A Comparative Evaluation of the Effects of Credit Risk Control on the Profitability of Micro-Finance Bank

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ABSTRACT

When assessing lending applications, banks face the problem of inadequate information needed to screen potential borrowers. The relevant information needed to evaluate the commitment of the entrepreneur and the likelihood of the business is challenging to interpret or even absent. This creates risk for the banks. Therefore, it is of paramount importance to give much consideration to credit management first before embarking on lending. In this research, we used both primary and secondary sources. We adopt a multistage sampling method by selecting a set of 21 respondents from a population of 52 credit officers. Questionnaires were used to collect data from the respondents while descriptive and inferential statistics were used to analyze the data collected and in testing the hypotheses. Specifically, we used simple percentage and regression analysis. We used the software SPSS (Statistical Package for Social Science) to implement the statistical techniques mentioned above. The results showed that microfinance banks need to strengthen their credit risk control measures to increase their profitability. This is because if properly adopted it helps to decrease the percentage of payments defaults. Credit management is important in improving the financial performance of microfinance banks and this is attributed to the fact that sounds and grounded credit management (client appraisal) allowed the bank to be efficient and have the availability of liquidity.

Keywords: Credit Management, Loan, Microfinance banks, Risk control.

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I. INTRODUCTION

History has it that the concept of credit became more prominent after the Second World War after the large appreciation of it in Europe then later in Africa. During that time Banks gave credit to customers with high-interest rates which sometimes discouraged borrowers and so the concept of credit didn't become popular until the economic boom when banks were able to lend excess money due to excess liquidity (Pike & Neale, 2006).

The power of financial institutions such as Micro-Finance to create cash is of paramount importance to daily business activities. Micro Finance Institutions serve mostly the poor who are not able to receive loans from conventional or formal financial institutions. These clients engaged themselves in minor businesses such as street vending, retail shops, carpentry, welding, etc. Micro-Finance institutions generate most of their income from the interest charged on loans that are being extended to their clients' i.e., small, and medium entrepreneurs. The main cause of financial institutions' failures today is their weak credit management. Microfinance Banks lack in expertise and resources to operate a good credit management system. Effective credit management is the backbone for banks' stability and good profitability while poor credit quality is the major cause of poor financial performance. Credit management involves controlling and collecting payments from customers. Sound credit management will help in reducing the amount of capital tied up with debtors. It will also minimize the likelihood of bad debts through good Credit Management practices e.g., terms and conditions, invoicing promptly, and monitoring your debts.

When assessing lending applications, banks face the problem of inadequate information needed to screen potential borrowers. The relevant information needed to evaluate the commitment of the entrepreneur is challenging to get and difficult to interpret. This creates risk for the bank, it is, therefore, more reasonable to give much consideration to credit management first before embarking on lending. Nduta (2013) performed a study on the performance of microfinance institutions. The work showed that there is a relationship between the credit management variables (client appraisal and credit risk control) and financial performance indices such as capital adequacy, profitability, and liquidity. The study used a correlation model to find the mapping between credit management and financial performance in terms of the relationship. Haron et al. (2012) performed research on loan performance and their effectiveness in terms of credit management systems on loans. The study found out that credit management variables such as credit risk control measures and credit terms adopted by microfinance institutions affected loan performances, the study used chisquare to evaluate the impact of credit terms and credit risk control measures on financial performance.

To address the aforementioned challenges, in this paper, we focus on assessing the impact of credit control on the financial performance of microfinance. Our earlier work appeared in work (Enoch, et al., 2021a; Enoch, et al., 2021b) and (Bala et al., 2015). In this paper, we extend the previous work but focus on the effect of credit risk control on the profitability of microfinance banks in Adamawa State.

II. RELATED WORK

There are many research papers on the credit risk control of microfinance banks. However, there is only a limited work that considers the comparative evaluation of the impact of credit risk control on the profitability of microfinance banks. In this section, we discuss the existing work on credit risk control, the effect of credit management on financial performance, and financial performance measures. A more detailed survey on the relationship between credit risk with individual loans and portfolio loans and their returns is presented in the work of Altman & Saunders (1997).

