Risk Management and the Performance of Commercial Banks in Nigeria (1994-2016)

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Abstract
This study examined the effect of risk management on bank performance in Nigeria. Two bank performance indicators (return on assets and return on equity) were used as the dependent variables while unsystematic risk management measures including credit risk, liquidity risk, operational risk and capital adequacy risk are the independent variables. The data for the study covering 23 years from 1994 to 2016 were obtained from NDIC annual reports. The SPSS was used to run OLS regression analysis. Results of VIF and Durbin Watson statistics for multicolinearity and autocorrelation respectively confirmed the suitability of the models and reliability of the results. Coefficient of determination showed that risk management variables explained 41% and 23% of changes in return on equity and return on assets respectively. Furthermore, credit risk has a significant negative effect on return on equity and insignificant negative effect on return on assets; Liquidity Management has no significant effect on bank performance; Operational risk has no significant effect on bank performance in Nigeria; while capital adequacy has a significant positive effect on return on equity but a negative insignificant effect on return on assets. The study concluded that there is a poor risk management practice in Nigerian banks. Among others, it recommended that the CBN and other regulators should endeavour to enforce risk identification, assessment, measurement and control mechanisms in line with global best practices in other to avoid financial crisis and also improve on commercial banks' performance.

Introduction

Generally, the financial system is adjudged the life wire of every economy. For this reason, the health of the financial system requires attention (Das & Ghosh, 2007) as its failure can disrupt economic development of the country. The banking system provides financial services, including issuing money in various forms, receiving deposits of money, lending money, processing transactions and the creating of credit (Campbell, 2007). All these activities of the banks have an intrinsic risk in themselves. This makes the banking sector a very risky industry. The risks in the banking sector cannot be eliminated or avoided (Soyemi, Ogunleye & Ashogbon, 2014).They can only be managed to control the degree and direction of their impact on bank performance. Risk management is the identification, assessment and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events (Njogo, 2012).

A study by Agwu, Iyoha, Ikpefan & Okpara (2015) identified five kinds of risk challenges to the Nigerian banking system as credit, liquidity, operational, foreign exchange and interest rate risks. These risks can be grouped under systematic and unsystematic risks. The unsystematic risks are the credit, operational and liquidity risks, which result from internal operations and management decisions of the banks, whereas the systematic risks which are foreign exchange and interest rate risks are imposed on banks by external forces like the Central Bank of Nigeria,

Policy and Foreign Exchange Market operations. All these risks affect bank performance in Nigeria.

In Nigeria, a new face of banking risk management techniques emerged in early 1990's. The new strategy posits that effective risk management starts with first identifying the different types of risk and defining them before attempts to manage them are made (Abiola, & Olausi, 2014). Despite the series of reforms that have been going on since 1999 to improve the capacity and health of Nigerian banks, the major test of risk management efforts of banks in Nigeria was the assessment of the risk asset quality of banks which led to the removal of eight chief executive officers and the injection of N600 billion into the banks (BGL 2010 Banking Report) in order to get the banks to lend again (Adeusi, Akeke, Adebisi & Oladunjoye, 2014). Even after this exercise, the Nigerian banking sector still wallows in risk problems with high rate of non-performing loans, low liquidity rate and prevalent operational risks in form of forgeries and fraudulent acts (Abdullahi, 2013).

Risk is inherent in every business organisation or activity. The risk in the banking sector is more threatening and as such risk management is of grave importance to the sector. In Nigeria like some developing economies where consumer confidence index is low, banking business is riskier than normal (Alajekwu, Okoro, Obialor & Ibenta). Banks have to battle with credit defaults, liquidity problems, balancing bank policy guidelines, regulatory issues and bank operations, as well as keeping pace with capital adequacy.

Extant empirical studies have largely posited that risks have effects on bank performance but grossly disagreed on the direction of such effects. Meaningful policies as well as managerial decisions may suitably emerge from these divergent findings. Akindele, 2012 and Ofosu-Hene & Amoh, 2016 who adopted all the risks in one study found a positive relationship between risk management and bank performance while the study by Oluasnmi, Uwuigbe & Uwuigbe, 2015 found a negative significant effect. Other studies that concentrated on only credit risk such as Kayode, Obamuyi & Owoputi, 2015, Ogbulu & Eze, 2016, found that credit risk impacts on performance but did not indicate the direction, while Almekhalfi , Kargbo & Hu, 2016 noted that credit risk has an adverse effect on bank performance. The present study seeks to examine the effect of risk mamgement on bank performance in Nigeria as well as ascertain the direction of the impact.

