CAPITALISATION AND PROFITABILITY OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract
This study examined the impact of the recapitalisation of deposit money banks on profitability covering a nine-year period from 2008 to 2017. Panel data of 13 Deposit money banks using data obtained from secondary source is used. The study is based on the Buffer theory of capital adequacy, deposit insurance theory and the expense theory. The investigation was in two phases. The pre-estimation involved the descriptive analysis, correlation analysis and variance inflation factor analysis utilised to evaluate the characteristics of the series. In the estimation and model diagnostic phase, the study utilised the Hausman test to determine and select the most appropriate estimating technique amongst the Pooled OLS, fixed effect and random effect analysis. The model diagnostic test was carried out to determine the appropriateness and exhaustiveness of the model. They are the heteroskedasticity, Cross dependence, the Serial correlation and Autocorrelation tests. The result showed that recapitalisation and exchange rates significantly and positively influenced the profitability performance of listed Deposit Money Banks in Nigeria. The study recommended that current level of 25 Billion Naira should be raised in order to enhance the operational capacity of the Deposit money banks. This is in addition to intensification of technology-driven service delivery

Keywords: Capacity financing policy, Capital restructuring, Deposit money banks, JEL classification: G31, G34, G21,

Introduction
The operations of an efficient banking sector are critical because of its role in engendering the growth and development of the economy. Indeed, firms in the non-financial sectors, in the opinion of Odunga (2016) depend on the banking sector for their very survival and growth by serving as coupling intermediaries in the economic system. However, the operations of the banking industry have been marked with irregularities, corporate governance and ethical issues (Omankhanlen,

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According to Soludo (2006), the Nigerian banking system was fragile and marginal due to low level of capitalisation. The consequences include poor loan quality of up to 21 per cent of shareholders’ funds compared with 1–2 percent in Europe and America and overtrading. Some banks abandoned the core function of banking to focus on quick profit ventures such as trading in foreign exchange arbitrage and tilting their funding support in favour of import-export trade instead of manufacturing; reliance on unstable public sector funds for their deposit base.

A review of the banking system in 2004 revealed that marginal and unsound banks practices accounted for 19.2% of the total assets, 17.2% of total deposit liabilities, while non-performing asset accounted for 19.5% of the total loans and advances in the same year. The implication of this unsatisfactory statistics as noted by Lemo (2005), the threat of a systemic distress judging by the trigger points in the CBN contingency planning framework of December 2002. The need for aggressive reform of the industry became manifest. These operational and capital inadequacy concerns made the transformation of the financial system a sine qua non for economic development.

Recapitalisation is a broad name that covers many processes. One of these is merger and acquisition, another involves capital restructuring, management overhauling, among others. Recapitalisation entails increasing the debt stock of the company or issuing additional shares through existing shareholders or new shareholders or a combination of the two. It could even take the form of merger and acquisition or foreign direct investment (Ifionu & Keremah, 2016). Whichever form it takes, the result is that the long-term capital stock of the organisation is increased substantially to sustain the current economy trend in the global world. It is not a guess work, but an organised scheme of revitalising a company to a better structure and focus and suggests three stages involved in process as follows: diagnosis (identification of the causes of the problem); prescription (to proffer appropriate solutions) and monitoring (monitor the implementation of proffered solutions) (Akinsulire, 2008).

