

Effect of Creative Accounting Practices on Credit Risk Management of Selected Deposit Money Banks Quoted in Nigeria

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Abstract

Sound credit risk management is one of the criteria for deposit money banks to carry out efficient financial intermediation in developed, emerging and developing economies including Nigeria. However, the manipulation of bank financial data by fraud utilizing inventive accounting techniques led to the poor credit risk management and collapse of deposit money institutions in Nigeria. The objective of the study is to examine the effect of creative accounting practices (cash assets structure, equity capital structure, loan structure, deposit liability and accrual quality) on credit risk management of selected deposit money banks quoted in Nigeria. The population of the study comprised of all the nineteen (19) listed deposit money banks as at December, 2021 while a targeted random sampling technique was adopted to select the sample size of seven (10) failed banks and seven (7) surviving deposit money banks listed in Nigeria Stock Exchange (NGX). Ex post facto research design was adopted using dataset for the period 2006–2021 which were collated from the annual reports and financial statements of the listed deposit money banks. The data collected were analyzed using mean scores and Panel Regression Model method. The analysis revealed that for surviving banks, creative accounting had a significant influence on credit risk management ($\text{Adj.}R^2 = 0.182$, Wald-Test= 4.44 :p < 0.05). Therefore, the study recommended that the management team of the banks should ensure that credit portfolio of the deposit money banks is prudently managed to grow year on year in the right mix and without contravening the statutory guidelines to avoid bad and doubtful loan classifications so as to achieve sound credit risk management.

Keywords: *Cash Assets Structure, Credit Risk Management, Deposit Liability, Equity Capital Structure, Loan Structure*

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Background to the Study

Deposit money banks serve as an economic middleman between units that are in deficit and those that are in surplus, with the goal of maximizing business survival, shareholder wealth, and profitability as well as raising the bank's market value. Due to ongoing non-performing loans, an inability to accommodate consumer withdrawals on demand, and an uncertain market share price, among other factors, commercial banks around the world have struggled to maintain long-term viability (Koenda and Iwasaki, 2021). Managers in the banking business run the risk of a bank's collapse due to unfavorable signals in credit risk management among commercial banks.

The ability of deposit money banks' management to effectively and efficiently manage the supervisory rating system known as CAMELS components—Capital adequacy, Asset quality, Management quality, Earnings, Liquidity, and Sensitivity to Market Risk—is essential to the achievement of the deposit money banks' goal of sound credit risk management. According to Isik and Uygur (2021), there is a high percentage of deposit money bank failure in sound management of credit risk management in developed, emerging, and developing countries, which has a negative impact on the primary functions of deposit money banks. However, Adámiková and Tatiana (2021) opined that globally, achieving sound credit risk management mechanisms by deposit money banks have become greater challenge to commercial bank managers which hinder sound financial intermediation of deposit money banks towards economic functions.

The survival of deposit money banks was in danger from 2007 to 2009 due to the global financial crisis. This problem of 2007 to 2009 financial crisis can be traced to poor credit management which had triggered asset value declines, panic in the banking sector, credit crunches, sovereign defaults, insolvency, and illiquidity, all of which made it difficult for banks to record sound risk management in developing economies including Nigeria (Isik and Uygur, 2021). Achieving sound credit risk management among deposit money banks in Nigeria has been a major challenge in today's banking businesses and dynamic business environment (World Bank Report, 2020). Similarly, World Bank Report (2020) pointed that Nigeria deposit money banks are characterized with untraceable lending, mismatching of assets and liabilities, weak and ineffective internal control, inadequate policies, lack of standard banking practices which metamorphose from poor credit management schemes. According to Ayunku and Uzochukwu (2020), majority of Nigerian deposit money banks experience poor credit risk management due to fraudulent usage of creative accounting among deposit money banks in Nigeria. This act of creative accounting practices enhanced fragile financial system and collapse of deposit money banks.

Creative accounting (cash assets structure, equity capital structure, loan structure, deposit liability and accrual quality) also known as income smoothing or accounting manipulation for the purpose of adjustment of accounting information in the financial statement to suit the greedy intention of managers. It shows how accounting exercise deviates from global accounting rules, characterized by excessive non-compliance and smoothing in income, assets or liabilities to gain greedy result that will attract more investors (Sanusi and Izedonmi, 2013;

Siyabola, Benjamin, Amuda, and Lloyd, 2020). Therefore, manipulation in the accounting record and exercise become illegal in the global accounting practices. Deposit money banks involved in accounting manipulation to twist the genuine and impartial trend in the financial situation of deposit money banks thus creating threat, distress and denied the deposit money bank from going concern objective (Odo and Ugwu, 2020).

