

CREDIT RISK MANAGEMENT AND MARKET PERFORMANCE OF LISTED MICROFINANCE BANKS IN NIGERIA

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Abstract

This study investigated credit risk management and market performance of listed microfinance banks in Nigeria. Credit risk management was proxied in the paper with non-performing loans-to-total loans ratio, capital adequacy ratio, total loans and advances-to-total assets ratio, loan to deposit ratio, while market performance was proxied with price to earnings ratio. The paper analysed data collected from the audited annual reports and accounts of Nigeria Police Force (NPF) microfinance bank between 2012 and 2021 which was the only listed microfinance bank in Nigeria as at 31st December, 2021. Ordinary least square regression statistical analysis technique was employed to analyse the data. Result revealed that non-performing loans-to-total loans ratio, capital adequacy ratio, total loans and advances-to-total assets ratio and loan to deposit ratio had no significant effect on market performance of listed microfinance banks in Nigeria. The study recommended to the management of listed microfinance banks in Nigeria that they should always pay particular attention to their credit risk management policies in order to minimise the occurrence of loan loss, enhance their capital and assets value recorded that will lead to long-term effect on the market viability and financial sustainability of the banks. Also, the paper recommended that the management should improve on the credit risk control system that will help them to reduce loan loss which will have long run effect on the market performance of the banks.

Keywords: Credit risk management; Listed microfinance banks in Nigeria; Market performance.

Introduction

In Nigeria, listed microfinance banks have played a vital role by providing credit facilities like loans to individuals, small and medium scale enterprises and companies as a source of financing their business activities. Generally, banks are exposed to financial risks which include foreign exchange risk, volatility risk, operation risk and credit risk (Akinbo-Balogun, 2022). These forms of risk must be evaluated effectively by the management because they will have both short and long run effects on their market performance. Basically, credit risk management in the banking sector is important because it serves as major threats like loan loss, bad debt unrecovered by banks when rendering financial services to their customers (Dunyoh, Ankamah & Kosipa, 2022). The primary source of income to banks is interest on loans issued to customers and as a result, it may be risky to the banks getting the loan and interest' repayments from the customers, hence effective credit risk management is required by bank managers.

Credit risk according to Aigbomian and Akinlosotu (2017), is the risk of total or partial loss of loans due to the inability of the customer to repay the loan as and when due. Credit risk is used to explain how value of the entity's assets is being affected by the adverse price of shares in the stock exchange market (Yousfi, 2014). Credit risk management according to Jehona and Hysen (2017) and Bencharles and Nwankwo (2021) may be determined by inefficiency, credit growth, deposit rate, capital adequacy ratio (the amount of bank's core capital expressed as a percentage of its risk weighted assets), loan to deposit ratio (the amount that the bank must hold out of the customers deposits), loan loss provision (specified amount provided from the interest income and kept in the reserve account to meet loan losses), liquid ratio, nonperforming loans and interest expenses to interest income ratio. This measurement implies that an increase in the ratio signal poor credit risk management by the bank.

The study of credit risk management has become an important subject in the present turbulent financial environment, hence, the microfinance banks being the cardinal focal institution that is heavily depended on by petty trading, small and medium scale enterprises as a source of short credit facility is often confronted with the challenges of effective credit management and its effect on their corporate performance. Stable credit risk management for entrenching qualitative loan portfolio is of primary significance to the effectiveness of the microfinance banks as well as the transformation of the general economy. The dynamic nature of the global financial system and high rate of loan defaults heightened credit risk for banks which transmit to their adverse financial performance in the long run (Ajao & Oseyomon, 2019). Microfinance banks managers are expected to effectively manage their credit risk as it would help the banks to mitigate the problem of non-performing loan and increase investors' confidence and enhance financial performance (Abdulnafea, Almasria & Alawaqleh, 2022). The effective management of credit risk would significantly affect the overall performance of microfinance banks because the higher the exposure of a bank to credit risk, the higher the tendency of the banks to experience financial crisis and vice-versa.

