



PRUDENTIAL GUIDELINES AND DEPOSIT MONEY BANKS PERFORMANCE IN NIGERIA

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ABSTRACT

This study is on prudential guidelines and deposit money banks' performance in Nigeria. It specifically examined effect of bank financial strengthen and ratios in terms of asset quality, capital adequacy, liquidity, leverage and bank size on bank performance in Nigeria. It is a longitudinal study covering a time frame of five (5) years (2011-2015). Historical data was obtained from the financial statements and accounts of twelve (12) sampled banks selected through purposive sampling technique. Data was analysed using descriptive statistics and statistical tool, panel least square (PLS) regression. The diagnostics test consisted of Jacque-Bera test for checking for normality, Pearson correlations for the purpose of checking for the presence of multicollinearity and Hausman test for the purpose of ascertaining whether to use fixed or random effect panel least square regression. Data was estimated with computer software known as E-views 8.0 and statistical package for Social sciences (SPSS) version 21. The study revealed that Asset quality and leverage have significant effect on bank performance, while capital adequacy, Liquidity and bank size have no significant effect suggesting that they are weak determinants but have positive relationship with bank performance in Nigeria. The study recommended that banks in Nigeria should endeavor to always increase their capital base from time to time and banks should acquire more assets especially investment securities and non-interest cash from other banks.

Keywords: Prudential Guidelines, Bank Size and Bank Performance

INTRODUCTION

Banks play an important role as financial intermediaries for savers and borrowers in an economy. Naser, Mohammad and Ma'someh (2013) posit that banks, as the most important financial institutions, have a determinant role in circulating currency and wealth of the society and enjoy a special position in financial system. All sectors of the economy virtually depend on the banking sector for their very survival and growth. The desired and effective performance of banks can create important effects on the development of economic sector and increase the quantitative levels of the output. Odunga (2016) notes that efficiency is the ability to deliver products and services costs effectively without sacrificing quality. It involves a combination of right variables to enhance productivity and value of business operations, while driving down the cost of routine operations to a desired level.

The Central Bank plays a dominant role in both the decision making and managerial process taking place in the economy while other banks do provide the essential financial services needed for effective operation of the economy. Bank failure has destabilizing impact on the economy of any nation. It is precisely the consequence of this failure that led to the enactment of various legislations, rules and guidelines by relevant authorities to curb the excesses of the banks with a view to ensuring that banks operating in Nigeria do so in accordance with the best practices of International banking professional standards. The late 1980s and early 1990s were years of financial boom, as the number of players increased substantially in the system. For instance, between 1986 and 1989, about 38 new deposit money and merchant banks were established.

The increase in the number of banks over stretched the existing human resources capacity of the banks which resulted into many problems such as poor credit appraisal system, financial crimes, accumulation of poor asset quality among others. The consequence was increased in the number of distress, banks and depositors began to lose confidence in our financial institutions in managing their fund. Based on these experiences, the Federal Government of Nigeria through the Central Bank of Nigeria (CBN), 1990 indicated that regulation and supervision were essential ingredients for stable and healthy financial system, and that the need became greater as the number and variety of financial institutions increased. The banking sector was singled out for a special protection because of the vital role banks play in an economy. Bank supervision entails not only the enforcement of rules and regulations, but also judgment concerning the soundness of banks assets, its capital adequacy and management (Volker, 1992). Capital as an important factor of production must be sufficient in business for effective operation of an organization. Bank is one of these organizations whose capital adequacy is of paramount significance to its customers. The Central Bank of Nigeria has the obligation to provide protection and confer confidence in all the banks' depositors and creditors by ensuring banks' capital adequacy to absorb their losses and financial short comings. Ikpefan, (2012) states that adequate shareholders fund can serve as a veritable stimulant in strengthening the performance of Nigeria deposit money banks and also heighten the confidence of customers especially in this era of global economic melt-down that has taken its toll in the Nigerian financial system.

