

Capital Adequacy and Return on Equity of Deposit Money Banks Quoted In Nigeria

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Abstract:

Financial performance in an organization demonstrates the proficient use of resources and the capacity to generate profit. This can be done through banks maintaining high return on capital and quality assets for better performance. In Nigeria, in spite of the fact that banks are highly regulated and that return on equity requirements have been in place since 1988, many banks have failed due to insufficiency of capital and mismanagement of funds. It is thus imperative to ascertain the effect of return on equity in the financial performance of quoted deposit money banks (DMBs) in Nigeria even when cognizance is taken of both critical microeconomic factors and macroeconomic variables.

This study adopted an ex-post facto research design. The target population for this research comprised 14 quoted deposit money banks in Nigeria which were in operation within the period of ten years that ranged from 2009 and 2018 from which secondary data was collected. The study employed ordinary least square regression analysis.

The findings of this research revealed the result showed that capital adequacy without control variables has a positive effect on financial performance using return on equity indicating that an additional increase in capital adequacy would cause return on equity to also increase by 0.165. However, it is significant since $p < 0.05$. The rho value showed that 3.9 % of variations in return on equity were caused by differences in the individual specific effects while the remaining 96.1 % are variables not in the model. The f statistics value of 5.669 is highly significant at the 5% significance level which showed that the overall model is statistically significant.

The study concluded that capital adequacy is a key factor affecting the financial performance using return on equity of the Nigeria deposit money banks and is essential in measuring financial performance of financial institutions. The study, therefore, recommended that the central bank of Nigeria should effectively regulate the capital and the resources owned by the deposit money banks (DMBs) in Nigeria.

Key words: Capital adequacy, Assets quality, Bank size, Inflation, Financial performance

Word counts: 328

1. Introduction

Financial performance in an organization demonstrates the proficient use of resources and the organization's capacity to generate profit. It is of considerable interest to stakeholders, including customers, creditors, shareholders, government, and managers in that it: shows shareholders the return on capital invested; sends signals to customers of the organization's capacity to meet their needs; shows government the capacity of the organization to pay its tax; and shows managers the value of their effort and human capital invested in the organization (Aymen, 2014). Return on equity (ROE) can be defined as the amount of net income returned as a percentage of shareholders' equity. It is one of the all-time favorites and perhaps most widely used overall measure of corporate financial performance (Rappaport, 1986) which was also confirmed by Monteiro (2006). ROE is popular among investors because it links the income statement (net profit/loss) to the balance sheet (shareholders' equity). The fact that ROE represents the end result of structured financial ratio analysis, called Du Pont analysis, also contributes towards its popularity among analysts, financial managers, and shareholders alike (Stowe, Robinson, Pinto & McLeavy, 2002).

The performance of a banking institution is largely driven by its ability to increase its customers' patronage, retain them and manage its assets and liabilities to enhance optimal returns. Banks function as a link between savers and borrowers

and carry out all activities related to the profitable and safe channeling of funds. Outside their intermediation roles, the performance of Deposit Money Banks (DMBs) has important implications for economic growth. Sound financial performance by DMBs rewards the stakeholders especially the shareholders on their investments. On the other hand, poor performance might cause bank collapse and failure that can hamper the economic development of the country (Dell'Araccia & Marquez, 2004).

The significance of bank performance can be considered at both microeconomic and macroeconomic levels (Aburime, 2013). At the microeconomic level, the outcome is necessary for the competition and it is the source of funds. At the macroeconomic level, a profitable and solid banking sector can withstand adverse shocks and adds to the power of the banking and financial system. The profit of a bank is an essential source of capital when ploughed back to the business. This would lead to strong banks, which encourages financial stability. Athanasoglou, Delis and Staikouras (2008) maintained that bank performance is a function of internal factors that are mostly influenced by a bank's management decisions and policy ideas, such as, the level of liquidity, expense management, bank size, provisioning policy, capital adequacy as well as external factors such as ownership, market concentration, stock market development and other macroeconomic factors.