Recapitalisation of firms in the financial system has been ongoing. Financial systems reforms of 1986 and 1993 led to deregulation of the banking industry. It increased the capitalisation level from 5 million Naira to 500 million Naira (Central Bank of Nigeria, 2005). Between 2000 and 2001, the Central Bank of Nigeria (CBN) raised the capital base of merchant and commercial banks to a uniform level of ₦1billion and ₦2billion respectively. These, as reported by Bakari (2011) were discovered to be inadequate and led a hike of minimum of ₦25 billion Naira. The resultant consequence was the consolidation of the banking sector in the form of mergers and acquisitions. The eighty-nine banks were reduced to 22. Several other regulatory reforms were initiated by the Central Bank of Nigeria including, new levels of Cash Reserve Requirement (CRR) which, was raised from 1% to 8%, Monetary Policy Rate (MPR) was jerked up from 6.25% to 12% and the Liquidity Ratio (LR) which, was increased from 25% to 50% (CBN, Annual Report, 2012).
The findings in the literature, on the effect of capitalisation on profitability of banks are mixed. Some reported significant positive impact (Alalade, Adekunle & Oguntodu, 2016; Kowalik, Davig, Morris & Regehr, 2015; Chinoda, Chingombe Chawuruka, 2015; Kukurah, Alhassan & Sakara, 2014; Growe, Debruine, Lee & Maldonado, 2014; Oluitan, Ashamu & Ogunkenu, 2014; Wheelock & Wilson, 2002; Hughes, Lang, Mester & Moon, 1998). Some results were negative (Augusto & Felix, 2014; Masood, Aktan & Chaudhary, 2009; Sturm & Wasiams, 2004). The finding of Badreldin and Kalhoefer (2009) in Egypt and Temu and Andilile (2011) found no compelling evidence to support the assertion that mergers improve banks’ performance. Sufficient time has elapsed since the 2005 recapitalisation exercise in Nigeria for a comprehensive evaluation of the impact of this exercise on the performance of listed deposit money banks in Nigeria.

Literature Review
This is in two parts: theoretical and empirical review.

Theoretical Review
Many theories seek to describe the dynamic process of the implementation of banks operational performance. Little is known, however, about the impact of the recapitalisation on the banks operational performance. This paper compares the constructs theory that relate with recapitalisation as they affect banks operational performance. The overall goal is to identify elements within the recapitalisation frameworks that are potentially modifiable and, thus, might be employed to improve the operational performance of a bank if adopted. The considered theories are Buffer theory of capital adequacy, expense theory, the portfolio theory of investment, the value increasing theory and the theory of performance.

The Buffer theory of capital adequacy provide for the compulsory creation of additional capital level as stipulated by the statutory regulator for financial institutions in addition to other minimum requirements. This is to moderate the procyclical nature of lending through the creation of countercyclical cushions in tandem with the provisions of the Basel III (Kagan (2018). Buffer theory of capital adequacy as applied to the study would enable the enlightenment of the CAMEL rating and how the banks actions of disobeying the instructions of CBN has repercussions which affects the economy negatively especially when there is inflation and yet they are giving out huge loans to investors.

The Expense theory of Wasiamson (1963) known as the theory of managerial discretion provided that managers have the option in pursuing policies, which, maximise their own utility rather than profit maximisation for shareholders. Operating expenses is derived from the use of resources and can have positive or negative implication on the dependent variable. The higher the discretionary expense level, the lower the profitability level of the firm. The Deposit Insurance theory posits that insurance serves the interest of the public by mitigating systemic
risk in the banking system, which is done through the reduction of liquidity risk. Deposit insurance protects depositors and banks, in addition to providing the banks the wherewithal to expand lending to customers (Calomiris & Jaremski, 2016).

**Empirical Review**

**Evidence from developed countries**

An investigation of the profitability and performance measurement of U.S. regional banks was conducted by Growe, Debruine, Lee and Maldonado (2014) using the generalised methods of moments (GMM) and correlation matrix covering a period from 1994-2011. The study found that among the performance measures, the efficiency ratio and provisions for credit losses are negatively, but equity scaled assets is positively related to profitability. The impact of bank consolidation among banks in the United States of America between 2011 and 2014 following the global financial crisis was examined by Kowalik, Davig, Morris and Regehr (2015) using the Probit model. They found that acquired banks surpassed the non-acquired banks in terms of return on assets and net interest income. They also recorded higher non-interest expenses and were consequently, less profitable.

Schipper (2013) examined the determinants of bank profitability through the global financial crisis gathering evidence from Slovakia and Poland while using Correlation matrix, fixed effect panel data analysis, ordinary least square method (OLS) between 1999 and 2011. The findings report negative impact of the effect of the aggregate crisis period between 2008 and 2011 on bank profitability in Slovakia but almost no effect in Poland. This is in contrast with the findings of Neville and Graydon (2013) who evaluated lessons from the financial crisis looking at banks’ performance and regulatory reform and making use of the multivariate logit regression analysis and the case study approach. The results show that an important contributor to positive bank performance was the reform foisted by the central banking authority including rigorous risk management and capital restructuring on the Canadian banking system.