A. Credit Risk Control and Profitability of Microfinance Banks

Credit risk is also known as default risk. Credit risk can be prevented with risk-based pricing, covenant, credit insurance, tightening, and diversification (Ross et al., 2008). Key credit control includes loan product design, credit committees, and delinquency management (Churchill & Doaster, 2001). One important risk faced by microfinance institutions is credit risk and the success of businesses is linked to effective measures to manage the risk (Gieseche, 2004). Chen and Pan (2012) refer to credit risk as the measure of functions in debt instruments and derivatives due to changes in the underlying credit quality of borrowers.

Credit risk control entails many factors such as identification, measurement, monitoring, and treating of risk from the likelihood of payment defaults in repayments (Coyle, 2000). Credit is given to loan' borrows can cause lean defaults, whereas banks extend credit on the understanding that borrowers will repay their loans. Where microfinance banks do not indicate what proportion of their borrowers will default, earnings will vary, thus exposing the banks to even more risk of the changes of their profits (Onyiriuba, 2009). The impact of proper credit risk control on microfinance profitability cannot be over-emphasized as it is very important. Proper management and control of credit risk enhance customers' confidence. Credit risk control utilizes bank risk, enhanced risk rate of return by keeping the credit risk exposure to a minimum from the adverse impact of credit risk and understanding the effect of credit risk management on banks' profitability (Kargi, 2011).

According to Mamman and Oluyemi, (1994) the profit of a bank is linked to its ability to foresee, monitor, and cover losses as a result of risk. This has the overall effect of a higher ratio of substandard credits in the bank's credit portfolio and thus reducing the profit of the banks.

High credit risk control (CRC) results in a decreased likelihood of loan default (Ross et al., 2008). Hence, credit risk control can be enhanced by maximizing danger-based assessment contracts, credit protection, tightening, and broadening. Using well-managed credit risk management of credit risk exposure, banks typically support both the possibility of having their businesses and also enhance profitability. In addition, they also enhance system stability and effective distribution of capital in the economy (Psillaki, 2010). Default by a few customers can cause a significant loss for banks. The safety of the banking system does not only dependent on the capital adequacy of a bank but also the profitability because any loan facilities granted by a microfinance bank are expected to yield profit as it will help in the bank's sustainability.

Chikalipah (2018) investigates the popular claim that smaller loans have a higher risk while the opposite is exactly true for loans that a larger. In particular, the author estimated the relationship between credit risk in microfinance banks with loan sizes (large or small loans), where they used 632 microfinance banks from 37 sub-Sahara Africa and 2000 annual observations based on data from 1995-2013. In the research, the author used the Generalised Method of Moments and Fixed effects estimator for empirical analysis. Their results show that there is a strong relationship between credit risk with loan sizes among microfinance banks in sub-Saharan Africa. Specifically, credit risk is positively related to loan sizes.

Blanco-Oliver et al. (2021) presented a study on the role that gender plays in loans transactions and its effects on credit risk management in microfinance banks based on a dataset of developing countries taking into account multiple countries. Their analysis indicates that a higher percentage of female loan officers increases loan portfolio risk where female loan officers have higher chances of giving female loan borrows loan and this may decrease the default rate of loans offered in microfinance banks. Durango-Gutiérrez et al., (2021) conducted a study on microfinance banks in Bolivia and Colombia based on credit portfolios. The author used a logistic regression model and neural network to analyze data from 2012 - 2015. Their results suggest that microfinance banks looking to improve credit efficiency and to reduce loan credit risk should consider attributes related to the banks themselves such as loan amount and the credit analyst's prognosis. In addition, banks should prioritize female borrowers over males.

Lawrence et al. (2020) presented the effect of credit risk control on the financial performance of South African banks (i.e., for both big and small banks). For the research, the author collected data from 14 banks and then analyzed them using R-Studio software to evaluate the effect of capital adequacy ratio, non-performing loan to gross loan, loan-todeposit ratio, leverage ratio, board gender diversity, bank size, and age size as the control variables on performance based on return on asset and return on equity. The results indicate that non-performing loans, capital adequacy ratio, leverage ratio, loan-to-deposit ratio, and bank age have a positive and significant impact on performance based on the analysis of return on asset and return on equity of small banks compared to the bigger banks. On the other hand, nonperforming loans showed a less impact on return on equity of small banks compared to return on equity of nig banks but showed no impact on return on assets of big banks.

