at the end of the financial year. Concerning the statement (d), the credit union respects the prudential norms and standard of provisioning loans, 38.5% hold that there is the respect of the rate of calculating and maintaining provisions on bad and doubtful loans while 33.4 % disagree with the statement. 28.1% are neutral to the fact and there general opinion will hold that credit unions neither respect nor really disrespect the provisioning rates given the almost tie in their values.

Table 5b: Appreciation of sampled microfinance workers on the situation of some financial performance factors

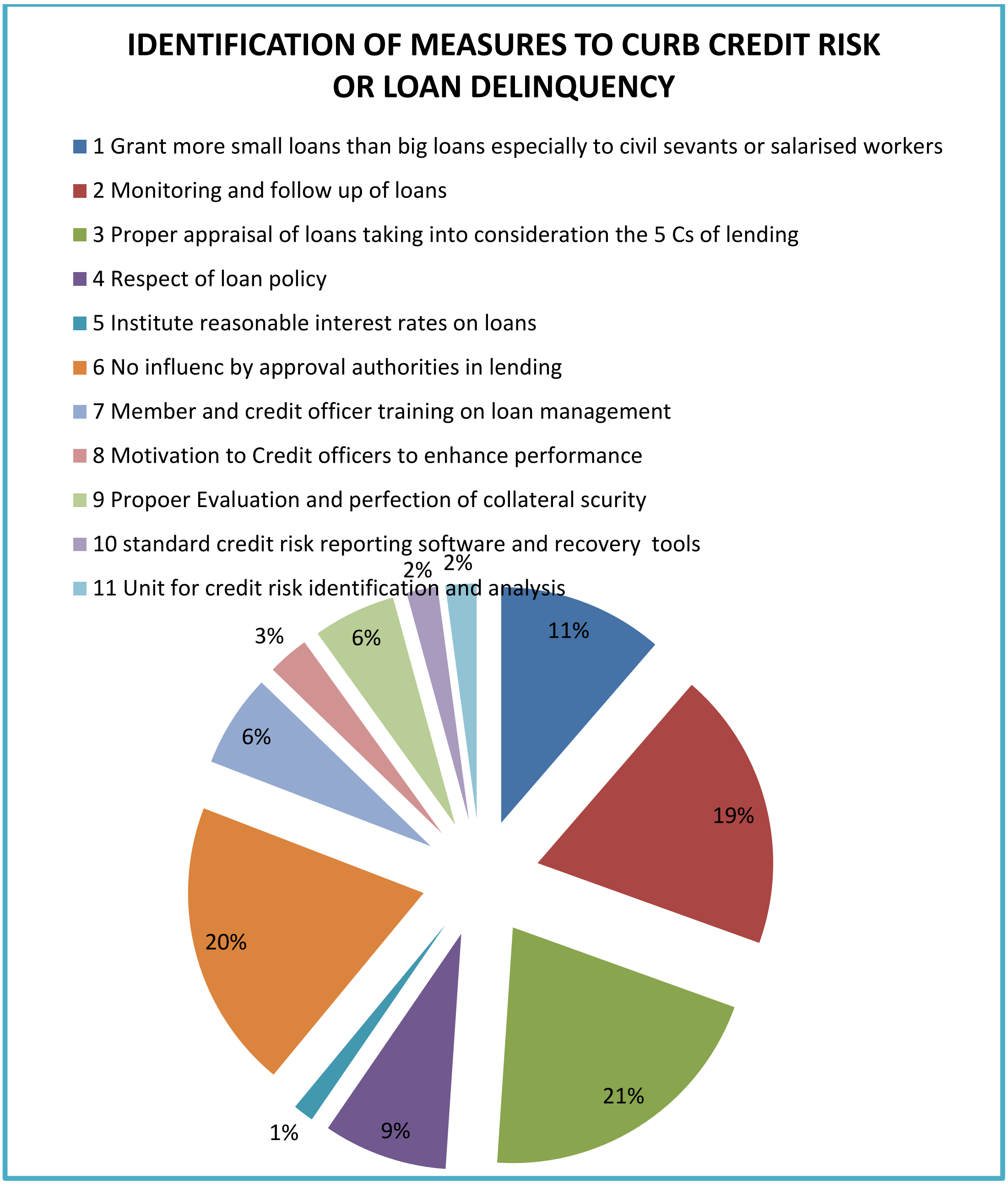
Mortgages are drawn and perfected to improve on asset quality (e)						
	strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Frequency	0	8	13	29	7	57
Percent	0.0	14.0	22.8	50.9	12.3	100.0
The credit union does not borrow to meet up members demand deposit and loan requests (f)						
Frequency	3	18	11	18	7	57
Percent	5.3	31.6	19.3	31.6	12.3	100.0
The credit union does not have high loan spread ratio (g)						
Frequency	6	18	13	14	6	57
Percent	10.5	31.6	22.8	24.6	10.5	100.0