In spite of the relevance of credit risk management on achieving increased corporate performance, it was observed in the last few years that the Nigerian banking sector has witnessed lots of financial challenges and other systemic deficiencies. According to Sanusi (2012), this problem was as a result of poor credit risk management by the bank managers. For instance, some board members gave out loan facilities without adequate collateral. Also, this assertion corroborated with the Central Bank of Nigeria (CBN) report that most banks gave out loan without adequate security and no adequate provisions for loan loss were made (Bencharles & Nwankwo, 2021). Furthermore, the rise in non-performing loans significantly contributed to the failures and financial distress in the banking sector in Nigeria in the recent decade.

How credit risk management affected corporate performance has attracted immense research interest. For instance, Adegbeie and Dada (2018) and Adegbeie and Adebajo (2020) provided evidence on how risk assets management, liquidity management, credit risk management affected banks profitability and stability. Permatasari (2020) and Bencharles and Nwankwo (2021) examined corporate governance, credit risk management, profitability and stability in the banking sector. However, there appear to be paucity in the extant literature as it concerns the effects of credit risk management on market performance of listed Microfinance Bank in Nigeria. The issue market performance of banks is worth investigating because a profitable bank could also be found to be financially unstable and which may affect the market performance of the bank. Moreover, credit risk management by banks may send a signal to the stock exchange market either reducing or increasing the demand for stock as well as market price per share. Therefore, the basic question

that arises here is what is the effect of credit risk management on market performance of listed microfinance banks in Nigeria?

This paper generally aims at investigating the effect of credit risk management on market performance of listed microfinance banks in Nigeria. In order to achieve this objective, the following null hypothesis is formulated:

HO₁: Credit risk management has no significant effect on market performance of the listed microfinance banks Nigeria.

Literature Review

Credit Risk Management:

Inegbedion, Vincent and Obadiaru (2020) stated that risk is one of the types of risks which involve the risk that comes from the failure of customers to service their bank loans and the interest paid on the loan. Afolabi, Obamuyi and Egbetunde (2020) asserted that credit risk is affected by changes in market series, currency exchange rate, interest rate, credit availability and credit quality, changes in countries revenue and unemployment level. Credit risk is the risk of loss or given default that does not meet its obligation (that is, it arise from lending activities, trade and investment activities, payment and settlement of securities trading on its own and foreign accounts) under the conditions of the contract and thus causes the holders of creditor's loss.

Furthermore, credit risk management involves policy, principles or rules and structures developed by top administration that neglect the company's credit division and analyze execution against established procedures in increasing credit benefits. Credit risk management involves effective placement of rules by top management in the organisation to help reduce credit-related costs while expanding its benefits. The main goal of credit risk management is to decrease the effects of risks, related to an influence accepted by the public (Agaba, Tamwesigire & Eton, 2022). Effective risk management is designed to ensure reasonably that the objectives of the company can be reached and to help the company to meet its financial objectives. Basically, credit risk management focused on minimizing earnings fluctuation, substantial loss reduction and increasing corporate performance.

Market Performance:

In corporate performance measurement, market performance indicator is one of the bases to evaluate the performance of the entity. The market based measurement assess the market value of shares and it includes market price per share, price-to-earnings ratio. The importance of market price for share was pointed out by Stickney, Brown and Wahlen (2007) that it reflects the aggregate expectation of the market participants in the stock market, tells the result of the market's trading activity as well as the aggregate expectations of the firm's future profitability and growth.

Market performance measurement ratios include; tobin-q, earnings per share, dividend per share, price-to-earnings ratio, dividend cover, dividend yield, earnings yield and others. Price to earnings ratio is used in this to proxy market performance because it considered the development of potential stock prices and management capabilities in managing company assets, as well as considering investment growth potential. Price to earnings ratio reflects the future profits of the company and a company with high ratio of current share price in the past will have a cost to increase and to get a return.

