Credit Risk Management and Financial Performance of Microfinance Banks in Nigeria

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ABSTRACT
This study examines the impact of Credit risk Management on Financial Performance of licensed Microfinance in Nigeria. The study has been conducted in different parts of the globe and in Nigeria with different findings which are mixed and inconclusive. The population of the study consists of ten (10) Microfinance banks licensed by Central Bank of Nigeria as at 31st December 2020 out of which the ten (10) Microfinance banks licensed by Central Bank of Nigeria were selected as samples for a period of twelve (12) years from 2009 to 2020 based on purposeful sampling technique. The study uses multiple regressions as a tool for analysis. The proxy for Credit Risk Management are Credit risk, Capitalization and Asset Quality while the proxy for Financial performance is Return on Assets (ROA). The study reveals that Credit risk has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria. Capitalization has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria. Asset Quality has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria.
Keywords: Credit risk, Non-Performing Loans, Financial Performance, Bank size.

I.   INTRODUCTION
Microfinance Bank (MFB) is any company licensed by the Central Bank of Nigeria CBN to carry on the business of providing financial services such as savings and deposits, loans, domestic funds transfer and non-financial services to microfinance clients. It can also be seen as a category of financial services targeting individuals and small businesses lacking access to credit. There are two mechanisms for the delivery of financial services to its clients which are; relationship – based banking for individual entrepreneurs and small business and group -based models where several entrepreneurs come together to apply for loans and other services as a group. Credit risk is the possibility of a loss resulting from borrower's failure to repay a loan or meet contractual obligations. Credit risk Management is the practice of mitigating losses by understanding the adequacy of a bank's capital and loan loss reserves at any given time. One the major risks faced by Microfinance banks is Non- performing loan. It is often referred to as the risk of default arising from the failure of borrowers to meet their obligations in terms of loan repayments. Microfinance Banks (MFBs) give loan facilities in form of micro-credits to people who lack access to such from commercial banks and they are known as major player in economic growth and development and so if loan repayment is not made on time it affects the financial performance of the Microfinance banks (Afolabi, Obamuyi & Egbetunde 2020). Asset Quality is an evaluation of asset to measure risk associated with it. Loans granted to businesses and households are assets for banks. The interest banks earn on these assets is a key component of their income and profit, and the risk of the loans not being paid back is their main risk. The higher the credit risk, the lower the asset quality. On the Other hand, when their asset quality decreases, banks must hold more capital to cover the related credit risk and book higher provisions to prepare for the expected losses which invariably affect financial

performance. A company might be endowed with assets and profitability but may fall short of liquidity if its assets cannot be readily converted to cash (Yakubu, Dangana & Oluwafemi (2020). Empirical studies have been conducted on the credit risk management and financial performance which include studies of Ekinci and Poyraz (2019), Noor, Chandra and Banik (2018), Serwadda (2018), Olugboyega, Babatunji & Tobi (2018) concentrated on commercial banks therefore they are not conclusive and could not provide adequate evidence on the impact of credit risk management on financial performance in Africa and Nigeria. The study on microfinance banks in Nigeria that we are aware of only captured 2 microfinance banks quoted in the Nigerian Stock Exchange. In Nigeria, to the best of our knowledge, we have not seen a study that took into consideration the Licensed microfinance banks by Central Bank of Nigeria. To this end, this study attempts to fill the gap by examining the impact of credit risk management on financial performance of licensed Microfinance banks in Nigeria. The main objective of the study is to examine the impact of credit risk management on financial performance of Licensed Microfinance banks in Nigeria. Specific objectives are: to determine the extent to which Credit risk impact on financial performance of Licensed Microfinance banks in Nigeria, to determine the extent to which Capitalization impact on financial performance of Licensed Microfinance banks in Nigeria, to determine the extent to which Asset Quality impact on financial performance of Licensed Microfinance banks in Nigeria. In line with the specific objectives, three hypotheses are formulated which are: HO1 Credit risk has no significant impact on financial performance of Licensed Microfinance banks in Nigeria. HO2 Capitalization has no significant impact on financial performance of Licensed Microfinance banks in Nigeria HO3 Asset Quality has no significant impact on financial performance of Licensed Microfinance banks in Nigeria.