Literature Review

Risk is the measure of the level of uncertainty in an event or activity. It is the likelihood of a negative outcome. In finance, it can be defined as the probability that the actual return on investment will be different from the expected return. Taiwo, Ucheaga, Achugamonu, Adetiloye, Okoye and Agwu (2017) in their study opined that risk is the likelihood of losing the principal and or the amount of interests accrued on it either in part or whole. Risk can be managed with the aim to reduce its effect and or maximize benefits. The concept of risk management has to do with the identification, evaluation, and prioritization of risks as well as the harmonized and reasonable use of resources to minimize, supervise, and control the possibility and the effect of inappropriate incidences (Zidafamor, 2016). It covers the practice of identifying risks, evaluating their consequences, and coming up with the decision on the best possible means to minimise it so as to optimise the benefits (Adenkule & Ishola, 2011).

Ideally, a sound risk management practice involves the pursuance of order process whereby those risks with the highest loss and the highest likelihood of occurring are brought under control first, and those with lesser possibility of happening and lesser loss are controlled in descending order (Isa, 2014). He also noted that the process of risk management can be very challenging in practice because balancing between these probabilities can easily be

mismanaged. However, it is only an ideal risk management procedure that can help to reduce spending as well as the adverse effects of risks. For the financial institutions, risk management allows them to isolate and stop the dangers to which they are exposed (Adenkule & Ishola, 2011).

In a broad perspective, financial risk can be classified into systematic and unsystematic risk. Isa (2014) described the systematic risk as irrelevant risk since they are beyond the control of business managers working in the market. It is irrelevant from the point of view that it is practically difficult to shade businesses from systematic risk. The study posits that unsystematic risk is the relevant risk which a manager should border about because it is under the control of the investor to decide in which security to invest or not, and can be controlled or eliminated through diversification.

This study hinges on the theories of Shiftability, Anticipated Income, and Liability Management.

The Shiftability theory, propounded by H. G. Moulton, argues that risk can be managed by obtaining liquidity converting assets to shift open market securities. When a bank that maintains a substantial amount of assets is in dire need of ready money, this theory supports the shifting of such assets to a more liquid bank. In line with this proposition, banks do accept shares and debentures of viable companies as liquid assets thus encouraging term lending.

The Anticipated Income Theory, propounded by H. V. Prochanow in 1944 posits that cash flow of the borrower is enough to hedge against risks from default. A bank's loan portfolio is thus considered as a source of liquidity. The loan is repaid in instalments out of the anticipated earnings of the borrower instead of a lump sum at maturity. This theory satisfies the three main objectives of sound banking operation namely, liquidity, safety and profitability. The loan is repaid in regular instalments ensuring liquidity. The ability of the borrower to repay guarantees safety and the regular cash inflow enables the bank to grant more loans thus ensuring profitability.

The Liability Management Theory developed in the 1960s claims that maintaining adequate liquidity for withdrawal by depositors enhances customer confidence and continued borrowing and hence bank profitability. A bank can create additional liabilities against itself by acquiring reserves from different sources. Issuing of certificates of deposits, borrowing from other commercial banks and central bank, issuing of shares and debentures as well as ploughing back of profits are the different sources available to the bank. This theory thus encourages banks to consider both sides of the balance sheet as sources of liquidity.

The chain of these theories implies that effective risk management strategy can enhance bank profitability. The management of bank risks reduces the level of bank and customer defaults. The bank that lacks liquid assets can default in honouring financial obligations that fall due, likewise the customer that did not fund his/her account. Thus shiftability of assets, consistent cash flow in customer accounts, and meeting customer withdrawals are essential for effective risk management. Hence these theories have a link with the issue in the study: risk management strategy and bank performance nexus.

Akindele (2012) examined the effect of risk management and corporate governance on bank performance in Nigeria. The study was a survey design that administered four hundred and eighty (480) questionnaires to employees of Wema Bank Plc and extracted data from the annual reports of the bank for the year 2008 and 2009 using financial ratios. The result obtained from Chi-square statistics revealed that risk management has a positive relationship with bank performance. The study further asserts that how well effective risk management enhances bank

profitability and bank performances is a function of risk management strategy and corporate governance of the organization.