The introduction of prudential guidelines to banks in Nigeria is to protect the depositors and prevent the banks from being exposed to capital inadequacy and possibly becoming insolvent, and to make banks meet up to international best practices for banks (CBN, 2016; Umadi, 2018). Legislation governing the banking practice in Nigeria is sourced from three major areas. They are: Law of General Application: This is the law that is applicable across the countries under the former British Empire. Such law because it was bequeathed to Nigeria at the Independence is otherwise referred to as "received English laws; Statute Law which are laws specifically enacted by the nation's legislature known as the Parliament of the National Assembly to deal with specific subjects or sectors. Example of such statute law are BOFIA (Banks and other financial institution Acts 1991), the CBN Act 1991 and CAMA (Companies and Allied Matters Act) 1990; and Subsidiary Legislations which are legislations made under the authorities of existing statutes. In view of the importance of the circular to bank management, bank auditors and bank examiners, the objective of these guidelines is to prescribe the prudential treatment of restructured accounts to provide a transparent mechanism for timely structuring of debts of viable entities facing problems. The prudential guideline is a subsidiary laws made by apex bank CBN for other banks to observe. It is the core legislation for banks and examples are Rules, Orders, and Regulations by laws and ordinances.

Prudential guidelines are aimed to sanitise banking systems, systemic distress and crisis experienced in the past. Prudential guidelines are necessitated following crises in the sector and the need to improve their performance. Banking crisis usually starts with inability of a bank to meet its financial obligations to its stakeholders. Okpara (2009) observes that directors tend to misuse their privileged positions to obtain unsecured loans which, in some cases are in excess of their banks' statutory lending limits and this is in violation of the provisions of the lending policy of banks. Agbeja, Adelokun and Olufemi, (2015) indicate that capital base (#2 billion) which has become grossly inadequate to meet domestic and global realities in the financial system and hence, has been upwardly reviewed to #25billion. According to Adegbaaju and Olokoyo (2008), a banking crisis can be triggered by weakness in banking system characterized by persistent illiquidity, insolvency, undercapitalization, high level of non-performing loans and weak corporate governance, among others. Most often banks were not too bothered as to whether the collateral was perfected or not thereby making realisability of collaterals difficult, if not outrightly impossible.

Most studies on prudential guidelines with emphasis on bank performance started after the great depression and the recent financial crisis were conducted in developed countries like U.S, France, Britain, and Japan (Beckmann, 2007; Berger & Mester, 2001; Maudos & Pastor, 2003; Shih, Zhang & Liu,2007). Few studies on the prudential guidelines in terms of financial strength and financial ratios in relation to bank performance were carried out in developing countries like Nigeria (Ikpefan, 2012; Abata, 2014; Ahmadu, 2015; Duruechi, Ojiegbe, & Otiwu, 2016; Bassey, Tobi Bassey & Ekwere2016, Umoru & Osemwegie, 2016) but their results were mixed and inconclusive, hence the need to validate these studies.

The broad objective of this study is to find out the influence of the prudential guidelines on the bank performance in the Nigerian Banking Industry. While specific objectives of the research work are to:

- (1) evaluate effect of asset quality on bank performance in Nigerian banks;
- (2) examine influence of capital adequacy on bank performance in Nigerian banks;
- (3) assess effect of liquidity on bank performance in Nigerian banks;
- (4) observe the extent to which leverage ratio influences bank performance in Nigerian banks.
- (5) examine the relationship between bank size and bank performance in Nigerian banks.

LITERATURE REVIEW

Concept of Bank Performance

Examining performance is a complex process that involves assessing interaction between the environment, internal operations and external activities. The primary method of evaluating internal performance is analyzing accounting data. In general, a number of financial ratios are usually used to assess the performance of corporate organizations. Financial ratios usually provide a broader understanding of the company's financial condition since they are constructed from accounting data contained in the company's balance sheet and financial statement (Oni, 2010).