Source: compiled by authors using field survey 2018

Table 5b also presents the appreciations of sampled microfinance workers on some situations of financial performance indicators. With respect to statement (e), Mortgages are drawn and perfected to improve on asset quality, 63.2% of the sampled population agree that mortgages are drawn and perfected to improve on the quality of asset (loan portfolio quality) while 14% do not agree to the statement while 22.8% are neutral. Concerning the statement (g), the credit union does not borrow to meet up members' demand deposit and loan requests, 43.9% opined or agree that credit unions do not borrow from their umbrella organization to meet up with members demands while 36.9% do not agree that credit unions do not borrow to meet up with their members' demands.19.3% are neutral. This however shows that from the sample population chosen, some credit unions do not borrow while some borrow to be able to meet up with cash demands be there for demand deposit or for further financing of loans, and finally, concerning the statement (g), the credit union does not have high loan spread ratio, 35.1% hold that loan spread ratio is low while 42.1 disagree to the statement that credit unions do not have high loan spread ratio while 22.8% are neutral. This situation in effect shows that there is little concentration of lending activities on very few members of the credit union. Loans are spread to majority of the members in the credit union which conforms to one of their principles that a single or persons or members should not hold or contract more than 15% of the total Asset or 30% of the net equity of the union.

Identification of measures to curb credit risk by mfis (open ended question from primary data)

Figure1: Percentage of key measures to reduce credit risk my MFIs.



Source: compiled by authors using field survey 2018.

From figure 1, it can be observed that the sampled worker population have identified that the first four major causes of credit risk in order of frequency or occurrence which should be handled or dealt with are;

a) Proper appraisal of loans taking into consideration the 5Cs of lending
b) No Influence by approval authorities in lending,
c) Monitoring and follow up of loans, and
d) Granting of small loan than big loans to members especially salaried workers and civil servants.

The Effect of Credit Risk on Financial Performance: Regression Analysis

Table 6: Summary statistics of variables used in the regression model

Variable	Obs	Mean	Std. Dev.	Min	Max
FPI	57	21.41509	4.474002	15	32
CRI	57	41.51515	19.93372	0	100
A_level	57	0.036364	0.188919	0	1
BSc/Btech	57	0.727273	0.449467	0	1
Masters	57	0.145455	0.355808	0	1
longevity1_5	57	0.596491	0.494962	0	1
Longevity6_10	57	0.280702	0.453336	0	1
Socio-political crisis	57	0.894737	0.30962	0	1
Governance	57	0.625	0.488504	0	1

Source: Calculated by authors

Table 6 presents the summary statistics of variables used in the regression, identifying their means, standard deviation, minimum and maximum values. It can be observed that 3.6% of the sampled workers have Advanced level, 72.7% are holders of a university degree and 14.5% have a master degree. 59.6% of them have worked in their MFIs between one and five years and 28.1% have worked in the MFI between six and ten years.

Table 7: The effect of credit risk on financial performance – Dependent variable: financial performance indicator

				Number of obs =	57
				F(8, 48) =	6.93
				Prob > F =	0.0000
				R-squared =	0.4916
FPI	Coef.	Elasticities [ey/dx]	Std. Err.	t	P>t
CRI	-0.14057	-0.00651	0.025994	-5.41	0.000
A level	-0.97458	-0.04512	2.971629	-0.33	0.745
BSc/Btech	3.847126	0.178108	1.680606	2.29	0.027
Masters	2.100977	0.097268	2.078758	1.01	0.318
Longevity1_5	1.880058	0.08704	1.575878	1.19	0.239
Longevity 6_10	0.891805	0.041287	1.643622	0.54	0.590
Socio-political crisis	-2.77995	-0.1287012	1.74789	-1.59	0.119
governance	0.842363	0.0389983	1.058983	0.8	0.431
Constant	23.05295	-	2.546667	9.05	0.000

Source: Computed by authors

Note: *financial performance indicator (FPI) was constructed through aggregation using seven (7) financial performance factors in Section D. Credit Risk Indicator (CRI) was built through aggregation using the factors of credit risk in Section B, weighted and normalized to fall between 0 and 100.*

***Note**: for level of education; HND was used as a reference category and for longevity; longevity above 10 years was used as a reference category in the regression analysis.*

Table 7 presents the regression results on the effect of credit risk on financial performance, while controlling for other correlates such as level of education and longevity in service. A Fisher Statistic of 6.93 with a p-value of 0.0000 shows that our model is globally significant at 5%. This way, the independent variables included in our model are significant in explaining the dependent variable, financial performance. From the table, we can observe that credit risk indicator relates negatively and significantly at 1% with financial performance. This shows that an increase in the level of credit risk will reduce financial performance of MFIs. Specifically, an elasticity value of -0.0065 shows that a 1% increase is credit risk is expected to reduce financial performance by 0.0065%, other variables held constant.