ROE, along with return on assets (ROA), is one of the all-time favourites and perhaps most widely used overall measure of corporate financial performance (Rappaport 1986). This was confirmed by Monteiro (2006) who stated that ROE is perhaps the most important ratio an investor should consider. The fact that ROE represents the end result of structured financial ratio analysis, also called Du Pont analysis (Stowe, Robinson, Pinto & McLeavy, 2002; Correia, Flynn, Uliana & Wormald, 2003; Firer, Ross, Westerfield & Jordan, 2004) contributes towards its popularity among analysts, financial managers and shareholders alike. ROE is calculated by taking the profit after tax and preference dividends of a given year and dividing it by the book value of equity (ordinary shares) at the beginning of the year. Average equity can also be used. Equity would consist of issued ordinary share capital, plus the share premium and reserves.

Arguments have been made to support the fact that factors that also improve a bank's financial performance apart from capital adequacy include: size of the institution, asset management, operational efficiency and other macro-economic variables (Tarawneh, 2006; Sufian & Chong, 2008). Obamuyi (2013) and Obadan (2004) agreed that there are other critical factors, which combined with capital adequacy, would guarantee a healthy banking sector. Obamuyi (2013), argued that indicators or measures of a bank financial condition and performance are based on capital adequacy, size, asset quality, managerial capability, liquidity and economic condition on the bank's profitability.

Capital adequacy indicates the capacity and efficiency of banks to measure, direct and control the risks it faces, in order to be scaled, controlled and making decisions consistent with the strategy and policy and to strengthen the bank's competitiveness strategy. Capital adequacy is beneficial in appreciating banking services and analyzing returns from banks' operations, in addition to policy development and procedures necessary for the prevention of different types of risks, which arise as a result of technological and electronic evolution and increasing complexities in banking and competition among banks. Thus, DMBs are mandated to provide enough capital to cover for any possible problems that may occur, and develop the right approach to ensure the survival of the bank with a higher percentage than the specified percentage and in order to avoid the intervention of monetary authorities to prevent its decline, which is known as corrective actions (Lone & Ahmad, 2017).

Adequate capital is necessary and essential for DMBs to function efficiently because it provides safeguard against failure (Gudmundsson, Ngoka-Kisinguh & Odongo, 2013). The key issues are the type and amount of capital required by a bank in order to have ample protection (Kou, 2008). Capital signifies the part of the bank's liabilities that does not have to be repaid and consequently is seen as a cushion in a situation where the value of the bank's assets falls (Thumbi, 2014). Banks do not make profit at all times, so capital is essential to act as a cushion when banks' profits fall due to heavy losses but in the event that a bank's asset value is lower than its total liabilities, the bank becomes insolvent (McAleer, 2009).

2. LITERATURE REVIEW

Financial performance of banks gives a signal to depositors or investors to choose whether to put in or remove their funds from the bank. Regulators are expected to be concerned about the financial performance of banks in order to effectively carry out their monitoring role. Financial performance of a bank as regards revenue and return mirrors its ability to assist current and prospective operations (Aymen, 2014).

Return on equity shows the profitability to shareholders of the firm after all expenses and taxes (Van Horne & Wachowicz, 2008). It measures the amount the firm is earning after tax for each dollar invested in the firm. In other words, ROE is net earnings per Naira equity capital. It is also an indicator of measuring managerial competence (Rose-Krasnor, 1997). Higher ROE means better managerial performance; however, a higher return on equity may be due to debt (financial leverage) or higher return on assets. Financial leverage creates an important distinction between ROA and ROE in that financial leverage always expands ROE. This will always be the case as long as the ROA (gross) is greater than interest rate on debt (Jaffe, Jeffrey & Westerfiled, 2004). Usually, there is higher ROE for high growth companies.

Reimann (1989) published his work that ROE was used extensively for measuring whether value was being created for shareholders. The reason behind the adoption of ROE as a measure was that it gave more reliable results than earnings per share (EPS) (Reimann, 1989). As it is important to consider how investors value the shares of a company Reimann (1989) considered a number of strategy consulting firms and found that they focus their measurements on the spread between ROE and the cost of equity. If the spread is positive, it indicates that a company has advantageous growth opportunities. Reimann (1989) also identified changes to accounting conventions (policies) as being a problem when using ROE as a performance measure. It was also recognised that financial measures such as ROE may be too short-term and that longer-term measures, perhaps more qualitative, must be adopted as well. Reimann (1989) found that ROE still left 66 percent of the variation in share prices unexplained, indicating a large degree of unreliability.

