



Credit and Market Risks Disclosure: Correlated Effect on Deposit Money Banks' Performance

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Abstract: The purpose of the study is to investigate whether credit and market risk disclosure affect the return on capital employed of deposit money banks in Nigeria. The study employed an ex-post facto research design, and data were retrieved from reports of the companies from the 2018-2022 financial years. The analytical technique used for this study was the panel regression method and correlation. The research results indicated that non-performing loans and advances, as a measure of credit risk, exerted a negative relationship with the performance of deposit money banks. The study further showed that market risk has a negative and significant relationship with the performance of deposit money banks. It was recommended that deposit money banks should continue to implement risk management strategies to enhance their resilience to credit and market risk, and to constantly monitor borrowing and lending rates to ensure that the cost of borrowing do not rise to the detriment of lending rates.

Keywords: Credit, market, risk and disclosure.

1. Introduction

The banking sector plays a critical role in the economic development of any nation. They serve other sectors by making available financial resources in expanding their scope and contribute significantly to growth in terms of real gross domestic product (GDP). In this light, any unfavourable event that may affect its performance

and functionality will directly result in downward growth of the entire economy of such a country if not timely addressed. Crises in financial institutions are not only peculiar to developed economies but have also, on many occasions, affected most developing countries, as was experienced in Nigeria in the early 90s and most recently the 2004 crisis, which resulted in bank consolidation in 2005. This reform has helped in strengthening the supervisory role of the apex bank (CBN), thereby encouraging market discipline as a complement to supervisory and regulatory tools for monitoring risk at individual banks.

The Central Bank of Nigeria (CBN) governor in 2009 maintained that some banks faced liquidity constraints. Thus, their activities were reduced because of their response to the perceived risk of lending to each other, making profits and returns suffer (Olajide, 2013). This led not only to liquidity and credit shortages but also resulted in the loss of public confidence as the financial system and entire economy were in a sour state. The fact is that banks have a dominant position in developing economic financial systems and are engines of economic growth (Levine, 1997); they cannot operate without risk. Risk implies exposure to uncertainty or threat (Kannan & Thangavel, 2008). Traditionally, risks have been viewed as negative consequences and unfavourable events. The consideration of risk from the negative perspective is obstructive and deceptive for two main reasons. First, uncertainty may manifest in either negative (threat) or positive (opportunity) form, or both; and second, the way a risk is perceived influences how it is handled (Hillson, 2006). Risk sometimes entails some economic benefits, as firms may derive considerable gains by taking risks. Colquitt (2007) maintained that it is quite difficult for the banking system generally to monitor and review its risk management. Risk is the probability of deviation of reported return from expected return that is derived from business objectives.

Effective risk disclosure by management constitutes a critical component of a bank's overall risk management strategy and is essential to the long-term success of any banking organisation. It becomes more and more significant to ensure sustainable profits in banks (Singh, 2013). Risk management and its disclosure are regarded as one of the most important concerns of bank executive directors, and the risk management activities are expected to be collaborative because their expansion will dampen the variability in periodic earnings, thereby reducing the average cost of funding the bank. Risk disclosure is expected to improve the effectiveness

of communication between companies and their stakeholders, and could inform investment choices to prospective investors. This implies that information disclosed should be correct and timely with respect to business strategy, financial performance and corporate governance of a firm. The disclosure of relevant information in connection with the market position and credit management of a bank is very significant. In practice, risk disclosure often fails to meet expectations, as demonstrated by repeated bank failures. The recent tumult relating to credits and market risk in Nigerian banks has drawn attention to the risk disclosure function since the number and extent of banks' exposures to risk have increased significantly.

Objectives of the Study

The broad objective of this study is to examine the effect of credit and market risk disclosure on the performance of deposit money banks in Nigeria.

The specific objectives of the study are:

1. To examine whether credit risk management affects the return on capital employed of deposit money banks in Nigeria.
2. To examine whether market risk management affects the return on capital employed of deposit money banks in Nigeria.