Another key management element that many studies have found to be a primary factor in assessing bank performance is operating efficiency (Beckmann, 2007). Beckmann further posits that measuring efficiency, both ex ante and ex post spreads can be used to provide information on cost control. The ex ante spreads are calculated from the contractual rates charged on loans and rates paid on deposits in case of banks. To further buttress the point Chirwa (2003) posit that as

an efficient indicator, we use the ex post spreads consisting of revenues generated from operations such as markup, rent – to – own, deferred sale, and services charges minus the expenses of carrying such activities. Accounting values from the corporate organization's financial statement were used to compute the ex post spread and profitability measure employed in this study. Two measures of bank performance are used in this study.

The return on assets (ROA, and return on equity (ROE), according to Jensen (1997), the appropriate accounting ratios to measure performance of any corporate organization are Return on Asset (ROA) and Return on equity (ROE). Both ROA and ROE are closely tied to the key item in the income statement; net income. ROA and ROE have been used in most structure performance studies and are included here to reflect the company's ability to generate income from non- traditional services. ROA shows the profit earned per naira of assets of the organizations and most importantly, reflects the management's ability to utilize the company's or firm's financial and real investment resources to generate profits. For any corporate organization irrespective of the line of business, Return on Asset (ROA) depends on the firm's policy decisions as well as uncontrollable factors relating to the economy and government regulations. Many regulators believe return on assets (ROA) is the best measure of firm efficiency. ROE on the other hand, reflects how effectively a corporate organizations management is using shareholders' funds (Jensen, 1997).

Bank Performance Profitability ratios evaluate a company's performance in generating earning, profits and cash flows relative to the amount of money invested (Palepu, Healy & Peek, 2010). They emphasize how effectively the profitability of a company is managed and how the company performs at generating revenue or profit relative to the investment. Return of equity (ROE) is an example of a profitability ratio which provides an indication regarding how well managers are investing the funds provided by investors. ROE is calculated by dividing the net profits by the book value of equity. Another profitability measure is return on assets (ROA) which measures how well a company is at generating profit from their assets. Total assets of ROA are measured by using the book value of its assets. Both these ratios, however, use book values of equity and assets. A limitation of this approach is that only current or historical firm profitability can be measured. In order to be able to include predicted future profitability, market values should be included in the analysis. An example is the market-to-book ratio (M/B ratio) which is calculated by dividing the market value of equity by the book value of equity or Tobin's-Q which is calculated by adding the market value of equity to the book value of debt and dividing this by the book value of total assets. When Tobin's q is below 1, the firm is undervalued indicating that the book value of the firm's assets are higher than their expected market value and when Tobin's q is above one, the value of its assets are expected to be higher than book value. Thus, by using firm performance measures including the market value, a more complete picture can be provided compared to a focus on profitability ratios alone since the expected future value of the firm are also incorporated.

Further empirical evidences reveal that profitability is an indicator of a bank's operating performance and banks' profitability should mirror the quality of their management and shareholders' behaviour as well as their competitive strategies, efficiency and risk management capabilities (García-Herrero, Gaviláb & Santabárbara, 2006). In the literature, bank profitability, typically measured by ROA and/or ROE, is usually expressed as a function of internal and external determinants (Athanasoglou, Delis & Staikouras 2006). ROA is explained as a good overall indicator of a banking organization's performance that illustrates the ability of

a bank to generate profits from the assets at its disposal, although it has a problem of not accounting for the profits generated from the off-balance-sheet operations (Ayadi & Pujals, 2005; Athanasoglou, Brissimis & Delis, 2005). Heffernan and Fu (2008) contend that ROE is as an alternative measure of profitability designed to reflect the return to owners' investment. It is often referred to as the bank equity multiplier measuring financial leverage (Athanasoglou, Brissimis & Delis, 2005). However, ROE has also a disadvantage that the denominator may vary substantially across banks even those of identical size. This is due to the discretionary choices by management as to the mix between equity and debt as well as the total amount of capital held by a firm (Ayadi & Pujals, 2005).