Adeusi, Akeke, Adebisi and Oladunjoye (2014) carried out a study to examine the effect of association of the risk management practices on bank financial performance in Nigeria. The study employed a panel of ten commercial banks for a period of four years covering 2006 to 2009. Using two variables of financial performance, return on assets and return on equity to develop two models with liquidity, credit and capital risks, the regression result showed that there is a significant relationship between bank performance and risk management.

Soyemi, Ogunleye andAshogbon (2014) investigated the effect of risk management practices on financial performance of banks in Nigeria. A cross-sectional model of eight quoted commercial banks was collected in 2012 for the study. The variables of risk management employed are Non-Performing Loan Ratio, Liquidity Ratio, Cost to Income Ratio, Capital Adequacy Ratio while two dependent variables used to form two models for the study were Return on Assets (ROA) and Return on Equity (ROE). The OLS regression result showed that financial performance is greatly determined by risk management practices.

Olusanmi, Uwuigbe and Uwuigbe (2015) examined the impact of effective risk management on banks' financial performance in Nigeria. The data set covered a sample of 14 banks listed on the floor of the Nigerian Stock Exchange over a period of 6years (2006-2012). The dependent variable was Return on Equity (ROE) while the explanatory variables included Non-performing loan ratio, Capital Ratio, Loan to Total Deposit and Risk Disclosure. The results from Ordinary least square regression showed that there is a negative insignificant relationship between risk management proxies and bank's performance

Ofosu-Hene and Amoh (2016) investigated the relationship between risk management and bank performance among the listed banks on Ghana Stock Exchange over the period 2007–2014. The performance of banks was measured using ROA and ROE while the explanatory variables included risk index, size of bank, bank solvency, bank liquidity, non-performing loans, inflation, and exchange rate. The regression result showed that risk management is positively related to performance.

Angote, Malenya and Musiega (2015) examined the effect of Enterprise Financial Risk Management on performance in Kenya commercial banks. A sample of 384 employees of 30 branches of KCB in Western Region, Kenya was involved in the study that employed performance as the dependent variable while financial leverage, diversification of products and credit policy were the independent variables. The data were obtained from a structured questionnaire design. The results obtained from mean, frequency and multiple regression analyses showed that there is a significant positive relationship between enterprise financial risk management and performance.

Oluwafemi and Obawale (2010), studied the effect of risk management on financial performance of commercial banks in Nigeria. The data set was a panel of annual observations from ten (10) Nigerian banks covering a time series of four years from 2006 to 2009. The financial performance of the banks was represented by profitability ratios using ROA and ROE, whereas the independent variables were liquidity, credit and capital risks. The regression analysis revealed that there is a significant relationship between bank performance and risks administration.

Muteti (2014) carried out a study on the relationship between financial risk administration and financial performance among Kenyan banks. The data set were obtained from 43 commercial banks in Kenya as at December 2013. A multiple regression model was employed wherein the

financial performance was measured by the ratio ROA while the independent variables were credit risk of the bank, interest rate of the banks, foreign exchange risk, liquidity risk of the bank, capital management, bank deposits and bank size. The study revealed that all the explanatory variables employed in the study have significant effect on the financial performance of Kenyan banks.

Wanjohi (2013) carried out a study on the financial risk management on financial performance of Kenyan commercial banks. The study employed five components of risk management including the Risk Management Environment of the institution, Risk Measurement skills, Risk Mitigation procedures, Risk Monitoring and Adequate Internal controls of the organization as the independent variables. The dependent variable was the mean of ROA for a period of five years covering 2008 to 2012. The study found that financial risk management strongly affected the financial performance of Kenyan Commercial banks.

Methodology

The study adopted the ex-post facto research design. The study involved the use of secondary data obtained from NDIC Annual Reports and Accounts for the period 1994 to 2016 from various issues. The data collected include Return on Asset (ROA), Return on Equity (ROE), Non-Performing Loan to total loan (NPL), Average Liquidity Ratio (ALR), Operational Risk (OR), Capital Adequacy Ratio (CAR).

The dependent variable for the study is a measure of firm profitability using ROA and ROE. The model for the study was adapted from the works of Adeusi et al (2014), and Oluwafemi & Obawale, (2010). These studies used only the variables of credit risk, liquidity risk, and capital risk and the model is as follows:

Bank Performance = f(Credit Risk, Liquidity Risk, Capital Risk)

The present study modified the independent variables of this model by adding the operational risk of the banks. Thus the functional relationship in the model of the present study is:

Bank Performance = f(Credit Risk, Liquidity Risk, Operational Risk, Capital Risk), where bank performance is represented by return on assets and return on equity, and risk management variables are represented by credit risk, liquidity risk, operational risk and capital risk.