2. Theoretical Framework and Literature Review

Theoretical framework

Contingency planning theory (Woodward, 1956): The theory was propounded by Joan Woodward in 1956. The theory of contingency planning is a crucial element of risk management. Most of the time, it refers to the business continuity planning approach. The theory is based on the ground that since all risks cannot be totally eliminated in practice, residual risks always remain; therefore, they should be provided for in case of exigency to salvage unexpected events. However, in most cases, combinations of adverse events and vulnerabilities may conspire to bypass or overwhelm even the best information security controls designed to ensure confidentiality, integrity and availability of information assets (Hisnson & Kowalski, 2008). In this study, contingency planning theory is seen as the summation of events, controls, processes, plans, etc., connecting to major occurrences and adversities. In all senses, contingency planning theory involves preparing for the unexpected and

planning for the unknown. It involves the act of preparing for major incidents and disasters, formulating flexible plans and arranging suitable resources that will come into play in the event, whatever actually eventuates.

Stakeholders' theory (Freeman, 1984): According to the proponent, stakeholders involve groups or individuals who can affect or are affected by the achievement of the organisation's objectives. From this perspective, the stakeholders of a bank in this study are investors, regulators, the general public and other stakeholders that are in any way affected by a bank's operations. A stakeholder-based perspective of value is important because managers focus attention on things that lead to higher performance based on what actually measured (Sachs & Riihli, 2011). There exists a social contract that banks and the environment have to fulfil so as to ensure compliance with the value systems of society. While the stakeholders' theory offers an explanation of obligation to stakeholders and presents the duties and the responsibilities that the company has toward the stakeholders. Deegan (2010) maintained that the importance of stakeholder theory is the mechanism to control managers through the disclosure of information. The bank must disclose all the information about its economic, environmental and social issues to enable those affected by the activity to evaluate its performance. Risk disclosure also enables stakeholders to manage their risk positions (Linsley & Shrivies, 2005). Since bank risk disclosure practices could savage economic misfortune to a nation, this implies that stakeholder groups could also be directly affected by the outcome of non-disclosure.



Figure 1: Conceptual Framework

Risk Disclosure

Disclosure of the financial activities of banks is an important aspect of the regulatory control to strengthen the industry. This has disregarded the assumption

that banks are owned by certain individuals, not the public. Disclosure per se provides an opportunity for investors and parties in business to evaluate the risks and returns of their investment and also to appreciate the height at which the business has reached despite several challenges. However, to avoid future arguments and doubts about its future existence, banking sectors have been encouraged to disclose their information. Given this assumption, Berthelot et al. (2003) argue that environmental disclosure is the set of information items that relate to a firm's past, current and future environmental management activities and performances and information about the past, current and future financial implications resulting from a firm's environmental management decisions or actions. Ibrahim, Ismail and Zabara (2011) noted that the Malaysian financial reporting standard lays down the basis for the presentation and disclosure of financial statements of Islamic financial institutions to ensure comparability of financial statements with those in previous periods and with those of other Islamic financial institutions. Several studies have identified the relationship between risk disclosure and performance, such as that by Nier and Baumann (2003). This disclosure is often connected with risk and performance, as an increase in disclosure increases trading and enhances the overall risk-return trade-off. Healy and Palepu (1993) observed that mandatory disclosure plays an important role in influencing the manager's tendency to disclose risk-related information and also restricts the communication link with outside investors. Solomon, Solomon, Norton and Joseph (2000) maintain that companies should decide on the type of risk information for disclosure purposes, regardless of whether the information is mandatory or voluntary.

Credit Risk Disclosure

Credit risk plays an important role in banks' profitability since a large chunk of banks' revenue accrues from loans, from which interest is derived. It arises from a transaction where a bank borrower fails to meet its obligation with respect to the agreed terms and conditions specified in the loan. The Basel Committee on Banking Supervision (2001) defined credit risk as the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Chen and Pan (2012) see credit risk as the fluctuations in the value of debt instruments due to changes in the fundamental creditworthiness of borrowers and counterparties. Coyle (2000) also

defines credit risk as losses that occur when a credit customer is not financially capable or deliberately fails to pay what is owed as specified by the terms of engagement. Credit risk is the exposure faced by banks when a borrower (customer) defaults in honouring debt obligations on the due date or at maturity (Kolapo et al., 2012). Kaaya and Pastory (2013) further stressed that credit risk can be a function of other factors such as insufficient knowledge on financial risks and especially credit risk at institution level; lack of appropriate and effectively implantable credit policies, inadequate capital level and unstable liquidity status, laxity in credit assessment, and poor lending practices and procedures. Furthermore, Kithinji (2010) points out that government interference and inadequate supervision by the central bank and direct lending as other sources of credit risk.