Girardone, Molyneux, Gardener (2000) reviewed the determinants of bank efficiency of Italian banks from 1993 to 1996 by employing the stochastic cost frontier model and logistic regression model the methodologies. The results show that mean x-inefficiencies range between 13 and 15 per cent of total costs and they tend to decrease over time for all bank sizes present in Italy, which were captured by the study. The findings of Sathye (2000) who also evaluated x-efficiency in Australian banking industry by employing the DEA and analysis of variance (ANOVA) show that the technical component was more important than the allocative component. However, Spong (2000) discovered that deposit money banks need to have enough capital to provide a cushion for absorbing possible loan losses, funds for its internal needs, expansion and added security for depositors.

Hughes, Lang, Mester and Moon (1998) on the impact of bank consolidation within US banks employed a structural model of leveraged portfolio production, which,
was based on Rhoades hypothesis. He concluded that the economic benefits of consolidation are strongest for those banks engaged in interstate expansion and interstate expansion that diversifies banks’ macroeconomic risk. The findings of Sturm and Wasiams (2004) contradicted that of Hughes et al. (1998).

The findings of Masood, Aktan and Chaudhary (2009) in Saudi Arabia was however different. In the same vein, Augusto Felix (2014) in Portugal found that bank bailouts contributed to the decrease in the credit supply to non-financial corporations, which, led to negated the capital buffer (measured as the difference between the banks’ capital ratio and the minimum prudential capital requirement) of recapitalised banks. Montgomery (2007) however was of a different opinion. While carrying out an examination on the effectiveness of bank recapitalisation in Japan using the panel data with fixed effects and OLS from 1990 to 1999 found that capital injections are more effective for international banks than for domestic banks in Japan. Also observed was that after a substantial decline in their capital base, the major Japanese banks issued subordinated debt to recover their capital. The findings were based on capital crunch hypothesis, moral hazard hypothesis. Wheelock and Wilson (2002) enquired on the consolidation in US banking looking at which banks engage in mergers. The study employed the basic Poisson model and found that capital adequacy, asset management, management, earnings and liquidity (CAMEL) ratings have a significant and non-linear effect on the probability that a bank was merge.

**Evidence from developing economies and Nigeria**

Kukurah, Alhassan and Sakara (2014) surveyed the effects of financial sector recapitalisation policy on the performance of banks in Ghana. The study employed test of equality of mean using t-test while carrying out the study for a period from 2005-2010 and found that bank recapitalisation exercise had significant relationship on the pre and post recapitalisation profitability indices of the quoted banks. However, Salami (2015) while evaluating the impact of mergers and acquisition (MA) on performance of Ghana’s banking industry from 1994-2004 and using the financial performance approach suggested lack of evidence of cost reduction and operational efficiency.

The findings of Badreldin and Kalhoefer (2009), Temu, and Andilile (2011) in Tanzania found no compelling evidence to support the assertion that mergers improve banks’ performance as the study had mixed results. San and Heng (2013) studied factors affecting the profitability of Malaysian commercial banks from 2003-2009 using Correlation matrix and ANOVA. The results show that that ROA is the best profitability measure. Moussa and Aymen (2013) who investigated the impact of capital on financial performance of Tunisian banks from 2000 to 2009 came to similar conclusion.

Oluitan, Ashamu and Ogunkenu (2014) investigated the effect of recapitalisation on bank performance in Nigeria between 2002 and 2011 and reported positive association. Alalade, Adekunle and Oguntodu (2016) in a similar Nigerian study from 2008 and 2012 support the finding. The research Adegbaju and Olokoyo (2008) found that the mean of key profitability ratio such as the Yield on earning asset (YEA), Return on Equity (ROE) and Return on Asset (ROA) were significant meaning that there was statistical difference between the mean of the bank before 2001 recapitalisation and after 2001 recapitalisation.

The study by Onalopo and Ajala (2013) revealed strong relationship between bank performance and merger (strategic decisions) – asset profile, capital structure, operating efficiency, liquidity risk and credit risk. That strategic decision was found to have positively influenced bank performance and that on average, bank consolidation resulted into improved performance. Ilori and Ajiboye (2016), Emori, Nkamare and Nneji (2014), Ailemen and Oyero (2013) and Bakare (2011) were of the same opinion. This was supported by the findings in Kanu and Anyanwu (2015) while investigating mergers, acquisitions and banking sector performance in Nigeria, it was found that mergers and acquisitions impacted significantly on the performance of deposit money banks with profit before tax (PBT) and total assets as proxies for bank performance although that could not be said of returns on equity, where there was no significant difference between the pre-merger and post mergers periods.