Moreover, since an analysis of ROE disregards the greater risks associated with high leverage and financial leverage is often determined by regulation, ROA emerges as the key ratio for the evaluation of bank profitability (Athanasoglou, Brissimis & Delis, 2005). Alternatively, net interest margin (NIM) is also an indicator of banks' operating performance, which focuses on the profitability of those earning assets or interest activities. The higher the ratio, the cheaper the funding or the higher the margin the bank is obtaining (García-Herrero, Gavilá & Santabárbara, 2005).

Prudential Guidelines in Nigerian Deposit Money Banks

The apex institution in Nigeria banking system, the Central Bank of Nigeria (CBN) is continuously moving banks in the country towards compliance with international banking practices. To this end, the Banking Supervision Department (BSD) issued on November 7, 1990, circular letter No.BSD/DO/23VOL.1/11, to all licensed banks and their auditors (CBN, 2010). The circular titled "Prudential guidelines for licensed Banks" addressed requirements for asset classification and disclosure, provisioning, interest accrual and off statement of financial position engagements (Aigbogun, 2011). The needs for these guidelines were to ensure high degree of comparability of banking performance across the National borders. These guidelines are part of the minimum rules that are being set out by the reserve Bank for the conduct of banking business in a safe and sound manner (Oni, 2010).

In view of the importance of the circular to bank management, bank auditors and bank examiners, the objective of these guidelines is to prescribe the prudential treatment of restructured accounts to provide a transparent mechanism for timely structuring of debts of viable entities facing problems, outside the purview of banks and other legal proceedings for the benefit of all concerned (Oni, 2010). The scopes of these guidelines are applicable to restructuring/rescheduling of amounts due from all borrowers other than those eligible for restructuring (CBN, 2010). Casting a look at the size structure, the assets structure, the deposits structure and the volume of credits they grant to the economy, their dominant position becomes evident. In the light of this therefore, their indispensable role of pooling together funds from the surplus economic unit to the deficit unit fast tracks economic activities. Effective management of banks assets and liabilities posed a great concern to all stakeholders because of large scale financial distress (Oni, 2010).

The table below shows summary of non-performing loans provisional requirements by the prudential guidelines.

Table 1: Non-Performing loan (Provisional Requirements)

| No | Classification | Days Past Due | % Provision |
|----|----------------------|---|---|
| 1 | Watch list | Where the repayment on outstanding obligations (mark-up/ interest or principal) is\or aggregate installments thereof are overdue by 90 days from the due date. | As above 0% of total outstanding balance. |
| 2 | Substandard | Where the repayment on outstanding obligations is between 60% and 75% of the amount the and\or aggregate installments thereof are overdue by 90 days to 1 year. | As above 25% of total outstanding balance. |
| 3 | Doubtful Debt | Where the repayment on outstanding obligations is less than 60% of the amount the and\or aggregate installments thereof are overdue by 1 to 2 years. | As above 50% of total outstanding balance. |
| 4 | Very Doubtful debt | Where the repayment on outstanding obligations is less than 60% of the amount the and\or aggregate installments thereof are overdue by 2 to 3 years | As above 75% of total outstanding balance. |
| 5 | Bad debt (Loan Loss) | Where the repayment on outstanding obligations is less than 60% of the amount the and\or aggregate installments thereof are overdue by more than 3 years. | As above 100% of total outstanding balance. |

Source: adopted from CBN Prudential Guideline (1990)

Empirical Study

Ikpefan, (2012) investigated the impact of shareholders' fund on bank performance in the Nigerian deposit money banks (formerly known as commercial banks- 1986-2006). The study captured their performance indicators and employed cross sectional and time series of bank data obtained from Central Bank of Nigeria (CBN).The formulated models were estimated using ordinary least square regression method. The study identified a positive relationship between shareholders fund and bank loan. It also found that there is significant relationship between shareholders' fund and banks' liquidity, bank deposits, and bank loans.

Naser, Mohammad and Ma'someh (2013) examined the effect of liquidity risk on the performance of commercial banks using of panel data related to commercial banks of Iran during the years 2003 to 2010. In the estimated research model, two groups of bank-specific variables and macroeconomic variables are used. The results of research showed that the variables of bank's size, bank's asset, gross domestic product and inflation will cause to improve the performance of banks while credit risk and liquidity risk will cause to weaken the performance of bank.