II LITERATURE REVIEW

Various studies have attempted to examine the impact of Credit Risk Management on Financial Performance. Ekinci and Poyraz (2019) examined the impact of credit risk on financial performance of 26 commercial banks operating in Turkey between 2005 - 2017. The secondary data from the statistical report of the Banks Association of Turkey was employed. Three panels' data were considered respectively state-owned banks, privately-owned banks and foreign banks in order to compare banks according to their ownership

structure. Return on Asset (ROA) and Return on Equity (ROE) were used as proxies for financial performance indicators while Non-Performing Loans (NPLs) was used as credit risk indicators. The result of the study showed that there is a negative relationship between credit risk and ROA as well as between credit risk and ROE. The results showed that there is a relationship between credit risk management and profitability of Turkish deposit banks from the period of 2005 to 2017. Accordingly, banks should focus more on credit risk management, especially on the control and monitoring of nonperforming loans. Noor, Chandra and Banik (2018) studied Impact of Credit Risk Management on Financial Performance of Banks of Major State-Owned commercial banks in Bangladesh POCL (Percentage of Classified Loan) was used to measure Credit Risk Management. Financial performance of the banks was measured by the profitability and productivity of the banks. Profitability measurements of the banks may be ROI, ROA, ROE and some other types of ratio analysis. The study measured the impact of POCL on ROI, ROE and ROA and to test the cointegration among the variables. The result of the study revealed that there exists co-integration among the study variables. They also found out that POCL has significant negative impact on ROI. The impact of POCL is not significant on ROA and ROE in the short run. But in the long run, there is significant impact of POCL on ROA and ROE. Serwadda (2018) analyzed the impact of credit risk management on the financial performance of commercial banks in Uganda. They used panel data for a sample of 20 commercial banks. They study employed return on assets as a dependent variable and non‐ performing loans, growth in interest earnings and loan loss provisions to total loans as credit risk measures. Secondary data was used from the Bank scope database, African development bank and the central bank of Uganda. They employed descriptive statistics, regressions and correlation analysis. Regression models are to estimate the magnitude of significance of credit risk management on the performance of commercial banks in Uganda. The study revealed that credit risk management impacts on the performance of Ugandan commercial banks. The results portrayed that banks' performance was inversely influenced by non‐ performing loans which may expose them to large magnitudes of illiquidity and financial crisis. Salem & Jamil (2021) examined the impact of credit risk management on the financial performance of United Arab Emirates commercial banks. They measured to what extent the independent factors

defined by capital adequacy ratio, non-performing loans ratio, cost-income ratio, liquidity ratio, and loans-to deposits ratio impact the financial performance of sixteen commercial banks operating in the United Arab Emirates using panel data for the period of 2013-2019. The secondary data were collected from banks and examined by applying standard descriptive statistics and the random effect model for hypothesis testing. The result of the study showed that non-performing loans ratio and cost-income ratio have a significant negative impact on commercial banks profitability in the United Arab Emirates, while capital adequacy ratio, liquidity ratio, and loans -to-deposits ratio all have a very weak positive relationship on the return on assets but they are not determinants of bank's profitability due to the insignificant statistical impact on it. Olugboyega, Babatunji & Tobi (2018) analyzed Effect of Credit Risk Management on Financial Performance of Nigerian Listed Deposit Money Banks. They explored ten listed deposit money banks in Nigeria for the period, 2005-2016. Credit risk management, the independent variable, used three parameters-Non-performing Loan to total Loan Ratio (NPLLR); Non-performing Loan to total Deposit Ratio (NPLDR) and Capital Adequacy Ratio (CAR). Return on asset (ROA) and Return on equity (ROE) was used as proxies for financial performance. They used Random effects generalized least squares (GLS) regression as data estimation technique, the study revealed that all the three credit risk parameters have a significant relationship with ROA and ROE. Bhattarai (2019) examined effect of credit risk management on financial performance of commercial banks in Nepal. Balance panel data of ten commercial banks with 160 observations for the period of 2001 to 2016 have been used for the analysis. The results of the study revealed that capital adequacy ratio (CAR), non-performing loan ratio (NPLR), and management quality ratio (MQR) have significant relationship with the financial performance (ROA) of the commercial banks in Nepal. Credit to deposit ratio (CDR) and Risk sensitivity (RS) have no significant impact on the financial performance of the commercial banks in Nepal. Alshatti (2015) analyzed the effect of credit risk management on financial performance of the Jordanian commercial banks. Two mathematical models were used to measure this relationship. The results of the study showed that the credit risk management indicators considered in this research have a significant effect on financial performance of the Jordanian commercial banks. Njoku, Ezeudu & Ifeanyichukwu (2017) investigated the impact of