Kahihu et al. (2021) investigated the market risk with financial performance in Kenya's microfinance banks, where the authors used positivism philosophy and explanatory nonexperimental research designs. The population of their study was the 13 registered microfinance banks in Kenya and the authors used collected secondary data from the bank's annual audit reports from 2014-2018 and then analyze them based on resource-based value theory and extreme value theory. Their results show that there is a significant positive effect between risk and financial performance in Kenya's Microfinance banks. Adusei (2021) investigated the impact of interest rates on the performance of microfinance banks based on 555 banks operating in 74 countries. Their results indicated that interest rate has a positive impact on microfinance banks. As a result, the author present that the interest rate and performance of banks are compatible.

Siddique et al. (2021) examined the impact of credit risk control with banks specific factors on the financial performance of South Asian commercial banks, where nonperforming loan, capital adequacy ratio was used as the credit measures while cost-efficiency ratio, average lending rate, and liquidity ratio were used as bank-specific factors. Then return on assets and return on equity were used as the measure for the financial performance. The population of the study is 19 commercial banks consisting of ten banks from Pakistan and the other nine from India from 2009-2018 based on secondary data. A generalized method of the moment was used for the coefficient estimation. Non-performing loan, cost-efficiency ratio, and lending rate indicated significant negative relatedness to financial performance based on ROA and ROE. Conversely, the capital adequacy ratio and average lending rate indicated a significantly positively relatedness to the financial performance of the South Asian commercial

Effective and intelligent organization of credit lines is a prerequisite for well organize credit management. The profit of lending institutions depends on the program put in place by lending institutions. So, lending is of paramount importance to financial institutions' activity. As a result, financial institutions must be well organized with their lending programs to achieve good profit for banks. A lending bank institution must assess some critical details such as who the client is? what the credit request will look like? can the client repay the credit? etc. in order to manage credit risk. These factors are important to achieving credit risk control and it is focused on reducing risks, this may largely impact the profit generated for a financial institution most especially microfinance institutions (Taiwo & Abayomi, 2013).

Therefore, microfinance must employ appropriate credit policies such as proper assessment of customers, sound lending practices, adequate supervision, ensuring a high level of capital and liquidity to ensure continuous survival.

B. Loan Product Design

Micro Finance institutions can prevent a large part of default risk by developing good loan products that satisfy the client's needs. Some of the product (or loan products) can be as follows; interest rate, interest fee, size, repayment arrangement, and any other special conditions or terms to satisfy. This loan product must be developed and implemented to meet the specific requirement for which a loan is meant.

C. Credit Committees

Setting up a committee of decision-makers for loans is an essential measure to reduce credit risk. An individual decision-maker can abuse strong banking policies or conditions, such conditions can be who can collect a loan? which loan can be written off? etc. It is essential that loan officers among the committee and at least one other individual with higher managerial authority is involved. Here, the credit committee's responsibility includes monitoring loan progress in terms of payment and delinquency management, loan approval, etc. (Nduta, 2013).

D. Effect of Credit Management on Financial Performance

Credit management means the tool used in minimizing the risk of default that results in financial distress and bankruptcy. According to Myers and Brealey (2003), credit management is a strategy used by companies to control and maintain the best level of credit and its management. These strategies can be credit rating, analysis, classification, and reporting. The ability to intelligently and effectively manage customers' credit lines for effective financial performance is a major key requirement for enhancing credit management. It is important that Microfinance institutions check customers' credit score history, financial strength, loan payment pattern over time, etc. Credit Management entails adopting mechanisms such as screening and monitoring, collateral requirements, and credit rationing for potential and existing customers. Credit management practices are essential to financial performance since they determine profitability, liquidity, efficiency, and productivity. Banks play a vital role in financing economic activities and a well-managed bank can provide a positive effect on the global economy impact which can withstand several types of financial shock (Athanasoglou, 2005; Umar et al., 2021). Banks are to serve as a tool for growth and development. Fig. 1. explains the relationship between credit risk control, client appraisal, collection policy with financial performance.