Credit Risk Management (CRM) has a systematic analysis of various forms of risks that could influence the repayment of loans given by the bank (Asha, 2015). The issue of effective credit risk management in banks has come into focus due to the global financial crisis, as persisting credit risk gradually impacts the liquidity and solvency of banks and may consequently lead to a total failure as default on loan repayment, together with an interest rate increase correspondingly. The objective of credit risk management is to reduce a bank's risk-adjusted rate of return by keeping credit risk exposure within acceptable limitations. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. The effective management and disclosure of credit risk is a critical component of a comprehensive approach to risk management and is essential to the long-term success of any banking organisation. Ravi (2012) maintained that credit risk management processes require the banks to establish a clear process for approving new credit as well as for the extension to existing credit. In their study, Kolapo, Ayeni and Oko (2012) measured credit risk as a function of the ratio of Non-performing Loans to Loan and Advances (NPLA) and the ratio of Total Loan and Advances to Total Deposit (LA/TD) used as indicators of credit risk. The study, therefore, adopts this formula, given that significant items used in determining the creditworthiness of banks were used.

$$\text{Credit Risk} = \text{NPLA}$$

$$\text{NPLA} = \text{Non-performing Loans and Advances}$$

$$\text{TLA} = \text{Total Loans and Advances}$$

Market Risk Disclosure

Banks and financial institutions are undergoing a sea change and today face an environment marked by growing consolidation, rising customer expectations with respect to their commodities, increasing regulatory requirements, proliferating financial engineering, credit spread and equity deficiency. Generally, market risks are external factors that affect banks, and these factors also have some negative effect on the overall economy of a country (Aruwa & Musa, 2014). Market risk is complex and could cause very simple losses within a short time, among unpredictable market situations, hence leading to a fall among institutions in strict situations. The Basel Committee on bank supervision (2006) define market risk as the risk of loss resulting from movements in market prices. Aykut (2016) sees market risk as the risk of damages in liquid assets resulting from the changes in market prices of commodities, which include interest rate, currency, and equity risks. This risk has contributed recently to the growing number of bank failures and has resulted in regulators and banks demanding greater insight to control, measure, evaluate and manage their processes adequately.

Jane, Willy and Kennedy (2016) summarised that market risks could result in substantial losses very rapidly in unpredictable market situations and the complete collapse of several institutions. Worzala (1995) observed that market risk could also be where banks accept financial instruments open to market price unpredictability as collateral for loans. Koch and MacDonald (2014) in their study maintained that market risk can be commonly classified into three lesser risks of stock price risk, interest rate risk and foreign exchange risk. However, given the need to address critical market risk facing banks in Nigeria, the study adopts Jane, Willy and Kennedy's (2016) approach of measuring market risk. These authors measure market risk using Net Interest Margin (NIM) as a proxy for interest rate risk exposure.

$$\text{Market risk} = \text{NIM}$$

Where NIM = Net Interest Margin

Empirical Review

The concept of risk is not new in business; it has been in existence as old as business transactions. Management's negligence in handling risk has resulted in too many business failures. The management approach has sparked a strong argument among

scholars in recent times. Ferguson, Lam and Lee (2002) examined the impact of international capital market pressures on voluntary disclosure of former state-owned enterprises in China listed at the stock exchange of Hong Kong. Their findings showed that overall disclosure scores are highly variable, ranging from 0.03 to 0.44. Disclosure by type of information varies considerably. Fathyyah and Lee (2015) used a content analysis method to investigate the relationship between corporate risk disclosure and corporate sustainability of companies in Malaysia. The study covered 80 publicly listed companies using a simple random sampling technique. The result indicates that there is a significant positive result to show that corporate risk management creates sustainability for a company. Mohammad (2015) examined the relationship between banking risk and banks' performance using a set of panel data concerning banks in a developing economy (Pakistan) and a developed economy (the USA). Performance was measured using return on assets, while capital adequacy ratio, bank size, liquidity risk, leverage and management quality were used in place of risk management. The study used panel data obtained from banks in Pakistan (LDC) and the USA for the period 2004 to 2014, which were analysed using descriptive statistics and pooled linear regression models. The results showed that banking risk management had a positive impact on banks' performance. Kolapo, Ayeni and Oke (2012) used panel regression analysis to study credit risk and commercial banks' performance in Nigeria between 2000-2010. The results showed that the effect of credit risk on bank performance, measured by the Return on Assets of banks, is cross-sectionally invariant. That is the effect is similar across banks in Nigeria, though the degree to which individual banks are affected is not captured by the method of analysis employed in the study. Harcourt (2017) investigates the impact of credit risk management on the performance of deposit money banks in Nigeria using the over-parameterised and parsimonious ECM and Granger causality. Findings demonstrate the selected credit risk management. Performance of banks was measured as return on assets (ROA) and return on equity (ROE). The results found evidence of a significant Granger causality relationship between the various credit risk management indicators and the various measures of performance. Yimka, Abimbola and Olusegun (2015) employed multiple regression tools based on the E-views software to examine the impact of credit risk management on financial performance in Nigeria. The study used loan loss provisions, total loans and non-performing loans as measures of credit risk, while return on equity was used