Many theories such as asymmetric information theory, the anticipated income theory, value maximisation theory, agency theory, risk management theory, credit market theory, extreme value theory, resources dependence theory have been used by related studies to examine credit risk management and corporate performance. Therefore, this study anchored on the theoretical foundation of the risk management theory and agency theory reviewed as follows:

Risk Management Theory:

This theory was developed according to Zhongming, Frimpong, and Guoping (2019) by David in 1997 and it is used to explain the need for firm's manager to engage in risk management to minimise possible chance of financial losses. Eichhorn (2004) asserted that risk management theory provides the information on how risks management correlate with corporate performance either direct or indirect. Since the performance of business organisation would result to the firm to sustain in their operations and objectives which often considered as the most important objective of a firm, effective credit risk management needs to be taken seriously by managers without taking chances of loans and interest loss. Hence, risk management theory predicts positive association between credit management and market performance of the banks.

Agency Theory:

This theory was propounded in 1972 by Alchian and Demsetz. However, in 1976 Jensen and Meckling further developed the theory which is based on the relationship between the principal (owners) and the agents (managers) in a corporate organisation. The separation of ownership from management in the modern organisation provides the contexts for the function of the agency theory. The distinction between ownership and control creates the potential for a conflict of interest between shareholders and managers which could result in costs associated with resolving the conflict (Ogbeiwi and Okoughenu, 2020).

In conducting empirical studies bot in Nigeria and outside, Akinbo-Balogun (2022) collected data from six (6) banks between the period 2011 and 2020 in Nigeria and examined the impact of credit risk management on the financial performance. In the study, credit risk management was proxy with asset quality ratio, management ratio, earnings ratio, liquidity ratio while financial performance was proxy with capital adequacy ratio. The study used descriptive, correlation and regression statistical analysis techniques to analyse the data and the result revealed that earnings ratio, liquidity ratio, management ratio had positive and significant impact on the bank's capital adequacy ratio.

Fatimehin (2022) collected data from ten (10) companies between the period 2012 and 2021 in Nigerian listed consumer sector and examined the effect of risk management on the performance. In the study, risk management was proxied with operational risk, liquidity risk while market performance was proxied with return on asset. The result revealed that operational risk and liquidity risk had no significant effect on financial performance of the companies.

In Pakistani listed commercial banks, Qazi, Ahmad, Khan and Riffat (2022) studied credit risk management and financial performance. The study covered five (5) major banks, proxied credit risk management with loans and capital adjustment ratios while financial performance was proxied with return on equity. The study used regression statistical techniques to analyse data and result showed that credit risk management by loans and capital adjustment ratios had significant positive impact on the financial performance of the commercial banks.

In Ghana, Dunyoh, et al. (2022) collected data from ten (10) rural and community banks between the period 2014 and 2018 to examine the impact of credit risk on financial. In the study, survey

design and purposive sampling method was adopted. The study analysed with regression statistical technique and the result showed that credit risk management had positive relationship with financial performance.

In Kenya, Too and Makokha (2022) used forty-four (44) commercial banks to test the effects of credit risk management on performance. The study focused mainly on the influence of management efficiency on bank performance between the period 2011 and 2016. Descriptive research design was adopted by the study and self-administered questionnaires were used to collect data. Multiple regression analysis result revealed that management efficiency had significant positive effect on bank performance in Kenya.

Between the period of 2010 and 2019, Ravikumar, Sharma, Puthukulam, Aro-Gordon, Meesaala (2022) tested the quantifiable effect of credit risk on the performance of listed banks in the sultanate of Oman. The study proxied credit risk with non-performing loans, size of the bank and oil price, while banks performance was proxied with return on assets and return on equity. The study employed regression statistical analysis technique to analyse the data and result showed that the quality of the assets on the balance sheet and the inherent credit risk had an inverse relation but bank size had no significant relationship with return on assets and return on equity

In Saudi Arabia, loan to deposit ratio and cash to deposit ratio was used to proxy liquidity risk while return on equity was used to proxy financial performance by Ishaq, Abir and Khadra (2021). The study tested the impact of liquidity risk management on the financial performance of selected conventional banks in Saudi Arabia for the period of 2002-2019. The study used panel data regression method to analyse the data and the result showed that loan to deposit ratio had negative effect on the financial performance of the banks. Also, the results showed that the cash to deposit ratio had negative effect on the banks' financial performances.