The Nigerian banking industry experienced reform and distress due to sharp practices in accounting information manipulation (Iwedi, 2017; NDIC Report, 2011). The collapsed among Nigerian deposit money banks were link to poor credit risk management, fraudulent engagement of creative accounting and prudential regulatory negligence on the side of the financial system regulators (Akpanuko and Umoren, 2018; Odo and Ugwu, 2020). Deposit money banks sound management of credit contribute short and long terms to economic activities, but manipulation of credit risk trend via creative accounting collapsed deposit money banks intermediary, thus hinder economic activities and continuity of deposit money banks in Nigeria (Abdullahi, 2007; Central Bank of Nigeria Report, 2020).

This study overviewed outlined works done by authors through survey of literature, it observed that majority of the studies have shortcomings in the comparative analysis on surviving banks and failed banks which shows what the failed banks did not get right in other to protect the surviving banks from towing the same path. Based on aforementioned challenges and problem identified between creative accounting and credit risk management, thus this study examined the effect of creative accounting practices on credit risk management of selected deposit money banks quoted in Nigeria

Literature Review and Hypothesis Development

This sub-section comprised of conceptual definitions, theoretical framework and empirical review

Credit Risk Management

Catherine (2020), Conceptually asserted that credit risk management may be construed to mean collection of arrangement, routine and criterion laid down by commercial banks to guaranty sound recovery of customer loan and reduce the level of customer loan default. Credit risk management as opined by Onyeiwu, Ajayi and Muoneke (2020), is described as the possibility that an obligor will fail to meet its obligations (principal, interests, and commissions), on time, or in tandem with the contractual agreement. Olaoye and Fajuyagbe (2020), described credit risk management as a method employed by commercial banks to controvert the unfavorable consequence of credit risk extended by commercial banks so as enhance bank survival. According to Mayowa and Ehi (2019), sound credit risk management in bank institutions is critical for survival and expansion in the face of economic globalization.

According to Adegbe and Adebajo (2020), credit risk management is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management they maintained is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within

acceptable parameters. Credit risk is the exposure faced by banks when a borrower (customer) default in honoring debt obligations on due date at maturity (Ebrahim, Khalil, Kargbo, and Xiangpei, 2016). According to Onyefulu, Okoye and Orjinta (2020) posited that credit risk, also called default risk, is the risk associated with a borrower going into default that is not making payments as promised. In the view of the scholars there is always the possibility for the borrower to default from his or her commitments for one or the other reason resulting in crystallization of credit risk to the bank.

Creative Accounting Practices

Adámiková and Tatiana (2021), conceptually defined creative accounting as the intentional disruption of economic development in society for a specific aim. It's a method for accountants to modify data in accounting utilizing their understanding of accounting laws and standards. Creative accounting tools can go beyond the legality and lead to crime and the essence of creative accounting is based on accounting theories, but it adjusts the company's results according to various purposes (Adámiková and Tatiana, 2021). Siyanbola, Benjamin, Amuda and Lloyd (2020), defined Creative Accounting Practices (CAP) as the falsehood of financial statement information to picture the company in a planned mark.

Similarly, Siyanbola et al. (2020), asserted that creative accounting practices are designed to give financial information so that stakeholders and other consumers of such information can make educated decisions. They went on to say that creative accounting entails both manipulating financial statements and performance statements. Accounting manipulation, they explained, is the purposeful alteration and falsification of financial information to please management with the intent to deceive users, either by creating a plausible position of the firm to outsiders or by satisfying the expectations of the organization's owners.

Creative accounting consists of accounting practices that follow required laws and regulations but deviate from what those standards intends to accomplish. Creative accounting capitalizes on loopholes in the accounting standards to falsely portray a better image of the company. Although creative accounting practices are legal, the loopholes they exploit are often reformed to prevent such behaviors. According to Anitha and Keerthi (2021), accounting is a process of recording and compiling financial information for reporting the internal affairs of any entity to different stakeholders at the end of a certain interval. The scholars averred further that it is the language of business and can play a vital role for ensuring and continuing with good corporate governance. In a global set up, as a discipline, accounting practice is highly moderated by accounting standards. In this study, creative accounting practices was measured in terms of cash assets structure, equity capital structure, loan structure, deposit liability and accrual quality of selected deposit money banks in Nigeria.