credit risk management on the performance of commercial banks in Nigeria. Seven commercial banking firms were used to analyze T for Seven years. The panel regression model was employed for the estimation of the model. In the model, Return on Equity (ROE) and Return on Asset (ROA) were used as the performance indicators while Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) as credit risk management indicators. The findings revealed that credit risk management has a significant impact on the profitability of commercial banks' in Nigeria. Embaye, Chenyan & Abderaman (2017) explained the impact of credit risk management on the performance of commercial banks in Eritrea. The indicators of the study are Return on Assets (ROA), Non-performing Loans Ratio (NPLR), Capital Adequacy Ratio (CAR), Loan and Advances Ratio (LAR) and Loan Loss Provision Ratio (LLPR). The study collected data from Commercial Bank of Eritrea and Housing and Commerce Bank of Eritrea from 1998 to 2015. Descriptive and panel data regression analysis were employed in order to test the relationship between the four indicators and the performance of commercial banks in Eritrea. The results of the study showed that credit risk management is inversely associated with bank performance. The nonperforming loan, and loan and advances ratios significantly and negatively affected performance of the commercial banks. The result also indicated that loan and advances ratio are negative but statistically insignificant. There is a positive relationship between CAR and ROA. The significant positive relationship between loan loss provision and commercial banks performance in this study could indicate the presence of potential earning management activities by bank managers.

III METHODOLOGY
This research adopted correlation research design and was considered adequate and appropriate for this study because it describes the statistical relationship between independent variables of the study (Credit risk, Capitalization, Asset Quality) and the dependent variable (Return on Asset). The population consists of selected Microfinance banks licensed by Central Bank of Nigeria namely licensed by Central Bank of Nigeria as at 31st December 2020 whose financial statements are accessible and covers a period of Twelve (12) years (2009-2020). Purposeful sampling technique was employed to select the sample. The sample selected are: Ahmadu Bello University MFB, Ajingi MFB, Akengwu MFB, Aliero MFB, Akaleri MFB, Alpha Kapital MFB, Amba MFB, Apa MFB, Apeks MFB

and Baure MFB. In line with this, the sample size is all the ten (10) selected Microfinance Banks licensed by the Central Bank of Nigeria. The study employed panel data using statistical package for social sciences (SPSS 25) and Ordinary Least Square (OLS) method adopted in this study is a parametric statistical test that is based on a number of assumptions, the violation of which could affect the reliability of the results. The Pearson correlation and t-test statistics were used for inferential analysis. Two of the most commonly encountered problems addressed in this study relate to normal distribution of the variables and descriptive statistics was used to test for normality of data.

MODEL SPECIFICATION
The model that was used to test the hypothesis formulated for this study is presented below. The null Hypothesis is tested considering the results for the P-values at 1%, 5% and 10% level of significance.
$ROA = f(\beta_1 CR + AQ\beta_2 + TETA\beta_3 + \beta_4 BSIZE)$
$ROA = \alpha + \beta_1 CR + AQ\beta_2 + TETA\beta_3 + \beta_4 BSIZE + \epsilon_i$
Where
α= the intercept
Return on Assets (ROA) = Net Profit After Tax divided by Total Assets.
Credit risk (CR) = Non-Performing Loan divided by Total Loan.

Capitalization (TETA) = Total Equity divided by Total asset
Asset Quality (AQ) = Total Loan divided by Total Quality
Bank Size = measured as Natural log of total assets
ϵ_i= error term
Bank size is a control variable.

IV. DATA PRESENTATION
This part presents the results of the descriptive statistics and regression results on the impact of Credit Risk Management on Financial Performance of Licensed Microfinance banks in Nigeria. (3) Three explanatory variables and one (1) control variable are employed for the purpose of explaining and predicting the impact of impact of Credit Risk Management on Financial Performance of Licensed Microfinance banks in Nigeria.

Test of Normality
The normality tests are supplementary to the graphical assessment of normality. For this study, Z skewness and Z Kurtosis are used to test for normality of the four (4) independent variables; namely Credit risk, Capitalization, Asset Quality. The Z skewness was computed as skewness divided by standard error of skewness and the Z kurtosis was computed as kurtosis divided by standard error of kurtosis.
Table 4.2.1 shows the skewness, kurtosis and Z skewness and Z kurtosis.

Table 4.2.1 Descriptive Statistics Table for the Variables

Variables	Skewness	Standard Error	Z Skewness	Kurtosis	Standard Error	Z Kurtosis
CR	3.223	0.221	14.583	14.768	0.438	33.716
TETA	3.995	0.221	18.076	18.183	0.438	41.513
AQ	3.427	0.221	15.507	16.258	0.438	37.118