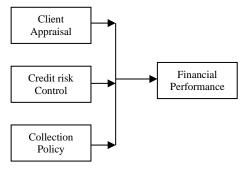


Fig. 1. Relationship between Credit Management and Financial Performance (adapted from Haron et al., 2012).

To achieve better bank performance, there will be a need for effective credit management. Hence, Micro Finance must adopt prudent credit policies, to reduce the rate of default. Horne (1995) stated that a company credit policy plays a major influence on the range of debtors. The credit policies of a firm define its financial performance. According to Pandey (2008), a company's credit policy has a lot of influence on economic conditions. As economic policies change the company's credit policies too may possibly change. Therefore, it is left for the financial institution to choose policies that best suits its operations.

E. Financial Performance Measures

Bessis (2002) describes the financial performance as a management plan to improve the accuracy of financial information to satisfy a certain standard while also executing day-to-day activities. In any financial institution most especially Micro Finance institutions, financial performance has an impact by slowing repayment and even non-repayment of the credit given them. Basically, financial ratio analysis, measuring performance against budget is used to measure the performance of banks/institutions (Avkiran, 1994).

F. Profitability

Financial profitability is used to show the resilient of Micro-Finance to survive over a long period (Wolday, 2002). It is an indicator that depicts that the MFI can run on its own. This will show that banks will be able to satisfy the needs of the customers through resources generated on their own from different sources. Financial profitability indicators of Micro-Finance Institutions are Return on Asset (ROA) and Return on Equity (ROE).

Return on Asset (ROA): which measures the net profit operating income as a percentage of average total assets. The ROA is calculated by equation (1).

$$ROA = \frac{Net \ profit \ operating \ income \ - \ taxes}{Average \ assets} \tag{1}$$

Return on Asset (ROA) indicates how Micro-Finance uses assets to generate profit. It is given by Equation (2). Here, the equation shows the return on the portfolio and also the revenue that is earned from investments. If the banks' ROA value is fairly constant, this ratio can be used to predict future gains. The ROA is a major profit indicator that measures a bank's ability to reward its shareholder's assets. The formula for the ROE is given by equation (2).

$$ROE = \frac{Net \ operating \ income - taxes}{Average \ equity}$$
 (2)

The shareholders or investors use this ratio to determine what the financial institution's returns will be on their equity investment. In a non-profit microfinance bank, its ROE shows the bank's ability to generate equity via retained earnings.

III. METHODOLOGY

In this study, we used a survey method with both primary and secondary sources. Furthermore, we also adopt a multistage sampling method by selecting a sample of 21 respondents from a total population of 52 credit officers. Questionnaires were used in the due collection of data from the respondents. Descriptive statistics (simple percentage) and inferential statistics (regression analysis) were used to analyze the data collected and in testing the hypotheses. We used the software SPSS (Statistical Package for Social Science) to implement the statistical techniques mentioned

A. The Hypothesis for This Research

Credit Risk Control has no significant effect on the Profitability of Micro Finance banks.

B. Scope of the Study

The study assesses the effect of credit risk control on the profitability of seven licensed Micro Finance Banks in Adamawa State' Local Governments. Specifically, we cover a period of six years (2010-2016), the period was selected due to substantial growth in small-scale businesses in Adamawa State which increased the demand for credit facilities. There are eight (8) licensed Micro Finance in Adamawa State, however, we could not cover one of the MFI in the Northern zone (Michika Micro Finance Bank) due to insecurity in that region as of the time of this research. Hence, this research focused on the seven banks located at the central and southern senatorial zone of the state.

TABLE I: PROFITABILITY OF MICROFINANCE BANKS BEFORE CREDIT RISK CONTROL MEASURES

Variable	Frequency	Percentage
Poor	24	47.1
Moderate	24	47.1
Strong	3	5.9
Total	51	100.0

Survey Work 2020.

Table I exhibits the nature of microfinance banks' profitability before credit risk control measures are adopted. Respondents that ranked or viewed the profitability of the banks as poor and moderate before the adaptation of credit risk control accounted for the highest with 24 people representing 47.1% each. However, those that rated it as strong formed the least score with 3 denoting 5.9%. This implies that prior to credit risk control the profitability of such banks is not satisfactory. The decline in profit may not be exempted from the lack of adoption of effective credit risk control measures.