as an indicator for financial performance. The results of the study discovered that the measures of credit risk management adopted had a significant effect on financial performance. Muriith, Muturi and Waweru (2016) used panel data techniques of random effects, fixed effects estimation and generalised method of moments to assess the effect of market risk on the financial performance of commercial banks in Kenya. Market risk was measured by the degree of financial leverage, interest rate risk and foreign exchange exposure, while financial performance was measured by return on equity. The results showed that financial leverage, interest rate and foreign exchange exposure have a negative and significant effect on bank profitability. Wachiaya (2011) conducted a survey to categorise the market risk management techniques used by commercial banks in Kenya and their effectiveness in moderating financial loss. The study adopted a census survey research design. The result found that the main techniques used were Scenario Analysis and Stress Testing to a very large extent. The major finding was that limits ensured management of risk exposure within the bank's risk appetite. Diby, Dilesha, and Pierre Ning (2019) employed a pooled ordinary least squares model to examine the effect of market risk on the financial performance of 31 non-financial companies. The study used a degree of financial leverage, the book-to-market ratio, and the gearing ratio as the indicators of market risk. It was found that different measures of market risk have substantial negative effects on the companies' financial performance.

3. Research Methodology

The study adopts an ex-post facto research design to examine the risk disclosure on the performance of deposit money banks listed on the Nigerian stock exchange, as well as the impact of subsisting between variables in the hypotheses. The choice of ex-post facto was informed by the fact that the dependent and independent variables of the study do not provide the opportunity to be manipulated, as such variables had already taken place, therefore, the research was conducted after the fact. Most risks are reported qualitatively (non-financial) in the annual reports of the respective banks, to provide support to the financial report communicated to stakeholders. Hence, the World Bank disclosure index was used in measuring the respective risk. To show the effect of risk management disclosure on the performance of deposit money banks in Nigeria, the sample size consisted of fourteen (14) banks

quoted and trading consistently on the Nigerian stock exchange, covering the 2017 to 2021 financial year. Examining a total of 14 banks listed over a five-year period yielded a sample of 70 in total. These banks are considered for the study in that they maintained a minimum cash reserve of ₦ 25 billion with the Central Bank of Nigeria (CBN) and are registered to operate in accordance with the relevant Act of Banks and Other Financial Institutions Act. The bank's disclosure items were considered to comply with the Basel Committee on Banking Supervision (2011) and the World Bank disclosure index. The study covered five years of consolidated financial statements of these banks, after the adoption of the International Financial Reporting Standard (IFRS) in 2012. This is to ensure that there is consistency and uniformity in financial reporting amongst the study banks. The study population is shown in the table below:

Table 1: List of quoted deposit money banks in Nigeria

<i>S/N</i>	<i>Names of Banks</i>	<i>Year of incorporation</i>	<i>Year of listing</i>
1	Access Bank Plc	1989	1998
2	Diamond Bank Plc	1990	2005
3	First City Monument Bank Plc	1982	2004
4	Guaranty Trust Bank Plc	1990	1996
5	Union Bank of Nigeria Plc	1969	1971
6	Fidelity Bank Plc	1987	2005
7	Zenith Bank Plc	1990	2005
8	First Bank of Nigeria Plc	1894	1971
9	Stambic IBTC Bank Plc	1989	2005
10	Sterling Bank Plc	1960	1992
11	Unity Bank Plc	1988	2010
12	Wema Banl Plc	1987	1990
13	ECO Bank	1985	2005
14	Polaris Bank	1989	2006

Source: Nigeria Stock Exchange (NSE) Factbook, 2021.