On the other hand, Agbeja (2014) evaluated the main determinants and the relative contributions of changes in bank capital base to the efficiency of Nigerian commercial banks from 1992 to 2007 using the panel data analysis, correlation coefficient conducting the granger bivariate causality test and also using the two-stage least square technique (TSLS). It was discovered that capital base requirement was ineffective in reducing distress in the banking industry. This confirmed the report of Okafor (2012) who found that profit efficiency and asset utilisation efficiencies of the banks have deteriorated since the conclusion of the consolidation programme. In another vein, Odunga (2016) ascribed bank profitability to operational efficiency and bank-specific factors beyond capitalisation. Roman and Adina (2013) found that Romanian banks’ profitability is influenced by both and changes in the external environment.
Methodology

Data Sources
The variables that were predicted by theories, bank supervisors’ measurement criteria adopted by the CBN and previous empirical studies were used in the analysis. This study adopted the Ex-post facto research design using data obtained from secondary source (Annual reports and accounts of selected banks as well as Central Bank of Nigeria Statistical Bulletins of several years). It covered all thirteen deposit banks quoted on the Nigerian Stock Exchange as of December 31, 2018.

There were 16 banks quoted on the Nigeria Stock Exchange as of December 31, 2018. Three of them were suspended. This research, which covered a nine-year period from 2008 to 2017, utilised the panel data of 13 deposit money banks in Nigeria. These are Access Bank Plc, Diamond Bank Plc, Fidelity Bank Plc, First City Monument Bank (FCMB) Plc, First Bank of Nigeria (FBN) Plc, Guaranty Trust Bank (GTB) Plc, Union Bank Plc., United Bank for Africa (UBA) Plc, Zenith Bank Plc, Ecobank Plc, Stanbic IBTC Bank Plc, Sterling Bank Plc and Wema Bank Plc. It obtained secondary data extracted from published financial reports of the banks, the National Bureau of Statistics, Central Bank of Nigeria (CBN) annual statistical Bulletins (various years).

Model Specification
The research adapted the models deployed by Ailmen (2009) based on the Buffer theory of capital adequacy, deposit insurance theory and the expense theory. The model used in this study is specified as:

\[ \text{PAT}_{it} = \alpha_0 + \alpha_1 \text{LMCAP}_{it} + \alpha_2 \text{DG}_{it} + \alpha_3 \text{LAG}_{it} + \alpha_4 \text{EXCR}_{it} + \alpha_5 \text{INTR}_{it} + \varepsilon_t \]  

(1)

Where: PAT = Profit after Tax; LMCAP = Market Capitalisation; DG = Growth in Total Bank Deposit; LAG = Growth in Loan and Advances; EXCR = Exchange Rate; INTR = Interest Rate.

The Profit after Tax (PAT) was utilised by this study as a profitability measure of the financial performance of entities as used in the studies of Adegbaju and Olokoyo (2008); Moussa and Aymen (2013). Market capitalisation here relates to the total market capitalisation of all firms, which are present in the capital market (stock exchange). An increase in the total number of firms was mean an increase in the level of economic activities as this was mean that these firms are experiencing a growth rate because of subscription to the shares which they trade in the capital market Oluitan et al., (2014). This study considers this variable as the banks which form the population of this study are those which have their shares traded on the floor of the stock exchange. It can thus be opined that the activities in the market have a way of affecting the level of performance and activities in the banking sector. It is for this reason that this market capitalisation is included as a variable in this study, also as seen in the work of Oluitan et al. (2014).
Method of Data Analysis

The analyses were carried out were to ensure that the models are most appropriate for the estimation and to avoid spurious results. They were carried out in two stages: the pre-estimation, and the estimation and model diagnostic phases. The descriptive analysis, correlation analysis and variance inflation factor analysis were used for the pre-estimation phase to evaluate the characteristics of the series. At the estimation stage, the study utilised the Hausman test to determine and select the most appropriate estimating technique amongst the Pooled OLS, fixed effect and random effect analysis. The model diagnostic test was carried out to determine the appropriateness and exhaustiveness of the model. They are the heteroskedasticity test, cross dependence test and the serial correlation test.