Vighneswara (2013) examined the determinants bank asset quality and profitability in India using robust data sets for the period from 1997-2009. The study used regression. It found that capital adequacy and investment activity significantly affect the profitability of commercial banks apart from other accepted determinants of profitability, asset size has no significant impact on profitability.

Abata, (2014) evaluated banks asset quality and performance in Nigeria using secondary data obtained from the annual reports and accounts of the six largest banks listed on the Nigeria Stock Exchange based on market capitalization with a sample interval of fifteen-year period from 1999 to 2013. The study adopted the use of ratios as a measure of bank performance and asset quality since it is a verifiable means for gauging the firms' level of activities while the data were analysed using the Pearson correlation and regression tool of the Statistical package for Social sciences (SPSS version 17.0). The findings revealed that asset quality had a statistically relationship and influence on bank performance.

Ferrouhi (2014) examined the relationship between liquidity risk and financial performance of Moroccan banks and to define the determinants of bank's performance in Morocco during the period 2001–2012. It first evaluate Moroccan banks' liquidity positions through different liquidity and performance ratios then we apply a panel data regression to identify determinants of Moroccan banks performance. The study also used four (4) bank's performance ratios, six (6) liquidity ratios and analyses five (5) specific determinants and five (5) macroeconomic determinants of bank performance. Results show that Moroccan bank's performance is mainly determined by seven (7) determinants: liquidity ratio, size of banks, logarithm of the total assets squared, external funding to total liabilities, share of own bank's capital of the bank's total assets, foreign direct investments, unemployment rate and the realization of the financial crisis variable. Banks' performance depends positively on size of banks, on foreign direct investments and on the realization of the financial crisis and negatively on external funding to total liabilities, on share of own bank's capital of the bank's total assets and on unemployment rate while the dependence between bank performance and liquidity ratios and bank performance and logarithm of the total assets squared depend on the model used.

METHODOLOGY

The study is longitudinal survey of quoted banks on the Nigerian Stock Exchange (NSE) covering a period of five years (2011-2015). The variables critically examined consist of return on Asset (ROA) as a proxy for bank performance which is the dependent variables and Capital adequacy, Liquidity, Asset quality, Capital structure and bank size as the independent variables. A total of sixteen (16) banks quoted on the Nigerian Stock Exchange as at December, 2016 constituted the population of the study (NSE Fact Book, 2015). For the purpose of our analysis, twelve (12) banks form our sample size. The purposive sampling technique was used in selecting the sampled bank. The scope of the study is within the banking sector in Nigeria. Emphasis is restricted to prudential guidelines that have taken place in Nigeria. It covers a period of five years (2011-2015) respectively.

Method of data analysis and Model Specification

Data collected are analysed using descriptive statistic and correlations. The statistical instrument employed is the Panel Least Square (PLS) regression. The diagnostic tests include Normality test for the purpose of assessing if the results are normally distributed and Hausman test to evaluate if to use Panel least square random effect or fixed effect.

For the purpose of this study, our model is specified as:

$$ROA_{it} = X_0 + X_1LIQ_{it} + X_2CAPA_{it} + X_3AQTY_{it} + X_4CAPS_{it} + X_5BSIZE_{it} + e \dots \dots \dots (1)$$

Where

ROA_{it} = Return on Asset (as proxy for performance) for bank (i) and at time (t)

X_0 = Constant

$X_1, X_2, X_3, X_4,$ and X_5 = Coefficients

LIQ=Liquidity

CA=Capital Adequacy

AQ=Asset Quality

LEV=Leverage

BSIZE= Bank size

e= Error term

it= At time ts

Our apriori expectation: $X_1>0, X_2>0, X_3>0, X_4<0,$ and $X_5>0,$

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

Data Presentation, Analysis and Interpretation

This section examines the results and interpretation of prudential guidelines proxied with financial strength and ratios in relation to bank performance in Nigeria. The variables examined consist of bank performance proxied by return on assets (ROA), Liquidity (LQT), Capital adequacy (CA), Asset Quality (AQ), Leverage (LEV) and Bank size (BS). These are discussed in descriptive statistics, correlations and Panel Least-Square (PLS). Data (Panel data) used for analysis are in appendix one and results are in appendix two.