Concerning the level of education, we can observe that an increase in the level of education of the worker is accompanied by an increase in financial performance. This is indication that more educated microfinance workers have the potential to affect financial performance of MFIs positively. From our results, longevity generally relates positively with financial performance of MFIs. However, it is important to underline that longevity between one (1) and five (5) years has a more enhancing effect on financial performance compared to longevity between six (6) and ten (10) years, other variables held constant. This may be indication of a declining motivation and disillusionment for seasoned workers in MFIs.

The ongoing socio-political crisis correlates negatively with financial performance in MFIs. This is indication that a further increase in the intensity of this crisis will only contribute in worsening the financial situation of MFIs in the NWR. Specifically, an elasticity value of -0.1287 shows that a marginal increase in the intensity of the crisis (say 1%) will reduce financial performance in MFIs by 0.1287%. The variable governance correlates positively with financial performance, showing that good microfinance governance is a vital input in generating better financial performance.

Discussion of Key Findings

Concerning the situation of nonperforming loans as well as the real written off loans, the result of our findings show that non-performing loans as well as real written off loans increased. From the delinquency situations, it also shows that if real standard of calculating provisions on bad and doubtful debts were adopted, more provisions and real written off loans would have been affected especially in 2017 where the results actually got worst.

Regarding the situation of some credit risk identification and assessment factors, it showed that the major credit risk factors are loan monitoring, proper appraisals of credit files, management influence in lending activities, loan segmentation and spreading, respect of policies, collateral perfection, good governance amongst others. From primary data, majority of the population uphold that the use and respect of the 5Cs and loan policy in lending would greatly reduce credit risk and improve on financial performance. The results also showed that increase in credit risk comes from management influence in lending. This however means that those involved in the approval of loans should not practice favouritism or grant loans on relational basis but focus on the technical aspects of lending to mitigate credit risk. The results or findings also indicated that the granting of smaller loans to a big portion of the membership and less of big loans to a small portion would reduce credit risk drastically. Granting of loans to civil servants with sure means of repayment would curb credit risk and improve on loan interest collection rate thereby improving on financial performance. Collateral security perfection and good governance would also reduce credit risk and the non-respect or practice of the mentioned factors would lead to credit risk.

Concerning the effect of credit risk on financial performance, our results showed that credit risk has an adverse effect on financial performance. This result is feasible or evident in the financial performance indicators like liquidity, loan delinquency rates, return on asset, asset quality, borrowing etc. A decrease in the liquidity holding of MFIs points to the fact that there are high credit risk factors and vice versa. The result showed that the MFIs under review do not have adequate cash to meet up their obligations as evidence by the current ratios calculated. Loan delinquency which is also an indicator of financial performance has been on the increase especially in 2017 where there was a big jump in delinquency, borrowing by MFIs to meet some demand deposits as well as for further credit creation also signifies a poor financial position as it increases the gearing ratio thereby reducing income.

Regarding the effect of the current socio-political crises in our country on financial performance of MFIs, our results indicated that the current socio-political crisis has negatively affected the financial performance of MFIs. This is evidenced by the end of year financial records where most of the financial performance indicators witnessed declining situations like income, net result, returns on asset or investment, interest on savings, drop in savings portfolio as well as increase in loan delinquency, provisions on bad and doubtful debts and written off loans. It is therefore evident that even though over the years MFIs have been facing the challenges of credit risk, the socio-political crisis has far reaching effects on the performance of MFIs in Cameroon and also internationally, as it can likely bring an imbalance of trade.

Regarding what other researchers have done and come out with, it has been ascertained that good lending practices would obviously reduce credit risk and in effect improve on financial performance of MFIs. Such practices include proper appraisals, regular or periodic review of loan policies, loan monitoring and practice microcredit activities and proper loan segmentation. Also, the environmental factors like political instability, would greatly work negatively to loan portfolio quality thereby increasing credit risk and poor financial performance. Therefore, best practices of lending through proper credit management leads to the success of the financial institutions.

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