Banjo and Oloyede (2021) collected data across the firms in Nigerian listed manufacturing sector and examined risk management strategies and financial performance of Nigerian manufacturing firms. The study adopted a cross-sectional and quantitative research design, the study collected data from the annual reports and accounts of the sampled companies and analysed with descriptive and regression statistical techniques. The study found that risk awareness has a significant impact on manufacturing company performance, and risk management practices improve manufacturing company performance substantially.

Bencharles and Nwankwo (2021) covered the period 2009-2019 and used twelve (12) deposit money banks in Nigeria to assess the impact of credit risk management on banks stability and the moderating role of corporate governance. The study employed ordinary least square regression technique to analyse data and result indicated that; nonperforming loans had a negative insignificant relationship with bank stability and a positive insignificant relationship with bank stability when corporate governance was introduced and liquid ratio, capital adequacy ratio and loan loss provisioning management were found to strengthen banks stability.

Risk management and financial performance of banks in Nigeria was investigated by Inegbedion, et al. (2020) and the study proxied credit risk management with loans to deposit ratio, current ratio, capital adequacy ratio and non-performing loans ratio, while financial performance was proxy with return on asset. Furthermore, the study employed an ex-post facto research design and data were analysed using generalized method of moments. The result revealed that banks' profitability was significantly influenced in the short run by liquidity risk and in the long-run by credit, capital adequacy, leverages and liquidity risks. Also, the result revealed that profitability had positive relationship with liquidity risk but negatively related to credit risk.

Afolabi et al. (2020) investigated the impact of credit risks on the financial performance between 2012 and 2018 in Nigerian microfinance institutions. In the study, credit risks were proxied with non-performing loans and total loans and development, while financial performance was proxy with return on assets. The study adopted secondary data source and analysed the data with descriptive and regression statistical techniques. The findings reveal that the return on assets and the number of non-performing loans were both adversely and strongly correlated. It was also indicated in the study that total loans and development had significant positive relationship with return on assets of microfinance institutions.

The impact of board characteristics and risk management on financial performance was examined by Nurudeen, Enebi and Kanwai (2020) and the study covered the period between 2012 and 2017 in Nigerian listed insurance firms. In the study, corporate characteristics was proxied with board size and board independence, risk management was proxied with solvency risk and underwriting risk while financial performance was proxy with return on asset. The study adopted correlational research design, used data extracted from annual reports of listed 26 out of 30 listed insurance firms in Nigeria and analysed the data with descriptive and regression statistical techniques. The study found that solvency and underwriting risks had a negative and significant impact on financial performance of listed insurance firms. In addition, board size and board independence in the study had positive and insignificant impact on financial performance of the firms.

Between the period 2006 and 2016, Ajao and Oseyomon (2019) collected data from money deposit banks in Nigeria and investigated the relationship between credit risk management and performance of banks. In addition, the study used the dynamic Generalized Method of Moment and Granger causality techniques to analyse the data. The results revealed a direct and statistically significant relationship between money deposit banks credit risk management variables measured by capital adequacy ratio, liquidity ratio, non-performing loan ratio and loan loss provision ratio and performance measured by return on asset. Moreover, the study indicated a significant inverse relationship between liquidity ratio and money deposit banks performance which suggested that excess liquidity not properly managed as credit facility will eventually leads to a reduction in the financial performance of money deposit banks. Between the period 1994 and 2016, Chukwunulu, Ezeabasili and Igbodika (2019) examined unsystematic risk control mechanisms and financial performance of listed banks in Nigeria. In the study, unsystematic risk control mechanisms were proxied with credit risk, operating risk, liquidity risk and capital adequacy risk while financial performance was proxied with return on equity and return on assets. The study analysed data with regression analysis technique and the result showed that credit risk had a significant negative impact on return on equity but a negative influence on return on assets. It was also revealed that liquidity had no significant impact on bank performance; operational risk had no significant influence on bank performance in Nigeria; while capital adequacy had a significant positive effect on return on equity but a negative impact on return assets of the banks.