Table 2. Descriptive Statistics (2011 – 2015)

| | ROA | LIQ | CA | AQ | LEV | BS |
|-------------|-----------|----------|-----------|----------|-----------|----------|
| Mean | 4.034879 | 0.726949 | 1.236333 | 10.77383 | 2.356494 | 10.17295 |
| Median | 0.003273 | 0.100000 | 0.001850 | 0.035000 | 0.050091 | 10.42672 |
| Maximum | 74.31400 | 7.780000 | 16.15699 | 87.28000 | 41.39691 | 12.97570 |
| Minimum | -1.594755 | 0.000000 | -0.003187 | 0.000000 | 1.99E-06 | 7.972011 |
| Std. Dev. | 1.628560 | 0.557579 | 0.532108 | 2.506160 | 1.182715 | 1.395821 |
| Jarque-Bera | 1.099264 | 4.242011 | 552.8724 | 47.92386 | 1.794.430 | 4.550994 |
| Probability | 0.456270 | 0.137428 | 0.000000 | 0.000000 | 0.370417 | 0.102746 |

Source: Researcher's Computation (2017) (E-views, 8.0)

Table 2. examines the descriptive statistics of the profile of variables. It is observed that bank performance proxied by Return on Asset (ROA) stood at a mean low value of 4.03 which is approximately 4% suggesting that average performance of Nigerian banks is low. It also showed maximum and minimum return on asset of positive and negative value of 74.3(over 74%) and -1.59 (-2%) respectively which are an indication that some of the sampled banks realized profits and as well made losses, while the standard deviation was at minimal value of 1.6286 (2%)and the Jarque-Bera result was at significant value of 1.099264, (P-value of 0.45627(46%) which is less than 5% critical value), indicating that ROA is significant in predicting performance and the variable results are normally distributed based on the outcome of the Jarque-Bera test result .

In the same vein, Liquidity (LIQ) which stood at a mean value of 0.726 (approximately 1%) which is also an indication that liquidity position of the sampled banks is low. the maximum and minimum values stood at 7.780 (8%) and 0.000(0%) respectively, while Jarque-Bera test was 4.242011 and P-value stood at 0.13742 (14%), indicating that LIQ value is significant in assessment of bank performance but the outcome indicated that the liquidity position of the banks was low following the standard deviation result which was 0.5%.

Furthermore, Capital Adequacy (CA) which is measured with Total loan to Equity fund for the periods under review stood at a mean value of 1.2363 (over 1%), maximum and minimum (CA) stood at approximately 16.15 (over 16%) and -0.0032 (-0.003%) respectively, while standard deviation was at 0.53% and a significant Jarque-Bera value of 552.872 (P-Value less than 5%) indicating that capital adequacy is significant as a means to evaluate bank performance but significantly low. The Asset Quality (AQ) with a mean value of approximately 10.8 (11%), with maximum and minimum value of 87.28 (87%) and 0.00%, and Jarque-Bera test result of 47.923 (P-value at 0% , which is less than the critical value of 5%), implied that asset quality (AQ) is significant but some bank were relatively high in value in nonperforming loan. Consequently, Leverage (LEV) stood at mean value of 2.356 (over 2%), maximum and minimum values of 41.399 (over 41%) and 1.99 (about 2%) respectively, and Jarque-Bera test statistic of 1794.430 with P-value at 0%, revealed that bank were financed with debt. Moreover, Bank Size (BS) with a mean value of ₦10.17 billion, maximum and minimum value of ₦12.9Billion and ₦ 7.97Billion respectively, while the Jarque-Bera test indicates significant value of 4.5519, indicating that bank size is significantly low.