Results and Discussion

Descriptive Statistics

The result of the descriptive statistics is shown in Table 1.

Table 1: Descriptive Characteristic of the Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Jacque-Bera (Prob)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAT</td>
<td>25.97</td>
<td>37.82</td>
<td>-94.88</td>
<td>177.93</td>
<td>1.06</td>
<td>6.33</td>
<td>26.82 (0.00)</td>
</tr>
<tr>
<td>LMCAP</td>
<td>8.08</td>
<td>0.49</td>
<td>6.82</td>
<td>9.07</td>
<td>-0.16</td>
<td>2.32</td>
<td>0.71 (0.70)</td>
</tr>
<tr>
<td>DG</td>
<td>12.15</td>
<td>24.89</td>
<td>-84.60</td>
<td>74.57</td>
<td>-2.75</td>
<td>22.47</td>
<td>0.76 (0.68)</td>
</tr>
<tr>
<td>LAG</td>
<td>11.03</td>
<td>33.73</td>
<td>6.57</td>
<td>106.60</td>
<td>-2.80</td>
<td>17.97</td>
<td>2.01 (0.37)</td>
</tr>
<tr>
<td>EXCR</td>
<td>179.68</td>
<td>54.22</td>
<td>118.55</td>
<td>305.80</td>
<td>1.32</td>
<td>3.52</td>
<td>N/A</td>
</tr>
<tr>
<td>INTR</td>
<td>4.61</td>
<td>16.61</td>
<td>-42.31</td>
<td>23.71</td>
<td>-2.10</td>
<td>6.66</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: Authors’ computation using Eviews 9.0 (2019)

The Deposit money banks showed wide variation in its profitability performance during the study period. They recorded an average performance of about 30 billion Naira. Apart from PAT and exchange rate; the other variables were negatively skewed. In terms of the Kurtosis all, the series except LMCAP are leptokurtic. The Jacque-Bera of normality showed that all the series except PAT were greater than 5 percent and are normally distributed. The non-normality of profit after tax is expected because the data cut across more than one company of different features and sizes. The Jacque-Bera test is not applicable to the exchange and interest rates because these variables are macro-data, which are of the same values across the sections.

Correlation Analysis

The result of Correlation matrix test carried out in order to determine the correlation and direction of association of series is presented in Table 2.

Table 2: Correlation Test Result

<table>
<thead>
<tr>
<th></th>
<th>LMCAP</th>
<th>DG</th>
<th>LAG</th>
<th>EXCR</th>
<th>INTR</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMCAP</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DG</td>
<td>0.1604</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAG</td>
<td>0.1458</td>
<td>0.7091</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXCR</td>
<td>-0.1057</td>
<td>-0.2599</td>
<td>-0.2068</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>INTR</td>
<td>-0.0115</td>
<td>0.0411</td>
<td>0.1673</td>
<td>0.0989</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: Authors’ computation using Eviews 9.0 (2019)
The result reveals minimum and maximum correlation coefficients of 0.01 and 0.71, which are, less than the benchmark shows that there is no evidence of multicollinearity among the variables. The result of the Variance Inflation Factor deployed to explain the nature of associations among the variables is presented in Table 3.

Table 3: Variance Inflation Factor (VIF) Result

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMCAP</td>
<td>2.10</td>
<td>0.48</td>
</tr>
<tr>
<td>DG</td>
<td>2.09</td>
<td>0.48</td>
</tr>
<tr>
<td>LAG</td>
<td>1.09</td>
<td>0.91</td>
</tr>
<tr>
<td>EXCR</td>
<td>1.06</td>
<td>0.95</td>
</tr>
<tr>
<td>INTR</td>
<td>1.03</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Mean VIF: 1.48

Source: Authors' computation using E-views 9.0 (2019)

The result shows that with a mean value of 1.48 which is less than the benchmark for Variance Inflation Factor is 5.0 (Baltagi, 2015), confirmed the absence of multicollinearity as indicated by the Correlation matrix result.

Estimation and Model Diagnostic Tests

The regression process consists of the estimation and the model diagnostic test analysis. The result of the Hausman test is presented in Table 4.