Credit risk management was proxied with non-performing loan to total loan ratio; non-performing loan to total deposit ratio and capital adequacy ratio, while financial performance was proxied with return on asset and return on equity by Kajola, Olabisi, Adedeji and Babatolu (2018). The study tested the effect of credit risk management on the financial performance of ten (10) listed money deposit banks in Nigeria. Moreover, the study employed the Random effects generalised least squares (GLS) regression as data estimation technique and revealed that all the three credit risk parameters had a significant relationship with financial performance of the banks.

A panel regression model was used by Adeusi and Dada (2017) to analyse the effect of credit risk management on money deposit bank financial performance in Nigeria between the period 2001

and 2015. Credit risk management was proxied with non-performing loan ratio, loan to total asset ratio, loan loss provision ratio, interest rate, and inflation rate while financial performance was proxy with profit after tax. The result revealed that non-performing loan ratio, loan to total asset ratio, loan loss provision ratio, interest rate had negative relationship with financial performance of the banks. In addition, the result revealed that loan to total asset ratio and inflation rate had positive relationship financial performance of the banks.

Harcourt (2017) collected data from money deposit banks and tested for the impact of credit risk management on bank performance between the period between 1989 and 2014 in Nigeria. The study proxied credit risk management with loan deposit ratio and non-performing loan while financial performance was proxied with return on assets and return on equities. The result showed that loan deposit ratio and non-performing loan had positive influence on financial performance of the banks.

Based on the empirical literature reviewed, it is observed that several studies have attempted to explain the effects of credit risk management on financial performance of banks. However, most of these studies particularly in Nigeria did not investigate the effect of credit risk management on market performance of listed microfinance banks.

The conceptual framework of this study is presented in Figure 1 below showing the dependent variable which is market performance proxied with price-to-earnings ratio and the independent variable which is credit risk management proxied with non-performing loans ratio, capital adequacy ratio, total loans and advances-to-total assets ratio and loan to deposit ratio.

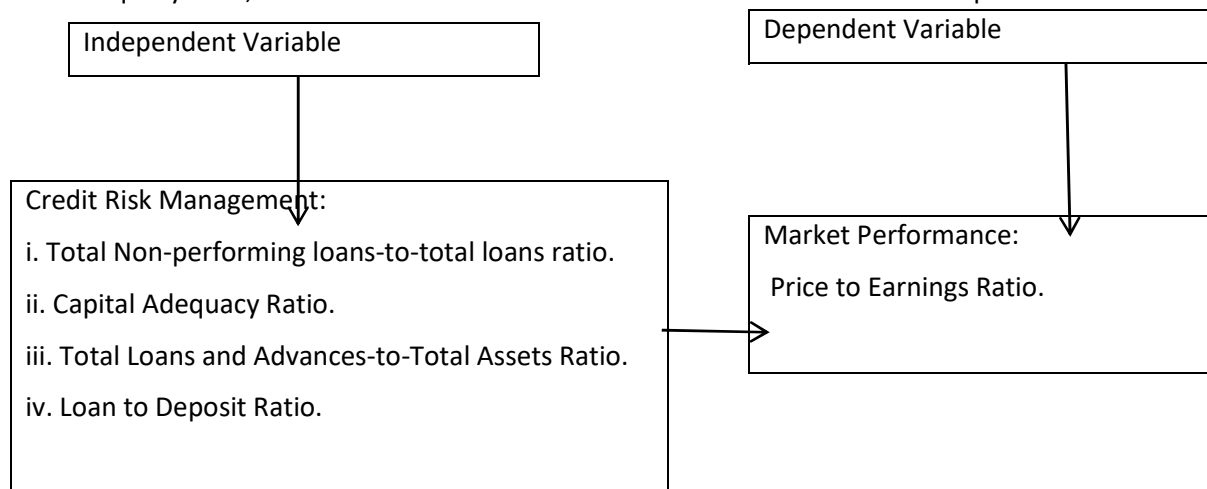


Figure 1: Researcher' Conceptual Model (2022).