Theoretical Framework

The survival-based theory and ethical theory served as the study's foundations. Both ideas demonstrate that businesses like deposit money banks will use immoral tactics to falsify financial data in order to outlive their competition. This is done by changing the credit risk trend in the bank's financial statements. The survival based and ethical theories primary

objective is turning around deposit money banks through manipulation of financial information that is creative accounting practices to make the deposit money banks survive and run efficiently to better adapt to banking system regulators requirement, business environment, and to achieve the goal of surviving the competitive market in which it operates. As survival-based theory and ethical theory argued that if banks are not adapting to the ever-changing environment and become efficient as well as give accurate report in its creative accounting practices, it simply means the deposit money banks will not record accurate credit risk, therefore deposit money banks practices unethical act regarding credit risk details and reporting through creative accounting sharp practices to remain in banking business and mislead the stakeholders. Thus, banks that successfully turned around that is involve in sound creative accounting practices is the one that operates efficiently and survive due to sound and appropriate reporting of its credit risk management.

Past Empirical Studies

Studies such as Adeusi, Akeke, Adebisi, and Oladunjoye (2014), and Wanjohi, Wanjohi and Ndambiri (2017), examined the effect of risk management practices on financial performance of commercial banks. Their studies revealed that there is inverse relationship between financial performance of banks and doubt loans, while capital asset ratio was found to be positive and significant on bank financial performance. Similarly, it suggests the higher the managed funds by banks the higher the performance. The study also found a significant relationship between banks performance and risk management. Wanjohi *et al.* (2017) further found that good financial risk management practices have a positive correlation to the financial performance of commercial banks.

The study of Olayinka, Uwuigbe, Eriabie, Uwuigbe, and Amiolemen (2019), examined the effect of Enterprise Risk Management (ERM) on accounting quality of selected listed firms in the Nigerian financial sector within a period of five years (pre-ERM period) (2007–2011) and another five years' period (post-ERM period) (2013–2017). Findings revealed that there is no significant association between enterprise risk management and accounting quality during the pre-ERM period. Their study further revealed that there was significant positive relationship between enterprise risk management (ERM) and accounting quality during the post-ERM period. This empirically shown that ERM implementation by Nigerian financial firms has a significant and positive impact on accounting quality, which has greater tendency to minimize the practice of discretionary accruals. Lyambiko (2015) on the effect of operational Risk management practices on financial performance of commercial banks. The study established that operational Risk management practices are positively correlated with financial performance of commercial banks. Oluwagbemiga, Idode and Ogungbade (2016), examined the relationship between risk management practices and financial performance of the Nigerian listed banks. The overall results reveal that risk management practices have a statistically significant impact on financial performance. Muriungi, Waithaka and Muriuki (2017), found out that operational risk management, financial risk management, market risk management, strategic risk management contribute to financial stability of state corporations. Kimotho (2015), found out that operational risk management, strategic risk management, financial risk management and governance risk management practices had positive significant effects on the financial performance of commercial state corporations.

Ayunku and Uzochukwu (2020), investigated the link between credit risk and agency cost among quoted DMBs in Nigeria within the period of 2007 and 2019. The study found that agency cost proxied for managerial inefficiency positively connected to the non-performing loan among DMBs in Nigeria. Kure, Adigun, and Okedigba (2017), explored the factors of non-performing loans (NPLs) and their impact on the macroeconomic environment. The findings show that there is a negative association between economic growth and NPLs. Furthermore, the study discovered that NPLs had a mild influence on the economy: a fall in credit and bank assets, an increase in bank risk-taking, and a reduction in economic growth.

Deng *et al* (2020), inspected the relationship between Credit Risk Management and the performance of financial institutions in South Sudan using measures of institutional performance and Credit Risk Management. Using the ARDL model, we establish compliance with the Basel accord significantly affecting the performance of finance institutions while monitoring corporate credit risk and risk management environment seem not to significantly exact influence the performance of financial institutions in South Sudan. On the other hand, credit risk operational practices seem to negatively and insignificantly affect the performance of financial institutions in the country. Al Zaidanin, and Al Zaidanin (2021), evaluated the impact of credit risk management on the financial performance of commercial banks in the United Arab Emirates. Based on the regression results, it is shown that the non-performing loans ratio and the cost-income ratio have a significant negative impact on commercial bank profitability in the United Arab Emirates, whereas the capital adequacy ratio, liquidity ratio, and loans-to-deposits ratio all have a very weak positive relationship on the return on assets but are not determinants of bank profitability due to the insignificant statistical impact on it. Ernest and Fredrick (2017), investigated the impact of credit risk management on the financial performance of six commercial banks and the study found that the non-performing loans ratio and loan loss provisions ratio have a significant negative impact on the profitability of Ghanaian commercial banks, whereas the capital adequacy ratio has a positive relationship with a bank's profitability. Rajkumar and Hanitha (2015), examined the impact of credit risk management on the profits of two Sri Lankan state commercial banks from 2006 to 2013. They found that capital adequacy, asset quality, and liquidity ratios have a considerable negative impact on the financial performance of commercial banks in Sri Lanka.