The equations of the relationship are:

$ROA = \alpha_0 + \beta_1 NPL + \beta_2 ALR + \beta_3 OPR + \beta_4 CAR + \mu$

$ROE = \alpha_0 + \beta_1 NPL + \beta_2 ALR + \beta_3 OPR + \beta_4 CAR + \varepsilon$

Where:

NPL = Ratio of Non-Performing Loans to Total Loans (%) as a proxy for Credit Risk.

ALR = Average liquidity ratio as a proxy for Liquidity Risk.

OPR = Operational Risk - Proportion of Expected Loss to Amount Involved (%), that is, amount lost to bank frauds and forgeries.

CAR = Capital to Total Risk Weighted Asset Ratio (%) as a proxy for Capital Risk.

Table 1: Multicolinearity

Variables	Model 1 (ROE)		Model 2 (ROA)		Remarks
	Tolerance	VIF	Tolerance	VIF	
ALR	.427	2.343	.427	2.343	No multicolinearity
NPL	.370	2.701	.370	2.701	No multicolinearity
CAR	.600	1.666	.600	1.666	No multicolinearity
OPR	.924	1.082	.924	1.082	No multicolinearity

All the independent variables had Variance Inflation Factors (VIF) less than 5, as a result our models for the analyses are suitable and reliable since none of variables has the tendency to cause problems of multicolinearity.

Table 2: Regression Results

Variables	Model 1 (ROE)		Model 2 (ROA)	
	Coefficient	t-value (Prob.)	Coefficient	t-value (Prob.)
Constant	3.427	1.259 (0.224)	104.261	2.096 (0.050)
NPL	-.153**	-3.257 (0.004)	-1.440	-1.680 (0.110)
ALR	-.044	-1.456 (0.163)	-1.039	-1.890 (0.075)
OPR	-.001	-.028 (0.978)	0.369	0.514 (0.613)
CAR	.180*	2.370 (0.029)	-0.289	-0.209 (0.837)
R-Squared	0.412		0.229	
Adjusted R-Squared	0.282		0.058	
F-Statistics (Prob.)	3.159*(0.039		1.338 (0.294)	
Durbin Watson	1.938		1.682	

*Significant at 5%, **Significant at 1%

Bank performance equation in table 2 above indicates that return on equity as bank performance received significant negative relationship from risk management variable credit risk, insignificant relation from liquidity and operational risks (significant). On the other hand, return on assets receives insignificant negative relation from credit and liquidity risks and insignificant positive relation from operational and capital adequacy risks.

The results of the study show that the risk management variables for credit risk, there is a negative and significant relationship between risk management and bank performance. This is contrary to the works of Angote, Malenya & Musiega (2015) in Kenya which shows a positive significant relationship between risk management and bank performance. The result for liquidity risk revealed a negative and insignificant relationship between risk management and bank performance in Nigeria. This is in line with the appriori expectation but contrary to the study by Ofosu- Hene and Amoh (2016) which found that risk management and bank performance are positively related. Also the risk management variable, operatonal risk shows that risk management has no significant relationship with bank performance in Nigeria though performance indicator return on equity has negative relationship while return on asset has positve retationship. This means that banking activies defy those risks that may lead to financial loss as a result of breakdown in day to day operational processes. Moreso, capital adequacy variable of risk management revealed a significant positive relatioship with bank return on equity and a nagetive insgnificant relation with return on asset. This is in tandem with the work of Mete (2005) that some banks take more risk than their capital could sustain.

Summary

The R- Squared of the models are 0.41 and 0.23, showing that the risk management variables explained 41percent and 23 percent of the chenges in return on equity and assets respectivily. Since these values are less than 50 percent, it implies that risk management is not a veritable tool for enhancing bank performance in Nigeria. The results of F- statistics show F value 3.159(prob .039) for model 1, and 1.338 (prob 0.294) for model 2 . This shows that risk management has significant relationship with return on equity but no significant relationship with return on assets of Nigerian banks.

Generallly, it was observed that there are poor and ineffective risk management pratice in the Nigerian banking industry. Following from the above findings, the study recommends that the CBN and other regulatory bodies should endeavour to enforce risk identification, assessment, measurement and control strategies in line with best global practices in other to avoid financial crisis and also improve on commercial banks' performance in Nigeria.

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