Methodology

This paper adopted ex-post facto research design to investigate credit risk management and market performance of listed microfinance banks in Nigeria. This design is adopted by this paper because the researchers have no direct influence to manipulate the independent variable and already existing data are extracted from the published financial statements of the banks.

The population comprises listed microfinance banks in Nigeria as 31 December, 2021. However, NPF microfinance bank formed the sample size of this study because it was the only microfinance bank listed on Nigerian Stock Exchange as 31st December, 2021, thus data are extracted from their audited annual reports and accounts for the year between 2012 and 2021.

The study employed both descriptive and inferential techniques of data analysis. In the descriptive statistics, variables were explained in terms of their mean, disparity, minimum and maximum values. Also, the study analysed data using both correlation and ordinary least square regression techniques through the use of Eview version 9.0 statistical software packages and alpha (α) level of 5%.

To achieve the specified objectives, the empirical model estimated in this study is functionally specified as follows:

$$PE/R = F(NLTL, CAR, TLTA, LTDR) \text{ -----3.1}$$

The regression model is transformed econometrically as:

$$PE/R_t = \beta_0 + \beta_1 NLTL_t + \beta_2 CAR_t + \beta_3 TLTA_t + \beta_4 LTDR_t + U_t \text{ -----3.2}$$

Where: PE/R is price to earnings ratio and measured by current share price/earnings per share, $NLTL$ is non-performing loans-to-total loans ratio and measured by total non-performing loans / total loans & advances, CAR is capital adequacy ratio and measured by total equity capital / total assets, $TLTA$ is total loans and advances-to-total assets ratio and measured by total loans & advances/total asset, $LTDR$ is loan to deposit ratio is total loans & advances/total deposit, t is time series data, β_0 is intercept, $\beta_1, \beta_2, \beta_3, \beta_4$ is parameters of the coefficients, and U is error or disturbance term $\beta_1, \beta_2, \beta_3, \beta_4 > 0$.

Results and Discussions

Descriptive Statistics

The descriptive statistics of the variables specified in the model of the selected listed microfinance bank in Nigeria for the period of 2012 –2021 is presented in Table 1 below:

Table 1: The Descriptive Statistics for the Model

Variables	PER	NLTL	CAR	TLTA	LTDR
Mean	79.16	4.692	32.45	62.474	122.033
Median	70.245	4.17	30.45	60.78	120.43
Maximum	183.33	8.99	49.43	73.58	146.12
Minimum	47.14	2.96	19.93	54.58	98.71
Std. Dev.	39.19088	1.936783	9.605483	6.118315	17.31962
Skewness	2.081448	1.059637	0.471643	0.550827	0.071117
Kurtosis	6.261632	3.291853	2.162813	2.209947	1.607026
Jarque-Bera	11.65331	1.906876	0.662779	0.765762	0.81692
Probability	0.002948	0.385414	0.717925	0.681894	0.664673
Sum	791.6	46.92	324.5	624.74	1220.33
Sum Sq. Dev.	13823.33	33.76016	830.3878	336.904	2699.722
Observations	10	10	10	10	10

Source: Author's compilations from Eview Version 9.0

Table 1 shows that on the average, the ratio of price to earnings is 79.16, while the maximum is 183.33 and the least is 47.14, hence, implying that 47.14 is an indication of periods of decrease in the price to earnings ratio; that is, the sampled banks reported decrease at some periods within the time frame of this study.

Correlation Matrix

The correlation matrix is presented in Table 2 showing the relationship between credit risk management (NLTL, CAR, TLTA, LTDR) and market performance (PER).