TABLE II: CREDIT RISK CONTROL MEASURES UNDER LOAN PRODUCT

DESIGN OF THE BANKS						
Variable	Frequency	Percentage				
Poor	0	0.00				
Moderate	9	17.6				
Strong	42	82.4				
Total	51	100.0				

Survey Work 2020.

Table II highlights how respondents ranked the nature of credit risk control measures adopted under product loan design. Respondents who ranked the credit risk control measures as strong recorded as the highest with 42 representing 82.4%. They were followed by the opinion of those who considered it as moderate with 9 representing 17.6%. However variable 'Poor' scored zero, meaning that microfinance banks adopt strong credit risk control measures. Adoption of strong credit risk control measures by the banks under product loan design is an effective tool for credit risk

TABLE III: CREDIT RISK CONTROL MEASURES UNDER CREDIT COMMITTEE

	E BANKS		
	Variable	Frequency	Percentage
	Poor	0	0.00
	Moderate	13	25.5
	Strong	38	74.5
	Total	51	100.0

Survey Work 2020.

Table III indicates respondents' views on credit risk control measures adopted under credit committees of the respective banks. Variable 'strong' scored the highest grade of 38 representing 74.5% of the respondents. This means that the majority of the respondents strongly certify that with a credit committee it is feasible for the banks to control credit risk. Variable 'moderate' accounted for the second with 19 meaning 25.5% of the respondents. However, there is no score for the variable 'poor' impliedly meaning that microfinance banks adopt strong credit risk control measures. The application of strong credit risk control measures by the banks based on credit committees of the respective banks is an essential element for credit risk control.

TABLE IV: NATURE OF CREDIT RISK CONTROL MEASURES UNDER DELINQUENCY MANAGEMENT OF THE BANKS

-			
	Variable	Frequency	Percentage
	Poor	0	0.0
	Moderate	11	21.6
	Strong	40	78.4
	Total	51	100.0

Survey Work 2020

Table IV explains the nature of credit risk control measures adopted by microfinance banks under delinquency management. Variable 'strong' accounted for the highest grade with 40 representing 78.4% of the respondents. Variable 'moderate' accounted for the second with 11 meaning 21.6% of the respondents. However, there is no score for the variable 'poor'. This indicates that the majority of microfinance banks adopt strong credit risk control measures. The utilization of strong credit risk control measures by microfinance banks under delinquency management is an essential element for credit risk control.

IV. TEST OF HYPOTHESIS

The following research hypotheses were tested for this research study:

H₀: Credit Risk Control has no significant effect on the Profitability of Microfinance Bank.

	TABLE V	: Model	SUMMARY 1
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Model	R	R Square	Adjusted R Square	Std. Error of the Est.
1	0.555	0.309	0.187	0.53901

Source: SPSS Version 17 Computation.

Table V shows that 'R' presents the relationship between an independent variable (Credit risk control measures under loan product design, credit committee, and delinquency management) and the dependent variable (Profitability of microfinance banks). The rule states that, the closer the figure to 1 the stronger the relationship and vice versa. Therefore, with respect to this model, the relationship between the independent and dependent variables is averagely good with 0.555. This implies that the model has a satisfactory goodness fit; meaning that Credit risk control measures adopted by the banks based on loan product design, credit committee, and delinquency management before giving loans have a positive effect on the profitability of microfinance banks. In the same vein, the model reveals an R2 of 0.309, meaning that about a 31% increase in the profitability of microfinance banks is accounted for by the variables in the model. The goodness fit of the model is further confirmed by an adjusted R2 of 0.187, which implies that about 19% of the variation in the dependent variable is accounted for by the regresses.

TABLE VI: MODEL SUMMARY 2

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	2.401	3	0.800		
Residual	14.580	47	0.310	2.580	0.065
Total	16.980	50	0.510		

Source: SPSS Version 17 Computation.