This table shows the normality test for Credit risk, Capitalization, Asset Quality.
In Small samples like that of this study which the number of observations is 120, values of Z skewness and Z kurtosis greater or lesser than 1.96 are sufficient to establish normality of the data. The result of Skewness for Credit risk is 3.223. The Z skewness of Current ratio is 14.583 which is more than 1.96 shows that the data is normal which indicates that the data for Credit risk relates linearly to the dependent variable (Return on Asset). The result of the Kurtosis for Credit risk is 14.768 and the Z kurtosis of Credit risk is 33.716 is more than 1.96 and therefore, is normal which indicates that the data for Credit risk relates linearly to the dependent variable (Return on Assets). The result of Skewness for Capitalization is 3.995. The

Z skewness of Capitalization is 18.076 which is more than 1.96 shows that the data is normal which indicates that the data for Capitalization relates linearly to the dependent variable (Return on Assets). The results of the Kurtosis for Capitalization is 18.183 and the Z kurtosis of Capitalization is 41.513 is more than 1.96 and therefore, is normal which indicates that the data for Capitalization relates linearly to the dependent variable (Return on Assets). The result of Skewness for Asset Quality is 3.427. The Z skewness of Capitalization is 15.507 which is more than 1.96 shows that the data is normal which indicates that the data for Asset Quality relates linearly to the dependent variable (Return on Assets). The result of the Kurtosis for Asset Quality is 16.258 and the Z kurtosis of Asset Quality is 37.118 is more than

1.96 and therefore, is normal which indicates that the data for Asset Quality relates linearly to the

dependent variable (Return on Assets). Ghasemi and Zahediasl (2012).

4.2.2 Credit Risk Management impact on Financial Performance.

Variable	Coefficient	T – value	P – value
Constant	1.328	0.233	0.816
CR	0.376	11.142	0.000
TETA	0.054	6.533	0.000
AQ	0.373	9.226	0.000
BSIZE	0.138	0.268	0.789
R	0.85		
R^2	0.73		
Adj R^2	0.72		
F stat	79.199		
F-Sig	0.000		
DW	1.771		

Source: Author's computation using SPSS 25

The estimated equation of the study is presented as follows:

ROA = 1.328 + 0.376 (CR) + 0.054 (TETA) + 0.373 (AQ) + FSIZE.

Financial performance of Microfinance banks measured by Return on Assets would be equal to 1.328 when all other variables are held to zero. A one unit change of Credit risk all other variables remain constant, would increase Credit risk by 0.376. The regression result of the study shows that the beta coefficient in respect of Credit risk is (0.376) and the t-value is (11.142) and it is significant at 1%. This means that, Credit risk has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria. The implication of this is that, the lower the Credit risk, the better the financial performance because the tendency of loan repayment is guaranteed. This provides an evidence of rejecting the hypothesis stating that Credit risk has no significant impact on financial performance of Licensed Microfinance banks in Nigeria. A one unit change of Capitalization all other variables remain constant, would increase Capitalization by 0.054. The regression result of the study shows that the beta coefficient in respect of Quick ratio is (0.054) and the t-value is (6.533) and is significant at 1%. This means that, Capitalization has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria. The implication of this is that, the higher

the Capitalization, the more credit available for microfinance banks borrowers in Nigeria. This provides an evidence of rejecting the hypothesis stating that Capitalization has no significant impact on financial performance of Licensed Microfinance banks in Nigeria. A one unit change of Asset Quality all other variables remain constant, would increase Asset Quality by 0.373. The regression result of the study shows that the beta coefficient in respect of Asset Quality is (0.373) and the t-value is (9.226) and it is significant at 1%. This means that, Asset Quality has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria. The implication of this is that, the higher the Asset Quality, cash and other financial assets can be easily and immediately converted into cash with minimal or no loss of value to meet its liquidity needs. This provides an evidence of rejecting the hypothesis stating that Asset Quality has a Positive significant impact on financial performance of Licensed Microfinance banks in Nigeria.

The impact of the Credit Risk Management is able to explain the dependent variable up to (85%). This shows a strong positive relationship as indicated by the R value and the remaining (15%) are controlled by other factors. Similarly, the result of the F- statistic shows the overall fitness of the model. The F- statistic has a value of (79.199) and is significant at 1% which implies that the model is fit because it is significant

at all levels of significant. Durbin Watson of (1.771) shows that there is no problem of autocorrelation in the data set (Gujarati, 2004).

FINDINGS OF THE STUDY
Credit risk has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria
Capitalization has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria.
Asset Quality has a positive significant impact on financial performance of Licensed Microfinance banks in Nigeria.

V.   CONCLUSIONS

This study has contributed to findings on Accounting Research in Nigeria. It determined to what extent credit risk management impacts on financial performance of licensed Microfinance banks in Nigeria. The study concludes that Credit risk, Capitalization and Asset Quality impact on financial performance of Licensed Microfinance banks in Nigeria.

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