Another problem with the use of ROE, as identified by Finegan (1991) is that it does not consider the timing of cash flows. For that reason the free cash flow model is often cited as a better means to determine whether shareholder value is being created. Finegan (1991) also stated that investors 'go far beyond earnings in evaluating performance'. Therefore the managers of a company cannot rely on earnings figures alone to measure performance, unless they want to wait for investors' reactions to see how they are performing. Copeland, Koller and Murrin (1996:105) argue that ROE is a short-term performance measure and that too much focus on it can lead a company to overlook long-term growth opportunities that might increase shareholder value. A company may also be able to improve its ROE, while at the same time earning a return that is below its weighted average cost of capital (WACC), and thereby destroy value.

Capital adequacy is the rate of capital needed for a bank as seen by the regulatory and supervisory establishments to take up the banks financial fitness and soundness. Capital adequacy as a measure of the solvency of a bank, tells whether a bank has enough capital to support the risks in its statement of financial position. Adequate capital is a significant variable in business of managing other peoples' money such as banking. Onoh (2002) posited that a bank capital is assumed adequate if it is sufficient to cover the banks' working expenses, satisfy customers with their needs and keep depositors against total or partial loss of deposits in the event of insolvency or loss sustained by the bank.

Ekundayo and Odhigu (2016) believed that, adequacy of capital can help to improve and sustain the financial assets of a company with an idea to broadening the size of long-term capitals available to the company. The reason for this is to fill a gap, provided by working capital and financing capital projects. The authors clarified that a gap could be found through repeated losses, worsening on quality of assets, under-provisioning and fraud. The fresh addition of funds could then help to afford more working capital, computerization programs, amongst others. It is well-known that the higher the capital requirement of any company the easier for it to fascinate any impact of abrupt mishaps, the larger the size of the operation the bank can handle, the lower the risk the bank is expected to have (Ezike & Oke, 2013).

Nzotta (2004) opined that the strength of a bank to a very large extent depends on the capital available to it. A bank's capital can be defined as the equity worth of a bank equated to the present value of its future net earnings. (Pyatt, 1963). Generally, banks' capital represents the owners' net worth in a bank and it includes the paid up capital and all additions to the capital resources of the bank. Bank capital helps in maintaining confidence of the public in the bank. It guarantees the public that customers' funds are secure, that the bank can allow the credit requests of the customers, assists as a means of

measuring the strength of a bank, and it reassures the regulatory authorities that the financial system is not vulnerable to shocks or weakened by crises in a single bank or group of banks.

Empirical Review of Related Studies

Petria, Căpraru and Ihnatov (2015) evaluated main determinants of banks' profitability in five selected Central and Eastern European Countries over the period from 2004 to 2011. The authors used return equity (ROE) as a proxy to measure the profitability of banks calculated as a ratio of the net profit to total equity; the return on assets (ROA) calculated as a ratio of the net profit to the total bank assets and net interest margin (NIM) computed as a ratio of the difference between interest income and interest expense to the total assets of the bank. The results showed that the management efficiency and capital adequacy growth influenced the bank's profitability for all performance proxies, while credit risk and inflation determined ROA and ROE only.

Berger and Bouwman (2013) asserted that the proposition that there should be a negative relationship between a banks ratio of capital to asset and its return on equity may seem to be self-evident as to not need empirical verification. It is thereby important to note that Berger (1995) found evidence for a positive relationship between the ratios of capital to asset and returns on equity.

Gul, Sehrish, Irshad Faiza and Zaman Khalid (2011) examined the impact of bank-specific and macroeconomic characteristics on bank profitability by using data of top 15 Pakistani commercial banks over 2005-2009 period. They used the pooled ordinary least square estimation method to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on major profitability indicators, i.e., return on asset (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM). The empirical results found a strong evidence that both internal and external factors have a strong influence on the profitability.