Table VI employs F-statistics to test for the overall significance of the hypothesis and regressor of the study. The regressor is significant at both 1% and 5% levels of significance. The rule states that if the calculated F value is greater than the tabulated F value rejects the null hypothesis. Therefore, with regard to this model the F calculated is 2.580 while F tabulated, or significant value is 0.065. Since F calculated is greater than F tabulated, so we reject the null hypothesis of no significance and conclude that credit risk control has a significant effect on the profitability of microfinance banks.

TABLE VII: MODEL SUMMARY 3

Model	Coefficient	T-Statistics	Sig. Value
1 (Constant)	2.058	1.506	0.150
Credit Risk Control base on	0.913	2.023	0.059
Loan Product Design			
Credit Risk Control base on	0.080	0.245	0.809
Credit Committee			
Credit Risk Control base on	-0.167	-1.830	0.017
Delinquency Mgt.			

Source: SPSS Version 17 Computation.

Table VII indicates the effects of an independent variable (Credit risk control measures under loan product design, credit committee, and delinquency management) and the dependent variable (profitability of microfinance banks). Meanwhile, the magnitude of the effects is of varying degrees. Credit risk measures adopted by the microfinance banks on loan product design have a strong positive effect given a coefficient of 0.913. This means that Credit risk measures adopted based on loan product design will bring about a change in the profitability of banks by about 91%. Equally credit risk measures adopted based on the credit committee will bring about little positive change in profit given a coefficient of 8%. However, based on prior knowledge of the above table, credit risk measures adopted based on delinquency management portrayed a negative effect.

Although, the negative effects of the variable are negligible and insignificant, given a coefficient of -0.16%. The multiple regression results have also indicated that credit risk measures adopted on loan product design are the most statistically significant of the repressors with a T – statistics of 2.023 at a 1% level of significance. Credit risk measures adopted on the credit committee by the banks are also statistically significant with a T-statistics of 0.245 at a 1% level of significance. However, credit risk measures adopted in delinquency management were found to be statistically insignificant at a 1% level of significance given a T-statistics of -1.830. Of course, the general outcome of the multiple regression models (results) showed a positive effect between the independent and dependent variables.

Table VIII indicates that all the independent variables

(collection policy 1, collection policy 2, collection policy 3, collection policy 4, collection policy 5, and collection policy 6) are negatively associated with the dependent variables (portfolio quality of microfinance banks).

However, collection policy 1, collection policy 3, collection policy 4, collection policy 5, and collection policy 6 were found to be significantly related with the dependent variable at a 2% level of significance indicating a strong, negative relationship. While collection policy 2 with dependent variable was insignificantly related. For almost all the six exogenous variables, the relationship was very healthy as expected except for only one independent variable that was insignificantly related. Although almost all the independent variables are negatively related to themselves.

Table IX reveals the Kolmogorov-Smirnov normality test which tests whether the sample distribution is significantly different from a normal distribution. Thus, a significant pvalue indicates a non-normal distribution of data. Therefore, going by the above table, it becomes apparent that the data are not normally distributed as the p-value of the Kolmogorov - Smirnov (0.000) and (0.001) are less than 0.05 for the data. Although the test distribution table indicates that the test distribution is normal.

	Portfolio	Level of					
	Quality before Bank Collection Policy	Agreement on Collection Policy 1	Agreement on Collection Policy 2	Agreement on Collection Policy 3	Agreement on Collection Policy 4	Agreement on Collection Policy 5	Agreement on Collection Policy 6
O1:416 D1-	Folicy	rolley 1	Folicy 2	Folicy 5	Folicy 4	Folicy 5	Folicy 0
Quality before Bank Collection Policy	1	-0.712**	-0.193	-0.611**	-0.432**	-0.501**	-0.637**
		0.000	0.174	0.000	0.002	0.000	0.000
	51	51	51	51	51	51	51
Level Portfolio of							
Agreement on Collection Policy 1	-0.712**	1	0.301*	0.756**	0.586**	0.828**	0.719**
	0.000		0.032	0.000	0.000	0.000	0.000
	51	51	51	51	51	51	51
Level of Agreement on Collection Policy 2	-0.193	0.301*	1	0.222	0.373**	0.307*	0.264
, -	0.174	0.032		0.117	0.007	0.028	0.061
	51	51	51	51	51	51	51
Level of Agreement on Collection Policy 3	-0.611**	0.756**	0.222	1	0.380**	0.600**	0.683**
,	0.000	0.000	0.117		0.006	0.000	0.000
	51	51	51	51	51	51	51
Level of Agreement on Collection Policy 4	-0.432**	0.586**	0.373**	0.380**	1	0.656**	0.607**
	0.002	0.000	0.007	0.006		0.000	0.000
	51	51	51	51	51	51	51
Level of Agreement on Collection Policy 5	-0.501**	0.828**	0.307*	0.600**	0.656**	1	0.697**
on concensi roney a	0.000	0.000	0.028	0.000	0.000		0.000
	51	51	51	51	51	51	51
Level of Agreement on Collection Policy 6	-0.637**	0.719**	0.264	0.683**	0.607**	0.697**	1
	0.000	0.000	0.061	0.000	0.000	0.000	
	51	51	51	51	51	51	51