Model Specification

As shown in this study, banks' performance generally is a reflection of efficiency in risk management. This is because the existence of risks such as credit risk and market risk is quite dangerous to a bank's existence and could restrict the achievement of its successes, but when measures are taken to manage this risk, they may provide reassurance to investors and other institutions or stakeholders. The dependent

variable in the regression equation is return on capital employed (ROCE) as a measure of company performance. The independent variables constitute credit risk disclosure and market risk disclosure.

Thus, the model is specified as follows:

$$PERF = f [CRDR, MKTR] \tag{1}$$

$$PERF_{it} = \beta_0 + \beta_1 CRDR_{it} + \beta_2 MKTR_{it} + \mu_{it} \tag{2}$$

Where:

PER = Performance (proxied by ROCE)

ROCE = Return on Capital Employed

MKTR= Market Risk Proxied with Net Interest Margin (NIM)

CRDR = Credit Risk Proxied with Non-performing Loans (NPLA)

μ_t = error term

it = Firm i in year t

β_0 = Constant

β_1, β_2 & β_3 = regression coefficient.

Techniques of Data Analysis

The study data has both cross-sectional and time series attributes. To estimate the model, therefore, the researcher employed the Panel Least Squares regression technique. Panel least squares regression analysis entails estimating both the fixed effects and random effects. When dealing with firms drawn from a population, as is the case with this study, the assumption of the random effect model has greater appeal. The Hausman test identifies whether the fixed effects estimation would be almost as good as random effects and enables a choice between a fixed or random effects specification. It involves two sets of estimates, one of which is consistent under both the null and alternative hypotheses, and another that is consistent only under the null are employed. The Hausman test is a test of H_0 : that random effects would be consistent and efficient, versus H_1 : that random effects would be inconsistent. Thus, the null hypothesis stipulates that the preferred model is the random effect if the Hausman test statistic exceeds the relevant critical value (p-value is greater than 0.05). Finally, the outcome of the Lagrange Multiplier Tests for Random Effects, that

is, a test of no random effect, determines the best model choice between pooled OLS and random effects. If the Breusch-Pagan Lagrange Multiplier test is less than 0.05, reject the null hypothesis that the random effect is inefficient.

4. Result Presentation, Interpretation and Discussion of Findings

Summary Statistics for the Dataset

Table 2: Correlation Between Liquidity Risk Dimensions and Return on Capital Employed

	<i>ROCE</i>	<i>NPLA</i>	<i>NIM</i>
Mean	4.04	12.19	0.06
Median	2.60	4.45	0.05
Maximum	93.3	236.36	0.59
Minimum	-337.24	0.000	0.03
SD	37.08	23.99	0.05
Skewness	-5.50	5.88	9.06
Kurtosis	48.45	49.15	93.49
Jarque-Bera Stat	14943.42	15502.65	58201.74
Prob. of J-B stat	0.000	0.000	0.000
Sum	662.45	1999.7	9.25
Sum Sq. Dev	224086.4	93828.48	0.29
Obs.	165	164	165

Source: Researcher's compilation 2021 from E-view10

Summary statistics for the response variable presented in Table 4.2 show that the mean of firm performance (ROCE) is 4.04, which is very far from both the maximum and minimum values of 93.3 and -337.24. This suggests a great disparity in the average performance of the firm under study. For the explanatory variables, the mean of NPLA is 12.19, which is very far from the maximum value of 236.36. The high standard deviation implies that the magnitude of non-performing loans and advances varies widely among the firms in the study. The mean of net interest margin (NIM) is 0.06 and very similar to the median and minimum. The standard deviation is low, indicating similarity in the effect of this variable. The plausible reason is that changes in interest rates have a similar impact on the firms under

study. The difference in impact is closely associated with the volume of loans as advances and deposits. The Jarque-Bera statistic reveals that all the variables in the estimated model are not normally distributed.

Table 3: Correlation Result

	<i>ROCE</i>	<i>NPLA</i>	<i>NIM</i>
<i>ROCE</i>	1		
<i>NPLA</i>	-0.285** 0.000	1	
<i>NETINTM</i>	-0.202** 0.009	0.051 0.514	1

Source: Researcher's compilation 2021 from SPSS Statistics 24 **Significant at 0.01 (two-tailed)

Table 3 shows that the profitability of firms has a negative and significant correlation with non-performing loans and advances (NPLA) and net interest margin (NIM). This result implies that non-performing loans and advances, and NIM move in different directions. In fact, the higher the NPLA, the lower the profitability of the firms. Similarly, the higher the interest rate, especially the cost of funds (borrowing rate), the lower the profit of deposit money banks (DMBs).