Almazari and Alamri (2016) examined the determinants of profitability in Jordanian commercial banks between 2005 and 2014. Using balanced panel data and ROA and ROE as measures of bank profitability, their results showed that capital adequacy, capital and leverage positively influenced banks profitability while a negative relationship existed between assets quality and profitability of selected banks.

Hashem (2016) examined the determinants of banking sector profitability in Egypt by using quarterly data over the period of 2004-2014. Study used cointegration procedure to investigate the long-run relationship between ROE and several bank-specific variables (liquidity, capital adequacy, and percentage of non-performing loans). The author used vector error correction model to explore the short-term dynamics of the model and the speed of adjustment to long run equilibrium. It mainly concluded that banking sector profitability was inversely related to capital adequacy, the percentage of loan provisions and the ratio of deposits to total assets. On the other hand, it positively related to the size of the banking sector implying that the sector exhibited economies of scale.

Al karim and Alam (2013) measured the performance of selected private sector banks (five), listed on both the Dhaka Stock Exchange and Chittagong Stock Exchange, in Bangladesh through extensive use of financial ratios that mainly indicate the adequacy of the risk based capital, credit growth, credit concentration, non-performing loan position, liquidity gap analysis, liquidity ratio, return on assets (ROA), return on equity (ROE), net interest margin (NIM), etc. Three indicators namely, Internal-based performance measured by Return on Assets, Market-based performance measured by Tobin's Q model (Price/Book ratio) and Economic-based performance measured by Economic Value add has been used to measure financial performance of the selected banks. Annual time series data from 2008-2012 of the selected banks from their respective audited annual reports (secondary data) were employed in multiple regression analysis to apprehend the impact of bank size, credit risk, operational efficiency and asset management on financial performance measured by the three indicators, and to create a good-fit regression model to predict the future financial performance of these banks. Statistically, the hypothesis was claiming that Bank size, credit risk, operational efficiency and asset management have significant impact on financial performance of Bangladeshi commercial banks.

Ongore and Kusa (2013) used the CAMEL model to study the determinants of financial performance of commercial banks in Kenya. Linear multiple regression model and Generalized Least Square on panel data were used to estimate the data collected from financial statements of the commercial banks and the profitability ratios of ROA, ROE and NIM were used as measures of financial performance. The study found that capital adequacy and management efficiency both have a positive relationship with bank performance but asset quality and bank performance have a negative relationship. Liquidity was found to have no significant influence on bank performance.

Sheefeni, (2015) analysed the bank-specific determinants for commercial bank's profitability in Namibia. The study employed the techniques of unit root, cointegration, and impulse response functions and forecast error variance decomposition on the quarterly data covering the period 2001 to 2014. Return on assets, return on equity and net interest

margin were used as measured of profitability. The results reveal that capital adequacy, credit risk and liquidity risk as the main determinant of commercial bank's profitability in Namibia. This suggests that the quality of loan portfolio determines the profitability of banks. Moreover, the bank has the ability to fulfill its obligations to the depositors. Lastly, the banks have required level of capital that enable them to withstand credit, market and operational risks they are exposed to in order to absorb the potential losses and protect the bank's debtors.

Uzhegova (2015) performed a study attempting to determine the effect of CAMEL elements on the profitability of Nigerian banks. Ordinary Least Square (OLS) method using The Statistical Package for Social Sciences (SPSS) was used to estimate the model for the study. The ratios of the CAMEL system are considered the independent variables while Return on Assets (ROA) and Return on Equity (ROE) are the profitability ratio used as the dependent variable. The results of the study based on the CAMEL model, revealed that all CAMEL components had a significant influence on bank profitability.