^{*} Correlation is significant at the 0.05 level (2-tailed).

TABLE IX: ONE-SAMPLE KOLMOGOROV-SMIRNOV TEST

		Portfolio Quality before Bank Collection Policy	Level of Agreement on Collection Policy 1	Level of Agreement on Collection Policy 2	Level of Agreement on Collection Policy 3	Level of Agreement on Collection Policy 4	Level of Agreement on Collection Policy 5	Level of Agreement on Collection Policy 6
N		51	51	51	51	51	51	51
Normal Parametersa	Mean	4.3137	1.4314	2.0392	1.4118	1.5686	1.4902	1.8039
	Std. Deviation	0.73458	0.60844	1.21591	0.60585	0.70014	0.64413	1.02019
Most Extreme Differences	Absolute	0.295	0.388	0.278	0.399	0.341	0.365	0.314
	Positive	0.195	0.388	0.278	0.399	0.341	0.365	0.314
	Negative	-0.295	-0.239	-0.196	-0.248	-0.208	-0.223	-0.215
Kolmogorov- Smirnov Z		2.110	2.773	1.982	2.847	2.433	2.606	2.243
Asymp. Sig. (2-tailed)		0.000	0.000	0.001	0.000	0.000	0.000	0.000

^{**.} Correlation is significant at the 0.01 level (2-tailed).

V. CONCLUSION

From the results, credit management has been identified as one of the most fundamental issues the financial institution needs to address for smooth operation. This is because the cash flow or liquidity of any financial institution with reference to microfinance bank depends solely on how well it managed its credit facilities. Although a lot of previous work has revealed the importance of well-articulated credit management on the performance of banks, the effectiveness of it seemed to be not well understood by some microfinance banks in Adamawa state. These form the basis of undertaking this study. The study set up three objectives to assess the effect of credit management on variables that indicate the financial performance of microfinance banks. The study examined the effect of credit risk control measures on the profitability of microfinance banks in Adamawa state. It found that credit risk control measures have a significant positive effect on the profitability of microfinance banks. This means that credit risk control measures help to reduce the likelihood of default payment, thereby leading to profit. Microfinance banks should strengthen credit risk control measures adopted to increase their profitability. This is because if properly adopted it helps to reduce the number of default payments.

In addition, MFI should keep on reviewing their debt collection policy as frequent review of debt collection policy in credit control is very effective in improving the portfolio quality of the banks. Furthermore, there is a need for MFI to continue to adhere to strict debt collection policy as strictness in collection policy helps the banks to recover their loans, thereby improving the portfolio quality of the banks. Besides, banks should keep on monitoring and evaluating the proper functioning of the credit-control section as the unit proves to be very significant in improving the financial performance of the banks.

Finally, MFIs need to maintain the appraisal of their clients based on their capacity, capital base, collateral, character, condition, etc. before giving the loans so as to recover the loans easily, thereby leading to the effectiveness and efficiency of banks. This is because client appraisal proved to be a very efficient yardstick in the credit management of banks and their financial performance.

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CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Esther Yusuf Enoch: Conceptualization, Methodology, Analysis, Writing – original draft, Writing – review & editing.

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