Results and Tests of Hypotheses

Table 4: Estimation Result for the Model

<i>Variable</i>	<i>Pooled OLS</i>	<i>Fixed Effects*</i>	<i>Random Effects**</i>
C	8.70 (0.79) {0.432}	3.54 (0.31) {0.757}	6.30 (0.55) {0.581}
NPLA	-0.42 (-3.68)† {0.000}	-0.35 (-2.88) {0.005}	-0.391 (-3.36) † {0.001}
NIM	-146.80 (-2.60)‡ {0.010}	-93.92 (-1.53) {0.127}	-124.53 (-2.17) ‡ {0.030}
R ²	0.120	0.118	0.120
ADJ R ²	0.104	-	-

Source: Researcher's compilation, 2021, from Stata 14. *t-test, **z-test; t/z values in (), p-values in {}; †sig at 1%, ‡sig at 5%

Table 5: Post-Estimation Result for the Model

<i>Variable</i>	<i>Pooled OLS</i>	<i>Fixed Effects</i>	<i>Random Effects</i>
F-Stat 1(2)	7.30	3.74 (2.01)	-
Prob. F-Stat 1(2)	0.0001†	0.013 (0.031) ‡	-
Wald Chi 1(3) (Prob.)			16.91 (0.0007)
Hausman Test (Prob.)			2.59 (0.459)
Bruesch-Pagan LM: -Cross-section -Time -Both			0.21(0.650) 3.33(0.07) 3.54(0.06)

Source: Researcher's compilation, 2021 from Stata 14, t/z values in (), p-values in {}; †sig at 1%, ‡sig at 5%

Table 4 depicts the Panel least squares regression results for both the fixed effects and random effects. When working with data from firms drawn from a population, it is customary to assume the presence of fixed effects. However, it is important to test whether the fixed effects estimation would be almost as efficient as random effects. In Table 5, the Wald chi-square result ($\chi = 16.91$, $p = 0.0007$) show that the variables can be estimated using the random effects regression model while the Hausman tests results (2.59, $p = 0.459$) show that between the fixed effects and random effects results, the random effect result is more efficient and consistent with the assumptions of the null hypothesis. Furthermore, the researcher carried out the Lagrange Multipliers (LM) test to ascertain the choice of the preferred model between the random effects and the pooled ordinary least squares results. The Bruesch-Pagan LM ratio shows that the random effect is still the preferred model for interpretation, as the test statistic is not significant at 5 per cent.

Test of Hypotheses

The hypotheses of the study were tested using the random effects estimation result in Table 4.3a. The Wald chi-square, Hausman test and Bruesch-Pagan LM test all support the primacy of the random effects for the estimation of the study model.

Hypothesis 1: There is no significant relationship between Credit risk disclosure as measured by non-performing loans and advances, and the performance of deposit money banks in Nigeria.

The basis of the test of this hypothesis is the coefficient of the non-performing loans and advances (NPLA) in Table 4.3a. The coefficient of the variable is -0.391, and the z-statistic is -3.36 with a probability of 0.001. This is less than the probability of 0.01, implying that the coefficient passed the significance test at the 1 per cent level. Consequently, the study rejects the null hypothesis, implying that credit risk has a significant effect performance of deposit money banks in Nigeria as measured by return on capital employed.

Hypothesis 2: There is no significant relationship between market risk disclosure, as measured by net interest margin, and the performance of deposit money banks in Nigeria

The study tested this hypothesis using the coefficient of net interest margin (NIM), which is -124.53, and the z-stat is -2.17 with a probability of 0.030. This is less than a 5 per cent critical value, and it implies that the coefficient passed the significance test at the 5 per cent level. Thus, the study rejects the null hypothesis. The result indicates that market risk has a significant but negative relationship with the performance of deposit money banks in Nigeria as measured by return on capital employed.