3. METHODS

Ex post facto research design was adopted in this study and secondary data were employed. Specifically, data were extracted from published financial statements of selected quoted DMBs, (various issues). The population of this study comprised deposit money banks quoted in Nigeria. Presently, there are twenty – one (21) of such banks out of which only 15 are quoted on the Nigeria Stock Exchange (NSE). This study focused on only fourteen (14) of the Deposit Money Banks quoted due to availability of data during the period: 2008- 2017. Purposive sampling technique was adopted, hence, the following 14 banks that met the criteria of data availability and continuous listing throughout the period of study constituted the sample size of this study:

Access Bank Plc., Diamond Bank Plc., Ecobank Nigeria Plc., First Bank Nigeria Holding Plc., First City Monument Bank Ltd, Fidelity Plc., Guaranty Trust Bank Plc., STANBIC IBTC Plc., Sterling Bank Plc., United Bank for Africa Plc., Union Bank of Nigeria Plc., Unity Bank Plc., WEMA Bank Plc. and Zenith Bank Plc.

Functional Equation and Model

Hypothesized Relationship

The hypothesized relationship is functionally expressed as follows:

Y= Dependent variable (Financial Performance)

X= Independent variable (Capital Adequacy)

Z= Control variables (z_1 = Asset quality, z_2 = Bank size, z_3 = Inflation and z_4 = Financial)

$$FP = f(CA)$$

$$FP = f(CA, AQ, BS, INF, FINDEV)$$

Decomposing FP into its various components, it becomes:

$$FP = ROE$$

$$ROE=f(CA)$$

$$ROE=f(CA, AQ, BS, INF, FINDEV)$$

Hence, the econometric model for the regression analysis is:

$$ROE_{it} = \alpha_1 + \beta_1 CA_{it} + \mu_1 \dots \dots \dots (i)$$

$$ROE_{it} = \alpha_1 + \beta_1 CA_{it} + \beta_2 AQ_{it} + \beta_3 BS_{it} + \beta_4 INF_{it} + \beta_5 FINDEV_{it} + \mu_1 \dots \dots \dots (ii)$$

Where:

FP = Financial Performance

CA = Capital Adequacy

ROE = Return on Equity

AQ = Assets Quality

BS = Bank Size

INF = Inflation

FINDEV = Financial Development

B, α = Coefficient of determinant

μ = Stochastic error term

i = Cross sectional data

t = Time Series

4. Result

MODEL ANALYSIS:

$$ROE_{it} = \alpha_1 + \beta_1 CA_{it} + \mu_1 \dots \dots \dots (i)$$

$$ROE_{it} = \alpha_1 + \beta_1 CA_{it} + \beta_2 AQ_{it} + \beta_3 BS_{it} + \beta_4 INF_{it} + \beta_5 FINDEV_{it} + \mu_1 \dots \dots \dots (ii)$$

VARIABLES	ROE	ROE
	Baseline Model	Model with Control Variables
CA	0.165** (2.381)	0.050 (0.766)
AQ		-0.463*** (-4.318)
BS		4.075** (2.301)
INF		-0.150 (-0.276)
FINDEV		-1.698* (-1.931)
Constant	5.924*** (0.415)	-37.453 (-0.939)
F-Stat	5.669**	9.533***
R-squared	0.039	0.262
Hausman Test	0.98***	2.88
Breusch and Pagan Lagrangian multiplier test	0.79	0.00
Normality Test	2.21	4.04
Seria correlation Test	10.790***	11.314**
Heteroskedasticity Test	0.17	0.43
Observations	140	140
Number of crossed	14	14
Time Periods	10	10

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Return on Equity and Capital Adequacy with and without control variable

Following the objective and hypothesis stated of this study, Return on Equity (ROE) is regressed on the Capital Adequacy to ascertain whether the effect of Capital Adequacy on Return on Equity is significant. That is, this sub-section's panel data regression analysis focuses on making inference on coefficients of Capital Adequacy in relation to Return on Equity. In view of this, the variable that is regarded as dependent variable is Return on Equity (ROE) while the explanatory variables are Capital Adequacy (CA), Asset quality (AQ), Bank size (BS), Inflation (INF) and Financial development (FINDEV) as case maybe.

According to the result in Table 1, the Breusch and Pagan Lagrangian multiplier (LM) [0.79 (P –value = 0.187); 0.00 (P –value = 0.495)] and Hausman [0.98 (P –value = 0.008); 2.88 (P – value = 0.718)] tests results for both the models without and with control variables. These indicate that the data is poolable. Thus, the Pooled results in columns (1) and (4) of the Table 1 are interpreted.