Furthermore, Tyoakosu and Ekpe (2018), investigated the Impact of Creative Accounting on the Performance of Nigerian Deposit Money Banks. The study's findings utilizing multiple regressions demonstrated that non-performing loans have no meaningful impact on bank performance. It was also discovered that total accrual has no significant effect on the performance of Nigerian deposit money institutions, however gross earnings had a considerable beneficial effect. Ahmed (2017) used a quantitative research approach with both primary and secondary data to investigate the impact of creative accounting procedures on the credibility of financial reporting with special reference to Saudi auditors and academics. The findings demonstrated that while the influence of creative accounting cannot be completely eradicated, it can be limited through proactive corporate governance rules employing independent non-executive directors.

Essien and Ntiedo (2018), investigated the extent to which accounting reports and disclosures offer shareholders and other interested parties with credible information to allow educated investment decisions, and the real valuation of enterprises has remained a source of contention. As a result, the inventiveness in those methods is motivated by avarice and the purpose to deceive the public, potential investors, and shareholders, increasing the rate of firm failures at a decreasing rate. However, the study found that a plethora of restrictions in the absence of adequate checks, sanctions, and rewards provides favorable conditions for creative accounting by allowing for misleading and cosmetic financial reporting. Egolum and Onodi's (2021), research looked at the impact of creative accounting practices on financial reporting in Nigerian deposit money banks. The study found that a well-designed structure of accounting regulation discourages innovative accounting practices in corporate financial reporting and contributes to Nigerian bank distress. Another finding was that creative accounting practice had a significant influence on both accounting policy selection and transaction manipulation in financial reporting. Based on past studies in relation to the empirical studies, there exist scanty studies examine the link effect between credit risk management and creative accounting practices among banking industry especially in Nigeria, this therefore form the empirical gap this study intends to fill.

Considering the empirical gap, this study hypothesized that;

H₀: Creative accounting practices (cash assets structure, equity capital structure, loan structure, deposit liability and accrual quality) have no significant effect credit risk management of selected quoted deposit money banks in Nigeria.

Methodology

The study employed *ex-post facto* research design due to the nature and objective of the study. The *expost facto* design is considered appropriate for the study because the study is non-experimental and sought to investigate past event that the data has been published and not possible to manipulate. Similar studies such as Olojede, Iyoha, and Egbide (2020), Okoye and James (2020) and Gupta (2018) employed *expost facto* design which is align with the current study. The study focused on and compare surviving and collapsed deposit money banks in Nigeria in the area of creative accounting practices (cash assets structure, equity capital structure, loan structure, deposit liability and accrual quality) within the period of 2005 to 2021 years.

The sample size of the study was drawn from the total population of 28 deposit money banks in Nigeria. The sample size was achieved through the use of purposive sampling technique; where five of Tier-1 (First Bank Limited, UBA Plc, GTBank Plc, Zenith Bank Plc and Access Bank Plc) deposit money banks was selected for Surviving Banks in Nigeria while Oceanic Bank Plc, Intercontinental Bank Plc, SKYE Bank Plc, Fin Bank Plc, Bank PHB Plc, Enterprise Bank Plc, Afribank Plc, Mainstreet Bank Plc and Diamond Bank Plc was selected for failed deposit money banks in Nigeria. The study employed panel regression method of analysis and post estimation tests such as hausman test, Testparm Test, Heteroskedasticity Test, serial correlation test among others.

Model Specification

Following the review of related literature, the study adapted the model in the study of Siano (2016) and the model is specified as;

$$BS = F (TA, TL, TE) \dots\dots\dots (1)$$

The model of Siano (2016) is stated in panel econometric form as;

$$LTS_{it} = \beta_0 + \beta_1 TA_{it} + \beta_2 TL_{it} + \beta_3 TE_{it} + \mu_{it} \dots\dots\dots (2)$$

Where:

LTS = Long Term Survival (LTS) proxy for Credit Risk Management (CRM). The bank CRM was one of the indicators used to measure bank survival in literature (Siano, 2016). Therefore,

CRM = Credit Risk Management proxy with LTS in this study as supported by literature and to achieve objective of this study.