Discussion of Findings

Credit risk disclosure and performance of deposit money banks

From the estimated result in Table 4, the test of this hypothesis is positive and significant at less than a 1 per cent level. This result shows that credit risk disclosure has a significant and negative relationship with the performance of deposit money banks in Nigeria, in line with the study's theoretical expectations. Indeed, the higher the level of non-performing loans and advances, the higher the credit risk. Provisioning for loan losses reduces the level of profitability of DMBs and hence return on capital. The findings agree with the conclusions of Ramazan and Gulden (2019), whose study result reveals a negative relationship between credit risk and performance of banks in Turkey, but are inconsistent with the findings of Kolapo et al. (2012), who find that credit risk is cross-sectionally invariant to performance.

Market risk disclosure and performance of deposit money banks

The result of the test of this hypothesis is negative and significant at 5 per cent, in line with the a priori expectation. In reality, if the rate of change in borrowing cost

is higher than the rate of change in lending, it will have a negative impact on the profitability of DMBs. The result affirmed the findings of Jane et al. (2016), whose findings showed that interest rate and foreign exchange exposure have a negative and significant relationship with bank profitability. However, this study's findings are at variance with the conclusions of Aykut (2016) finds that interest rate does not significantly affect banking sector profitability.

5. Summary of Findings, Conclusion and Recommendations

The study was undertaken to assess the effect of risk disclosure on the performance of deposit money banks in Nigeria. Banking sector is a critical segment of the financial sector in the whole world; they facilitate and make resources available to expand the scope of other sectors in the economy, which have the direct potential to increasing efficient growth.

First, the results show that amongst the risks the banking sector is exposed to, market risk and credit risk are most pervasive. The result of non-performing loans and advances as a measure of credit risk reveals that a negative relationship exists between NPLA and the performance of deposit money banks. This indicates that when a bank borrows much from its customers, the likelihood of default increases and the higher the propensity of default, the greater the amount of provisioning for non-performing loans. Higher provisions imply lower profits and hence return on capital employed.

The study also reveals that market risk has a negative and significant relationship with the performance of deposit money banks. Market risk has a significant effect on deposit money banks. If borrowing costs are high and DMBs are unable to transfer a commensurate proportion to customers, it will reduce the margin available to the DMBs.

Conclusion

The importance of the banking sector cannot be overemphasised, given its roles and contributions in expanding the economy of any nation. The sector is critical because it drives credit creation that facilitates commercial transactions, thus ensuring consistent growth of the economy.

The study results show that credit risk and market risk have a significant effect on the return on capital employed (ROCE) of deposit money banks in Nigeria.

Generally, risks can have grave consequences on all performance indicators if not properly managed. To guard against the probable risk of poor return and cash flow volatility, it is important for banks to put in place financial risk management strategies and a qualitative approach that will minimise credit and market risk in the banking sector.

Recommendations

Following the discussions above, the study therefore makes the following recommendations,

1. Deposit Money Banks should continue to implement risk management strategies to enhance their resilience to credit risks.
2. Deposit Money Banks in Nigeria should constantly monitor borrowing and lending rates to ensure that the cost of borrowing does not rise to the detriment of the lending rate.

References

- Akomeah, M., Kong, Y., Hu, X., & Afriyie, S (2017). Bearing of credit risk management on financial performance: Evidence from financial institutions in Ghana". *American Journal of Multidisciplinary Research*, 5(2), 150 -160
- Aruwa, S.A., & Musa, A. O. (2014). Risk components and the financial performance of deposit money banks in Nigeria. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 514-522.
- Asha, S (2015). Effect of credit risk management on private and public sector banks in India. *International Journal of academic research in business and social science*. 5(1), 2222-6990.
- Aykut, E. (2016). The effect of credit and market risk on bank performance: Evidence from Turkey. *International Journal of Economics and Financial Issues*, 6(2), 427-434.
- Chen, K. & Pan, C. (2012). An empirical study of credit risk efficiency of the banking industry in Taiwan. *Web Journal of Chinese Management Review*, 15(1), 1-16.
- Colquitt, J. (2007). *Credit risk management: How to avoid lending disasters & maximise earnings*. 3rd Edition. McGraw-Hill. USA.
- Coyle, B. (2000). *Framework for credit risk management*, Chartered Institute of Bankers, United Kingdom.
- Deegan, C. (2010). *Financial accounting theory*, McGraw-Hill Book Company, Sydney.