Table 4: Result of Regression with Driscoll-Kraay Standard Errors

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coeff</th>
<th>Std.Err</th>
<th>t-test</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMCAP</td>
<td>42.13</td>
<td>13.17</td>
<td>3.2</td>
<td>0.01*</td>
</tr>
<tr>
<td>DG</td>
<td>0.27</td>
<td>0.25</td>
<td>1.1</td>
<td>0.3</td>
</tr>
<tr>
<td>LAG</td>
<td>-0.25</td>
<td>0.17</td>
<td>-1.44</td>
<td>0.18</td>
</tr>
<tr>
<td>EXCR</td>
<td>0.22</td>
<td>0.06</td>
<td>3.61</td>
<td>0.01*</td>
</tr>
<tr>
<td>INTR</td>
<td>0.01</td>
<td>0.14</td>
<td>0.07</td>
<td>0.95</td>
</tr>
<tr>
<td>Constant</td>
<td>-353.94</td>
<td>93.48</td>
<td>-3.79</td>
<td>000</td>
</tr>
</tbody>
</table>

Overall R-squared = 0.45; Wald chi2(5) = 516.76; Prob > chi2 = 0.0000

Hausman Test: Chi^2(5) = 3.59, ρ = 0.61

Dependent Variable: PAT Significance @ 5%
Source: Authors’ computation using Stata/ IC 11.0 (2020)

The result of Hausman test of Regression with Driscoll-Kraay standard errors indicates the Random effect as the most appropriate estimation technique because the probability (ρ = 0.61) exceeds the 0.05 significance level. This meets the acceptance criteria of the Hausman test null hypothesis.

Model Diagnostic Test Results

The results of the diagnostic tests (heteroskedasticity test, cross-sectional independence test, and autocorrelation test) are presented in Table 5.
Breusch and Pagan LM Test for Random Effects: This is a confirmatory test for Random effect on the output of the Hausman test. It is required to confirm the appropriateness of the Random effect result of the Hausman test. Otherwise, the Pooled Ordinary Least Squares method will be deployed. The result showed that since the probability value of 0.0003 ($\rho = 0.0003$) which is less than the 0.05 level of significance, the most appropriate estimation test is the Random effect.

Cross-sectional Independence Test Result: This is a diagnostic test to examine if the residuals of the model across the firms “i” are uncorrelated over time “t”. The result, $\rho = 0.000$ is less than the chosen level of significance of 5 per cent. This is an indication of the presence of cross-sectional dependence among the residuals in the model (Pesaran, 2004).

Heteroskedasticity Test (Breusch-Pagan / Cook-Weisberg test): This test revealed the presence of heteroscedasticity. The result $\rho = (0.00) < 0.05$ is an indication of inconsistencies in the differences of the residuals of the model across the period “t”. It means that the variations in the residuals of the model over the period “t” are not constant.

Autocorrelation Test: The Wooldridge Test was carried out to determine the existence of associations among the coefficients of the model and its residuals. Unhealthy association result to the error terms being smaller than expected and the co-efficient of determination being higher than normal. The statistics derived ($F_{(1, 12)} = 0.518, \rho = (0.486)>0.05$ supports the null hypothesis which states that there is no first order autocorrelation. This implies that there is no unhealthy association among the coefficients of the model and its residuals.

The model diagnostic test results to determine the appropriateness and exhaustiveness of the model confirm that the robustness of the estimation model notwithstanding the presence of inconsistencies in the differences of the residuals of the model (heteroscedasticity) and the cross-sectional dependence among the residuals. The test of the model also confirmed the appropriateness of the Random effect together with Driscoll-Kraay standard errors estimation technique.

Indeed, as depicted in Table 4 showed that deposit growth (DG), loans and advances growth, and interest rate with probabilities greater than the chosen 0.05
level of significance, are insignificant in influencing the Profit after Tax. On the other hand, market capitalisation and exchange rate significantly influence the Profit after Tax. In addition, a unit change in market capitalisation would lead to 42.13 billion rise in Profit after Tax. In an increase in one Naira increase in exchange rate would lead to 0.216 billion Naira increase Profit after Tax.

Overall, the independent variables (market capitalisation, deposit growth, loans and advances growth, exchange rate and interest rate) jointly accounted for about 45 percent of profitability. The result of the F-statistic with $p$-value of 0.000, which is less than the chosen significant level of 5 percent, showed that recapitalisation significantly impacted on the profitability of listed Deposit Money Banks in Nigeria.