- TA = Total Assets proxy for Creative Accounting
- TL = Total Liability proxy for Creative Accounting
- TE = Total Equity proxy for Creative Accounting

In order to achieve the specific objective of the study, the study adapted the model of Siano (2016) by including loan structure and accrual quality so as to suit the objective of the study and fully capture variables related to creative accounting practice published in the financial statement of deposit money banks in Nigeria. The adapted model is stated as;

$$CRM = f(CAS, ECS, LS, DL, AQ) \dots\dots\dots (.3)$$

Econometrically, the adapted model could be written thus:

$$CRM_{it} = \beta_0 + \beta_1 CAS_{it} + \beta_2 ECS_{it} + \beta_3 LS_{it} + \beta_4 DL_{it} + \beta_5 AQ_{it} + \mu_{it} \dots\dots\dots (4)$$

Where:

- β_0 = Constant
- BS = Bank Solvency
- CAS = Cash Assets Structure
- ECS = Equity Capital Structure
- LS = Loan Structure
- DL = Deposit Liability
- AQ = Accrual Quality
- μ_{it} = Error term

Measurement of Variables

Table 1: Summary of Study Variables' Measurement

Variables	Variable Measurement	Source	Source for the Measure of Study Variables
Credit Risk Management (CRM)	Rate of Non-Performing loan	Yearly Financial Statement of the Selected DMBs	Deng, Rono, and Sang (2020)
Cash Assets Structure (CAS)	Ratio of (Cash + Cash Equivalents) to Current Liabilities	Yearly Financial Statement of the Selected DMBs	Ahmed, Ningi and Dalhat (2018)
Equity Capital Structure (ECS)	Formula 1: Share capital equals the issue price per share times the number of outstanding shares. Formula 2: Share capital equals the number of shares times the par value of stock plus the paid in capital in excess of par value	Yearly Financial Statement of the Selected DMBs	Doorasamy (2021)
Loan Structure (LS)	Value of loan repayment with tenor	Yearly Financial Statement of the Selected DMBs	Dang and Huynh (2019)
Deposit Liability (DL)	loan-to-deposit ratio, divide a bank's total amount of loans by the total amount of deposits for the same period	Yearly Financial Statement of the Selected DMBs	Novickytea and Petraitytea (2013)
Accrual Quality (AQ)	(Net Income – Free Cash Flow) divided by total assets.	Yearly Financial Statement of the Selected DMBs	Usifoh, Adegbie and Salawu (2019)

Source: Author's Computation (2022)

Results and Discussion

Table 2: Regression and Post-Estimation Results of Hypothesis

Variable	Surviving Banks				Failed Banks			
	Coeff	Std. Err	T-Stat	Prob	Coeff	Std. Err	T-Stat	Prob
Constant	60.603	12.115	5.000	0.000	42.394	8.939	4.740	0.000
CAS	-0.238	0.234	-1.020	0.311	-0.329	0.151	-2.190	0.033
ECS	-0.298	0.124	-2.400	0.018	-1.669	0.790	-2.110	0.039
LS	-1.439	0.399	-3.600	0.000	-0.406	0.246	-1.650	0.104
DL	0.256	0.190	1.350	0.182	0.007	0.121	0.060	0.954
AQ	13.854	10.895	1.270	0.207	-7.004	7.701	-0.910	0.367
<i>Adj. R</i> ²	0.181				0.338			
<i>F</i> -Stat	Fixed-effects (within) regression with Cluster standard errors				Pooled OLS with Robust standard errors			
Wald-Stat	F _(5, 100) = 4.44 (0.00)				F _(5, 59) = 5.75 (0.00)			
Hausman Test	chi ² ₍₅₎ = 179.45 (0.00)				chi ² ₍₅₎ = 32.97 (0.00)			
Testparm Test	F _(15, 85) = 2.22 (0.01)				F _(14, 36) = 1.51 (0.16)			
Heteroskedasticity Test	chi ² ₍₇₎ = 559.26 (0.00)				chi ² ₍₁₎ = 19.80 (0.00)			
Serial Correlation Test	F _(1, 6) = 45.353 (0.00)				F _(1, 6) = 4.315 (0.07)			
Cross-Sectional Dependence Test	0.890 (0.37)				0.890 (0.37)			

Dependent Variable: CRM

@5% significance level

Source: Author's Computation (2022)

Regression Equation Results

$$CRM_{it} = \alpha_0 + \beta_1 CAS_{it} + \beta_2 ECS_{it} + \beta_3 LS_{it} + \beta_4 DL_{it} + \beta_5 AQ_{it} + \varepsilon_{it}$$