- Diby, F., Dilesha N., Pierre. A & Ning, D (2019). Market risk and financial performance of non-financial companies listed on the Moroccan Stock Exchange. *Risk* 7(1), 20.
- Doherty, N. A. (2000). *Integrated risk management - Technologies & strategies for managing corporate risk*. New York, NY: McGraw-Hill.
- Fathyah, H., & Lee, T. (2015). Corporate risk management disclosure and sustainability of public-listed companies in Malaysia. The role of diversification. *Research Gate*, 1-6.
- Ferguson, M., Lam, K., & Lee, G. (2002). Voluntary disclosure by state-owned enterprises listed on the stock exchange of Hong Kong. *Economic, Business & Financial Accounting*. 13(2):125 – 152
- Freeman, R.E. (1984). *Strategic management: A stakeholder approach*. Prentice-Hall, Englewood Cliffs, NJ.
- Harcourt, E (2017). Credit risk management and performance of deposit money banks in Nigeria. *International Journal of Managerial Studies And Research*. 5(8), 47-57.
- Healy, P. M., & Palepu, K. G. (1993). *Voluntary corporate disclosure: Who, what, and why? Working Paper*. MIT Sloan School of Management, Cambridge, MA.
- Hinson, D & Kowalski, L (2008). *Roles and responsibilities for contingency planning*. London: UCL Press.
- Jane, G., Willy, M., & Kennedy, M. (2016). The effect of market risk on the financial performance of commercial banks in Kenya. *Journal of Finance and Accounting*. Vol. 4(4). 225-233
- Kaaya, I & Pastory, D (2013). Credit risk and commercial banks performance in Tanzania. A panel data analysis. *Research Journal of Finance and Accounting*. 4(16), 2222-2847.
- Kannan, N., & Thangavel, N. (2008). Risk management in the financial services industry. *Academic Open Internet Journal*, 22(7).
- Kithinji, A. M. (2010): Credit risk management and profitability of commercial banks in Kenya, School of Business, University of Nairobi, Kenya.
- Koch, T., & MacDonald, S. (2014). *Bank management*. Nelson Education.
- Kolapo, T., Ayeni, R., & Oke, M (2012). Credit risk and commercial banks performance in Nigeria. A panel model approach. *Australia Journal of Business and Management Research*. 2(2), 31-38.
- Levine, R. (1997). Financial development and economic growth: Views and agenda. *Journal of Economic Literature* 35(2):688-726

- Linsley, P., & Shrives, P. (2006). Risk reporting: A study of risk disclosures in the annual reports of UK companies. *The British Accounting Review*, 38(4), 387-404.
- Mohammad, A. (2015). Capital adequacy and banking risk in Basel 111. *Donnish Journal of Business and Finance Management Research*. 1(5), 060-067.
- Muriithi, J., Muturi, W., & Waweris, K. (2016). Effect of market risk on the financial performance of commercial banks in Kenya. *Journal of Finance and Accounting*. 4(4), 225-233.
- Nier, E. & Baumann, U. (2003). *Market discipline, disclosure and moral hazard in banking*. Bank of England, U.K.
- Olajide, S. (2013). Risk and risk management failure: Lessons for business enterprise. *International Journal of Academic Research in Business and Social Sciences*. 3(2), 2222-6990.
- Ravi, P. (2012). The impact of credit risk management on the financial performance of commercial banks in Nepal. *International Journal of Arts and Commerce*. 1(5), 9-15.
- Sachs, S., & Riihli, E. (2011). *Stakeholders matter: A new paradigm for strategy in society*. Cambridge: Cambridge University Press.
- Singh, A. (2013). Credit risk management in indian commercial banks in the *International Journal of Marketing, Financial Services and Management Research*, 2(7), 47-51
- Solomon, J., Solomon, A., Norton, S. & Joseph, N. (2000). A conceptual framework for corporate risk disclosure emerging from the agenda for corporate governance reform. *The British Accounting Review*, 32, 447-478.
- Wachiaya, J. (2011). *A survey of market risk management techniques by commercial banks in Kenya and their suitability in mitigating financial loss* (Doctoral dissertation, University of Nairobi, Kenya).
- Woodward, J. (1956). *Management and technology*. H. H. stationary office. London.
- Worzala, E. (1995). Currency risk and international property investment. *Journal of Property Valuation and Investment* 13 (5), 23-38.
- Yimkaa, A., Taofeekb, A., Abimbolaa, C., & Olusegun, A. (2015). Credit risk management and financial performance of selected commercial banks in Nigeria. *Journal of Economic & Financial Studies*, 03(01), 01-09