From the table, it was observed that bank performance proxied with return on assets, liquidity (LIQ), leverage (LEV and bank size (BSIZE) were normally distributed, while capital adequacy (CA), and Asset quality (AQ) were not normally distributed, hence we proceed to Pearson correlation to check for presence of multicollinearity in the variable set in Table 3. Below

Table 3. Correlation of Variables (2011 – 2015)

| VARIABLES | ROA | LIQ | CA | AQ | LEV | BS |
|-----------|--------|---------|---------|---------|---------|----|
| ROA | 1 | | | | | |
| LIQ | .073 | 1 | | | | |
| CA | .218 | -.069 | 1 | | | |
| AQ | -.095 | .004 | .219 | 1 | | |
| LEV | .653** | -.068 | .426** | .019 | 1 | |
| BS | -.123 | -.470** | -.470** | -.454** | -.353** | 1 |

Source: Researcher's Computation (2017) (SPSS. 20)

Table 3. Highlights associations among variables captured in the study. The association between Return on Asset (ROA) and Liquidity (LIQ) shows positive association with Return on Asset (ROA) at 0.073, (at about 7%), Also, Capital Adequacy (CA) stood at a positive value of 0.218 (approximately 22%) with Return on Asset (ROA), indicates that Capital Adequacy are significantly correlated with Return on Asset. Return on Asset and Asset Quality (AQ) stood at negative correlation value of -0.095 (-10%), indicating that high level of non-performing loan negatively affect bank performance by Return on Asset (ROA).

Moreover, Leverage which stood at positive correlation value of 0.653** (over 65%) with ROA, reveals that high level of leverage in financing the banks would positively be associated with bank performance proxied by Return on Asset (ROA). Finally, Bank Size (BS) which stood at negative correlation of -0.128 which is about (13%) with ROA, implies that BS has no significant association with bank performance proxied by Return on Asset. Since none of the values exceeded 0.90 (90%) suggested absence of multi-collinearity as suggested by Bryman

and Cramer (2005) for case of multicollinearity. The outcomes were correlated at 0.05 (5%) and 0.01 (1%) significant level (2-tailed) as shown in the appendix for results.

Table 4. Estimation of Coefficient of Panel Least Square (2011 – 2015)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 11.38807 | 17.23853 | 0.660617 | 0.5125 |
| LIQ | 0.472609 | 1.101608 | 0.429017 | 0.6701 |
| CA | 0.080037 | 0.548625 | 0.145886 | 0.8847 |
| AQ | -0.186322 | 0.069498 | -2.680981 | 0.0104 |
| LEV | 1.156879 | 0.233847 | 4.947163 | 0.0000 |
| BS | 0.764489 | 1.589003 | 0.481112 | 0.6329 |

Source: Researcher's Computation,(2017) (E-view 8.0)

$$\text{ROA} = 11.388 + 0.4726\text{LIQ} + 0.0800\text{CA} - 0.1863\text{AQ} + 1.156\text{LEV} + 0.7644\text{BS}$$

$$\quad \quad \quad (\mathbf{0.661}) \quad (\mathbf{0.4290}) \quad (\mathbf{0.1458}) \quad (\mathbf{-2.6809}) \quad (\mathbf{4.947}) \quad (\mathbf{0.4811})$$

$$\overline{R^2} = 0.5939$$

$$R^2 = 0.5692 \quad \text{S.E of regression} = 3.2856$$

$$\text{F-statistic} = 10.8392$$

$$\text{DW} = 2.1413$$

In the diagnostic test carried out whether to use random or fixed effect, the Hausman test stood at calculated Chi-square value of 1.258117 and P-value of 0.8350(84%) (See appendix). As a rule, since the P-value of 84% is greater than critical P-value 5%, we use random effect Panel least Square (PLS) , otherwise fixed effect panel least square.