Surviving Banks Regression Equation Results:

$$CRM_{it} = 60.603 - 0.238CAS_{it} - 0.298ECS_{it} - 1.439LS_{it} + 0.256DL_{it} + 13.854AQ_{it} + \varepsilon_{it} \dots \text{restated}$$

Failed Banks Regression Equation Results:

$$CRM_{it} = 42.394 - 0.329CAS_{it} - 1.669ECS_{it} - 0.406LS_{it} + 0.007DL_{it} - 7.004AQ_{it} + \varepsilon_{it} \dots \text{restated.}$$

Pre-Estimation Results for Surviving Banks

To determine the most appropriate estimating approach, the study carried out a Hausman test to decide whether to use fixed effects or random effects techniques for the Surviving Banks. Judging by the Hausman probability value of 0.00, we reject the null hypothesis (random effect) and accept the use of fixed effect analysis as there is a correlation between the unique errors and the regressors in the model. The testparm test was conducted to determine whether the coefficient for all years is jointly equal to zero, requiring the choice of time fixed effect model. The testparm test revealed a probability value of 0.01, so we reject the null (the dummies for all the years are equal to 0) indicating that the coefficients for all the years are not jointly equal to zero. Thus, there is a need for time-fixed effects. For the robustness of the model, Heteroskedasticity, and serial correlation tests were conducted to check for variations in the model's residuals. The heteroscedasticity test result had a probability value of 0.00, we reject the null (homoscedasticity) and conclude that the model is Heteroskedasticity. This implies that the model's residuals are trending over time. The serial correlation test conducted using the Wooldridge test had a probability value of 0.00. We reject the null (no serial correlation) and conclude that there is a serial correlation that causes the standard errors of the co-efficient to be smaller than they actually are and higher than the R-Squared. This implies that the data has first-order autocorrelation and thus, the model is not free from serial correlation problems. Also, a B-P/LM test of independence was carried out to test whether the residuals across entities are not correlated, the test had a probability value of 0.37, we thus reject the null and conclude that there are no cross-sectional dependencies. Due to the result of the heteroskedastic and serial correlation of the model, Model for the Surviving Banks is estimated using Fixed-effects (within) regression with Cluster standard errors.

Pre-Estimation Results for Failed Banks

To determine the most appropriate estimating approach, the study carried out a Hausman test to decide whether to use fixed effects or random effects techniques for the Failed Banks. Judging by the Hausman probability value of 0.00, we reject the null hypothesis (random effect) and accept the use of the fixed effect analysis as there is a correlation between the unique errors and the regressors in the model. The testparm test was conducted to determine whether the coefficient for all years is jointly equal to zero, requiring the choice of time fixed effect model. The testparm test revealed a probability value of 0.16, so we failed to reject the null (the dummies for all the years are equal to 0) indicating that the coefficients for all the years are jointly equal to zero. Thus, there is no need for time-fixed effects. For the robustness of the model, Heteroskedasticity, and serial correlation tests were conducted to check for variations in the model's residuals. The heteroskedasticity test result had a probability value of

0.00 indicating that the model is heteroskedastic, which implies that the model's residuals are trending over time. The serial correlation test conducted using the Wooldridge test had a probability value of 0.07. We fail to reject the null (no serial correlation) and conclude that the data does not have first-order autocorrelation, that is there is no serial correlation that causes the standard errors of the co-efficient to be smaller than they actually are and higher than R-Squared. Thus, the model is free from serial correlation problems. Due to the result of the heteroskedastic and serial correlation of the model, Model five for the Failed Banks is estimated using Pooled OLS with Robust standard errors.

Regression Analysis of Surviving Banks

Table 2 shows the result of the regression analysis for objective of the study, the effect of creative accounting practices (CAP) on credit risk management (CRM) for the Surviving Banks. The probability values revealed that Cash Assets Structure (CAS), Deposit Liability (DL), and Accrual Quality (AQ) (CAS, $\rho = 0.311$; DL, $\rho = 0.182$ and AQ, $\rho = 0.207$) insignificantly affect bank CRM. Equity Capital Structure (ECS) and Loan Structure (LS) (ECS, $\rho = 0.018$ and LS, $\rho = 0.000$) significantly affect banks' CRM.

In assessing the magnitude of the effect as well as the directions, the coefficients of individual constructs of creative accounting practices (CAS, ECS, LS, DL, and AQ) were used. The signs and values of the coefficients showed that CAS ($\beta = -0.238$), ECS ($\beta = -0.298$) and LS ($\beta = -1.439$) negatively affected CRM while DL ($\beta = 0.256$) and AQ ($\beta = 13.854$) exerted a positive effect on CRM.