Table 2: The Correlation Matrix for the Model

Variables	PER	NLTL	CAR	TLTA	LTDR
PER	1	0.545475	0.052597	-0.128	-0.16644
NLTL	0.545475	1	-0.67077	-0.16264	-0.75137
CAR	0.052597	-0.67077	1	0.153725	0.858357
TLTA	-0.128	-0.16264	0.153725	1	0.401744
LTDR	-0.16644	-0.75137	0.858357	0.401744	1

Source: Author's compilations from Eview Version 9.0

Table 2 shows that the variables are positively and negatively correlated. In addition, according to Peck, Olsen and Devore (2015), correlation values are: (1- 0.8) Strong; (0.8-0.5) Moderate; (0.5.- 0.1) Weak; (0) Non-correlation. Since the result showed the relationship between the dependent variable (PER) and independent variables (NLTL, CAR, TLTA and LTDR) ranged between medium and weak relationships, it implies that there is no correlations between the independent variables.

Table 3: Unit Root Test Augmented Dickey Fuller (ADF)

Variables	ADF@Level	ADF@1 st Difference	Order of Integration
PER	-3.608659	-	F(0)
NLTL	-1.525682	-2.582758	I(1)
CAR	-1.41955	-3.511632	I(1)
TLTA	-4.648949	-	F(0)
LTDR	-1.773187	-3.907545	I(1)

Source: Author's compilations from Eview Version 9.0

Table 3 shows the ADF unit root tests summary results and the variables are tested at levels and first difference for stationarity. The result showed that variable of PER and TLTA are stationary at level while NLTL, CAR and LTDR are stationary at first difference. Hence, this shows that the regression is no more spurious but real; that is, all the variables are individually stationary and stable.

Regression Analysis

Table 4: Regression Model

Dependent Variable: PER				
Method: Least Squares				
Date: 08/30/22 Time: 07:22				
Sample: 2012 2021				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-85.629	160.9611	-0.53199	0.6175
NLTL	20.89847	8.668343	2.410896	0.0608
CAR	3.258373	2.394608	1.360713	0.2317
TLTA	-0.39939	2.158152	-0.18506	0.8605
LTDR	-0.11513	1.64967	-0.06979	0.9471
R-squared	0.621813	Mean dependent var	79.16	
Adjusted R-squared	0.319263	S.D. dependent var	39.19088	0.6175
S.E. of regression	32.33515	Akaike info criterion	10.09704	0.0608
Sum squared resid	5227.808	Schwarz criterion	10.24833	0.2317
Log likelihood	-45.4852	Hannan-Quinn criter.	9.931072	0.8605
F-statistic	2.05524	Durbin-Watson stat	2.098864	
Prob(F-statistic)	0.024687			

Source: Author's compilations from Eview Version 9.0

Table 4 shows that the ratio of NLTL and CAR has a positive and statistically insignificant effect on PER given that the individual probabilities are 0.0608 and 0.2317 respectively while their individual coefficient is 20.89847 and 3.258373 respectively. The overall regression is both positive and statistically insignificant at 5% level of significance implying that an increase in the ratio of non-performing loan to total loan (NLTL) and capital adequacy ratio (CAR) will have a substantial positive effect on price to earnings ratio (PER) respectively. In addition, TLTA and LTDR have a negative and statistically insignificant effect on PER given that the individual probabilities are 0.8605 and 0.9471 respectively while their individual coefficient is -0.39939 and -0.11513 respectively. The overall regression is both negative and statistically insignificant at 5% implying that an increase in the ratio of total loan to total assets (TLTA) and loan to deposit ratio (CAR) will have a substantial negative effect on price to earnings ratio (PER) respectively.