Table 4. above reveals the coefficients and t-statistics values of the variables captured in the study. Reported below the equations in the parentheses are the t-statistics. Reported individually, Liquidity (LIQ) with a positive coefficient value of 0.472 with Return on Asset (ROA) implies that a unit increase in Liquidity will affect bank performance proxied by Return on Asset (ROA) by over 47%. Similarly, Capital Adequacy (CA) which indicated a positive coefficient value of 0.080 with Return on Asset, reveals that a unit increase in Capital Adequacy is likely to affect bank performance proxied by return on asset by over 8%. Moreover, Asset Quality (AQ) which stood at negative coefficient value of -0.186 with Return on Asset, indicates that a unit decrease in Asset Quality can negatively affect Return on Asset by 19%. However, Leverage (LEV) whose coefficient value stood at positive value of 1.15 with Return on Asset shows that a unit increase in Leverage can positively affect bank performance proxied by Return on Asset (ROA) by about 1.2%. Bank Size (BS) which stood at a positive coefficient value of 0.76 with Return on Asset (ROA), means that a unit increase in BS, will positively affect bank performance by 0.8%.

The coefficient of determination R^2 which stood at a value of 0.5939 indicates that over 59% of the systematic variations in the dependent variable were accounted for by the independent variables, while the remaining 41% were unaccounted for, thereby captured by the stochastic disturbance. Consequently, after adjusting the degree of freedom, the adjusted coefficient of determination (the adjusted R-square($\overline{R^2}$)) stood at 0.56922 with the dependent variable, implying that about 57% of the systematic variations were explained while the remaining 43%

were unexplained, hence captured by the stochastic disturbances. Meanwhile, the standard error of regression stood at a minimal value of 3.2857 compared to the overall F-statistic which stood at 10.8392, indicating that the results are significant and suitable for forecasting. In addition, Durbin Watson (DW) statistic revealed 2.1413, suggesting absence of autocorrelation in the result which also further indicates that the entire results are impressive for forecasting and decision making.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary of findings

The findings of the study are summarized below:

1. Capital adequacy has no influence on bank performance indicating that it is a weak determinant but has positive relationship with bank performance.
2. Liquidity has no significant impact on bank performance meaning that it is a weak determinant but has positive relationship with bank performance.
3. Asset quality has significant effect on bank performance suggesting that it is a strong determinant but has negative relationship.
4. Leverage has significant influence on bank performance signifying that it is a strong determinant and has positive relationship with bank performance.
5. Bank size has no significant effect on bank performance indicating that it is a weak determinant but has positive relationship with bank performance.

Conclusion

Prudential guidelines have attracted a great deal of concern in Nigeria. Prudential guidelines were directed towards improvement in banking sector and to address the systemic distress such that depositors can go to sleep while their monies are in safe hands. In essence the prudential guidelines are geared towards strengthening the banking sector. Moreover, the various prudential guidelines carried out merely to improve the financial soundness of the Nigerian banking sector.

Following the outcome of various analyses and findings using bank financial strength and ratios or characteristics in terms of asset quality, capital adequacy, liquidity, leverage and bank size, we could conclude that the prudential guidelines succeeded in strengthening some aspects of the banks characteristics and practices, but have not significantly impacted on the banks performance in Nigeria,

Recommendations

Following the outcome of our findings, we therefore recommend as below

- (1)Banks capital base should be increased from time to time. Higher capital adequacy ensures better resilience to systemic shocks and hence enhanced financial stability and performance.
- (2)Banks in Nigeria should holistically looked into the liquidity position. This is due to the fact that liquidity is one of the operational parameters that assess bank performance. Again, bank with adequate liquid asset is perceived safe. As such banks on their part should explore avenues to increase their liquidity position.
- (3)Banks should acquire more assets especially investment securities and non-interest cash from other banks. This is because adequate asset quality can guide against loan lost and profitability.
- (4)Use of leverage is fundamental in financing any form of business. Banks should be indulge in use of leverage, but adequate care should be taken on the manner it is being used to finance

bank by directors. This is because leverage is a double edge sword which can kill or survive business.

(5)The banking should strictly look at the bank size in terms of employees, branches and total assets. Banks currently in operation should spread their branches to rural areas.

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