The magnitude of the effect is measured by the absolute values of the coefficients which means that an increase in the CAS by a percentage would yield a 0.238 per cent decline in CRM; likewise, a percentage increase in ECS would result in a 0.298 per cent decline in CRM; also, as LS increases by a per cent, there would be a fall in CRM by 1.439 while a per cent increase in DL would lead to 0.256 per cent rise in CRM. Also, a per cent increase in AQ would result in a 13.854 per cent increase in CRM.

In conclusion, CAS exerted a negative insignificant effect on CRM, ECS and LS exerted a negative insignificant effect on CRM, while DL and AQ exerted a positive insignificant effect on CRM. The result of the Wald Chi-Squared Test of 4.44 and probability of 0.00 shows that the parameters for the explanatory variables are zero and are significant meaning that the variables did add to the model. That is, the independent variables CAS, ECS, DL, LS, and AQ jointly have significant effects on CRM. Also, the R^2 value of the coefficient of multiple determination of 0.1818 means that the combined changes in CAS, ECS, DL, LS, and AQ would cause 18.18% changes in CRM while the remaining changes of 81.82 per cent are caused by other factors which are not within the coverage of the model five.

Decision: At a level of significance of 5%, the Wald-statistics is 4.44, while the P-value of the Wald-statistics is 0.000, which is less than 0.05 accepted level of significance. Therefore, the study rejected the null hypothesis for surviving banks which states that creative accounting practices do not significantly affect credit risk management (CRM) of listed deposit money banks in Nigeria. We thus conclude that creative accounting practices significantly affect credit risk management (CRM) of listed deposit money banks in Nigeria.

Regression Analysis of failed Banks

Table 2 shows the result of the regression analysis for the study model, the effect of creative accounting practices (CAP) on credit risk management (CRM) for the Failed Banks. The probability values revealed that Cash Assets Structure (CAS), and Equity Capital Structure (ECS) (CAS, $\rho = 0.033$; ECS, $\rho = 0.039$) significantly affect bank CRM. Loan Structure (LS), Deposit Liability (DL), and Accrual Quality (AQ) (LS, $\rho = 0.104$; DL, $\rho = 0.954$ and AQ, $\rho = 0.367$) insignificantly affect bank CRM.

In assessing the magnitude of the effect as well as the directions, the coefficients of individual constructs of creative accounting practices (CAS, ECS, LS, DL, and AQ) were used. The signs and values of the coefficients showed that CAS ($\beta = -0.329$), ECS ($\beta = -1.669$), LS ($\beta = -0.406$) and AQ ($\beta = -7.004$) negatively affected CRM while DL ($\beta = 0.007$) exerted a positive effect on CRM. The magnitude of the effect is measured by the absolute values of the coefficients which means that an increase in the CAS by a percentage would yield a 0.329 per cent decline in CRM; a percentage increase in ECS would result in a 1.669 per cent decline in CRM; also, LS increases by a per cent, would result in a fall in CRM by .406 and a per cent increase in AQ would result in a 7.004 per cent decrease in CRM. while a per cent increase in DL would lead to a 0.007 per cent rise in CRM.

In conclusion, CAS and ECS exerted a negative significant effect on CRM. LS and AQ exerted a negative insignificant effect on CRM, while DL exerted a positive insignificant effect on CRM. The result of the Wald Chi-Squared Test of 5.75 and probability of 0.00 shows that the parameters for the explanatory variables are zero and are significant meaning that the variables add to the model. That is, the independent variables CAS, ECS, DL, LS, and AQ jointly have significant effects on CRM. Also, the R^2 value of the coefficient of multiple determination of 0.3382 means that the combined changes in CAS, ECS, DL, LS, and AQ cause 33.82% changes in CRM while the remaining changes of 66.18 per cent are caused by other factors which are not within the coverage of the model Decision: At a level of significance of 5%, the F-statistics is 5.75, while the P-value of the F-statistics is 0.000, which is less than 0.05 accepted level of significance. Therefore, the study rejected the null hypothesis for failed banks which states that creative accounting practices do not significantly affect credit risk management (CRM) of listed deposit money banks in Nigeria. We thus conclude that creative accounting practices significantly affect credit risk management (CRM) of listed deposit money banks in Nigeria.