The result for the goodness fit test showed a coefficient of determination of $R^2 = 0.621813$ (62%) and adjusted R^2 is 0.319263 (32%); this shows that 62% variation in the dependent variable (PER) is explained by the independent variables (NLTL, CAR, TLTA, LTDR). The p-value of the F-statistics is 0.024687 indicating that it is statistically significant at 0.05 implying that we get not to accept the null hypothesis. Also, it is showed that the independent variables are not significantly related

with the dependent variable. The Durbin Watson is 2.098864, indicating that it falls under reasonable bounds making the probability of autocorrelation at significantly low levels. The underlined model has proven to be viable generally.

Consequently, when taken collectively and based on the probability values of the independent variables; NLTL, CAR, TLTA, LTDR which are 0.0608, 0.2317, 0.8605, 0.9471 and greater than 0.05, the null hypothesis one (H_{01}) is hereby accepted.

Discussion of Findings

The study found that credit risk management proxied with non-performing loan to total loan (NLTL), capital adequacy ratio (CAR), total loan to total asset (TLTA), loan to deposit ratio (LTDR) has no significant effect on market performance proxied with price to earnings ratio (PER) of listed microfinance banks in Nigeria. The implication of this is that credit risk management has no significant adverse or long-term effect on the market viability and financial sustainability of the listed microfinance banks in Nigeria.

This result is in line with the study by Adeusi and Dada (2017) which indicated insignificant effect of credit risk management on financial performance. Also, the result showed that credit risk management proxied by non-performing loan to total loans and advances and capital adequacy ratio had positive effect on market performance and this is in line with the Risk Management Theory which argued that firm's manager effectively engages in risk management to minimise possible chance of financial losses would enhance performance of the firm.

However, the result is not in line with the studies such as Akinbo-Balogun (2022) and Harcourt (2017) in Nigerian listed deposit money banks and Qazi, et al. (2022) in Pakistan listed commercial banks which indicated that credit risk management had significant effects on financial performance of the bank. In addition, the finding is not in line with the reported outcome of Banjo and Oloyede (2021) who found that risk awareness has a significant impact on manufacturing company performance, and risk management practices improve manufacturing company performance substantially. The finding also disagreed with the reported outcome in Pakistan listed commercial banks by Qazi, et al. (2022) who showed that credit risk management by loans and capital adjustment ratios had significant positive impact on the financial performance of the commercial banks.

Conclusion and Recommendations

An investigation was carried out in this study on the effect of credit risk management on market performance of listed microfinance banks in Nigeria. The findings demonstrate succinctly, that the selected credit risk management indicators, (non-performing loans-to-total loans ratio, capital adequacy ratio, total loans and advances-to-total assets ratio and loan to deposit ratio) did not significantly affect market performance, that is, price to earnings ratio of listed microfinance banks in Nigeria. Therefore, it can be concluded that credit risk management indicators employed in the study have no significant effects on market performance proxies with price to earnings ratio of listed microfinance banks in Nigeria.

It is recommended to the management of the listed microfinance banks in Nigeria that they should always pay particular attention to their credit risk management policies in order to minimise the occurrence of loan loss, enhance their capital and assets value recorded that will lead to long-term effect on the market viability and financial sustainability of the banks. Also, the management should improve on the credit risk control system that will help them to reduce loan loss which will have long run effect on the market performance of the bank.

The current paper has made significant contribution to knowledge particularly in accounting and financial management literature. Although several studies have attempted to explain the effects of credit risk management on financial performance of banks, the point of departure of this study from most previous studies is the conspicuous observation that while most of such studies did not examine the effects of credit risk management on market performance of listed microfinance banks particularly in Nigeria. This paper has bridged this gap by employing by showing that credit risk management indicators have no adverse or long term effect on market performance of the listed microfinance banks in Nigeria.

The paper is not without some limitations that suggest the need for future studies. The credit risk management indicators and market performance indicator employed by the current study were randomly selected from a host of credit risk management indicators and market performance indicators. The extent to which these variables are or are not exhaustive representatives of the actual credit risk management indicators and market performance indicators respectively poses some constrains. Therefore, future studies should include some other credit risk management and market performance variables to examine the effects of credit risk on market performance to justify the result provided by this study.

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