**Findings**

This research gathered evidence from seventy studies covering a cross section of countries, developing countries, developed countries and Nigeria. The results were mixed. The foundational theories of this study are the Buffer theory of capital adequacy, Deposit insurance theory and the Expense theory (also known as the theory of managerial discretion).

This study upholds the Buffer theory of capital adequacy, which posits that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. There is the possible adverse effect of poorly capitalised banks, which may be tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways; risks relating to lower capital adequacy affects banking operations. The Buffer theory provide for the compulsory creation of additional capital level as stipulated by the statutory regulator for financial institutions. This is in the opinion of this study needed to moderate the procyclical nature of lending through the creation of countercyclical cushions in tandem with the provisions of the Basel III (Kagan (2018) and therefore improve profitability.

The finding of this study also confirms the proposition of the Expense theory also referred to as the theory of managerial discretion, Wasiamson (1963). The expense theorists are of the opinion that managers have the option in pursuing policies, which maximise their own utility rather than profit maximisation for shareholders. The Expense theory is included as an asset theory because of the relationship, which this theory has with assets. It is a general belief in accounting and finance that outflow in the expenditure of an entity affects the economic resources (assets) which are controlled by the entity. Operating expenses is derived from the use of resources and can have positive or negative implication on the dependent variable. Increase in the discretionary expense level will diminish the profitability of the firm. Results from various banks used in this study points to the fact that with the
low cost of account switching, the banks that have been able to garner customer loyalty, efficiently disburse, monitor and retrieve loan assets, efficiently manage its treasury operations (foreign exchange and derivatives trading) have been the leading players in the industry and thus adds value to their investors wealth, hence pointing to the fact that most managers in those various banks are in pursuit of policies that would maximise the wealth of their various shareholders.

With respect to the Deposit insurance theory, this research came to a different conclusion that the growth in total bank deposit would has no impact on profitability. However, the theory opines that insured banks tend to reduce their risk of failure, increase customer deposits and seek to transfer deposit insurance to corporation. The argument being that more deposits means banks can grant more loans. They may not be able to reduce the need for excessive capital where bank loans and advances are given out to customers without due process. This may adversely affect capital and liquidity position and consequently the profitability of the banks in the long-run.

The mixed result in the previous studies might be due to different measures of financial performance adopted as well as measures of characteristics. This finding negate the Nigerian report of Emori, Nkamare and Nneji (2014) who found that loans and advances were a determinant of banks profitability. It is however in conformity with the findings of Odeleye (2014), Kanu and Hamilton (2013). The positive influence of exchange rate on profitability contradicts the findings of Ilori and Ajiboye (2016) who obtained insignificant econometric results.

This research supports the findings of Naceur and Omran (2010) who conducted a study on the effects of bank regulations, competition, and financial reforms on banks’ performance gathering evidence from a group of countries including Tunisia, Bahrain, Egypt, Saudi Arabia, Jordan, Kuwait, Lebanon, United Arab Emirates (UAE), Morocco and Oman from 1989-2005. They reported that bank-specific characteristics, in particular bank capitalisation and credit risk, have a positive and significant impact on banks’ net interest margin, cost efficiency, and profitability. They also found exchange rate variation on bank profitability. The importance of bank specific variables was emphasised by Muhammed and Zahid (2014) who reported that the key characteristics of banks negatively influenced the financial performance.

The suggestions for improved bank profitability have been placed on the doors of the government and monetary authorities. They are to ensure consistency, a more systematic approach to banking operations and distress resolution. This is essential in order to maintain overall profitability and stability in the banking sector such as in terms of capital requirements, improved earnings and assets quality, resolved liquidity problem and sustained growth and development among others.
Conclusion
The study examined the impact of the recapitalisation exercise on the profitability of banks in Nigeria with the aim of improving customers’ confidence in the banking system. The result showed that the independent variables (market capitalisation, deposit growth, loans and advances growth, exchange rate and interest rate) jointly accounted for about 45 percent of profitability. However, only the market capitalisation and exchange rate significantly and positively influence the profitability of the Deposit Money Banks in Nigeria.

The study therefore, recommends that the current level of 25 Billion Naira should be raised in order to enhance the operational capacity of the Deposit money banks. It should also intensify the adoption and deployment of technologies in its service delivery.

References