Table 3: Explanation of Coefficient Results

Variable	Surviving Banks				Failed Banks			
	Coeff	Prob	Sign	Sig	Coeff	Prob	Sign	Sig
CAS	-0.238	0.311	Negative	Insignificant	-0.329	0.033	Negative	Significant
ECS	-0.298	0.018	Negative	Significant	-1.669	0.039	Negative	Significant
LS	-1.439	0.000	Negative	Significant	-0.406	0.104	Negative	Insignificant
DL	0.256	0.182	Positive	Insignificant	0.007	0.954	Positive	Insignificant
AQ	13.854	0.207	Positive	Insignificant	-7.004	0.367	Negative	Insignificant

Source: Author's Computation (2022)

Discussion

The result of this study shows that creative accounting practices significantly affect the credit risk management of listed deposit money banks in Nigeria. This is in line with our *a priori* expectation for this study. Many studies agree with our findings. The study of Olayinka, Uwuigbe, Eriabie, Uwuigbe, and Amiolemen (2019). findings revealed that there is no significant association between enterprise risk management and accounting quality during the pre-ERM period. Their study further revealed that there was a significant positive relationship between enterprise risk management (ERM) and accounting quality during the post-ERM period. This empirically shows that ERM implementation by Nigerian financial firms has a significant and positive impact on accounting quality, which has a greater tendency to minimize the practice of discretionary accruals. Adeusi, Akeke, Adebisi, and Oladunjoye (2014) and Wanjohi, Wanjohi and Ndambiri (2017) studies revealed that there is an inverse relationship between the financial performance of banks and doubtful loans, while the capital asset ratio was found to be positive and significant on bank financial performance. Similarly, it suggests the higher the managed funds by banks the higher the performance. The study also found a significant relationship between banks' performance and risk management. Wanjohi *et al.* (2017) further found that good financial risk management practices have a positive correlation to the financial performance of commercial banks.

From the individual constructs, it can be implied that banks involved in creative account practice are inefficient in analyzing the credit quality of their clients, resulting in a higher amount of NPLs. On the other hand, credit risk operational practices seem to affect the performance of financial institutions negatively and insignificantly in the country. Also, creative accounting or false information on the loan structure of deposit money banks may not present the true situation in bank financial health which may impact their analysis, credit and loan offerings.

Creative accounting has an adverse effect on the banks as shown in this study and also supported in the work of Essien and Ntiedo (2018), who contended that there are grounds to deceive the public, potential investors, and shareholders, increasing the rate of firm failures at a decreasing rate from bank accounts reports. However, the study found that a plethora of restrictions in the absence of adequate checks, sanctions, and rewards provide favorable conditions for creative accounting by allowing for misleading and cosmetic financial reporting. Egolum and Onodi's (2021) study found that a well-designed structure of accounting regulation discourages innovative accounting practices in corporate financial reporting and contributes to Nigerian bank distress. Another finding was that creative accounting practice had a significant influence on both accounting policy selection and transaction manipulation in financial reporting. In the long run, the effect of creative accounting practice affects credit risk management and has a significant direct association with the bank's financial performance and ultimately survival. This was established in the work of Li and Zou (2014), Nyabicha (2017), Adegbe and Adebajo (2020).

It is advisable from this study that banks should be careful as they handle their loan structure. poor loan structure decisions based on credit risk may trigger a wrong mix of debt and equity

that may lead to a high cost of capital, increase financial risk, lower performance and survival problems. Special attention needs to be paid to how banks go about their Tenor-Based Structures, Short-term notes, revolving loan, factoring, medium/Long-Term debt, risk-based structures, senior debt, secured debt, debentures and subordinated debt credit risk management in Nigeria.

Conclusion

The result of the surviving banks shows that only equity capital structure and loan structure has a significant negative effect on credit risk management while cash asset structure, deposit liability and accrual quality are insignificant to credit risk management. For the failed banks, cash asset structure and equity capital structure both have a negative significant effect on credit risk management while loan structure, deposit liability and accrual quality were insignificant to credit risk management. In general, given the coefficient and the level of significant being below 5%, creative accounting has a significant effect on credit risk management.

Recommendation

The study recommended that the management team of the banks should give sound and standard reporting of financials and ensure that credit portfolio of the deposit money banks is prudently managed to grow year on year in the right mix and without contravening the statutory guidelines to avoid bad and doubtful loan classifications so as to achieve sound credit risk management.

Suggestion for Further Studies

In addressing the problem of creative accounting practices on business survival among Nigeria deposit money banks, selected DMBs were used which included the 5 first tier banks and 2 other fairly big banks for the Surviving Banks, future studies could consider all Surviving Banks in the same manner. From the scope perspective, this study concentrated only on the banking sector, future studies could expand the scope by including other sectors including the manufacturing sectors or all the sectors using all the companies listed on the Nigerian Stock Exchange.

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