Again, after regressing ROE on Capital Adequacy as well as the control variables; the regression the residuals (error terms) of the estimated models are checked for normality using Jarque-Bera statistic. Also, Breusch-Pagan / Cook-Weisberg test for heteroskedasticity is employed to check whether the models' residuals possess constant variances and the results are presented in Table 1. Econometrically, a model is said to possess heteroskedasticity if the variances of error term are not equal over the various values of the independent variables it implies that during regression analysis the variance would be found to be non - consistent. As in the Table, all the test statistics and their associated p-values are statistically insignificant. These mean that the residuals are normally distributed and have constant variance. Consequently, we conclude that the models are fit.

As in the Table 1, the F-statistic [F-test = 5.669 (P – value = 0.019); F – test = 9.533; (P – value = 0.000)] suggest that the models fit well and that the explanatory variables account for changes in the Return on Equity (ROE) in both cases. Additionally, the R-squared value of 0.039 and 0.262 for the models without and with control variables respectively showed that the independent variables explain about 3.9% and 26.2% of variances in the dependent variable. Inference from the results showed that the coefficient of Capital Adequacy (CA) is positive and statistically significant in the model without control variables [coefficient = 0.165; P – value = 0.019] at 5% alpha levels. This indicates that CA shows positive and significant effect on ROE when Asset quality (AQ), Bank size (BS), Inflation (INF) and Financial development (FINDEV) are not accounted for.

On the inclusion of control variables the regression analysis estimates in Table 1 showed that Capital Adequacy (CA) and Bank Size (BS) have positive effects on Financial Performance (ROE). This is indicated by the sign of the coefficients, that is $\beta_1 = 0.050 > 0$ and $\beta_3 = 4.075 > 0$, while Asset Quality (AQ), Inflation (INF) and Financial Development (FINDEV) have negative effects on Financial Performance (ROE). This is indicated by the sign of the coefficients, that is $\beta_2 = -0.463 < 0$, $\beta_4 = -0.150 < 0$ and $\beta_5 = -1.698$. The size of the coefficient of the independent variable show that a 1 unit increase in Capital Adequacy (CA) and Bank Size (BS) will lead to a 0.050 and 4.075 unit increase in Financial Performance (ROE) respectively. While a unit increase in Asset Quality (AQ) will lead to a 0.463 unit decrease in Financial Performance (ROE), a unit increase in inflation (INF) will lead to a 0.150 unit decrease in Financial Performance (ROE) and a unit increase in financial development (FINDEV) will lead to a 1.698 unit decrease in Financial Performance (ROE).

The effect of the control variables is not obvious in this model because, Capital Adequacy (CA) was significant as well as positively related to Financial Performance (ROE) in the base line model, and was not significant after the control variables were included into the model. The probability of the f-statistics for the baseline model showed 5.669** which is significant at 5% level of significance indicating that the baseline model was significant, likewise, the probability of the f-statistics for the model with the control variables showed 9.533*** which is also significant at 1% level of significance which is an indication that the model is also statistically significant.

Decision: From the result of the regression analysis, Capital Adequacy (CA) controlled by Asset Quality (AQ) and Bank Size (BS) has a significant effect on Financial Performance (FP) for the sampled deposit money banks quoted in Nigeria. Therefore, the null hypothesis (H_{03}) which says Asset quality and Bank Size have not significantly influence the effect of Capital Adequacy on financial performance of deposit money banks quoted in Nigeria is hereby rejected.

4. DISCUSSION

Empirically, the findings of this research revealed that capital adequacy has significant relation towards financial performance of DMBs in Nigeria, and this goes in line with the theoretical expectation and in line with the findings of other authors. Banks with adequate capital are perceived to have more safety and such advantage can be translated into higher profitability. The higher the capital ratio, the more profitable a bank will be. A positive relation between capital adequacy and return on equity was suggested by Almazari and Alamri (2016); Sheefeni (2015); Uzhegova (2015) and Berger (1995). However, the linkage between capital adequacy and financial performance provided a low explanatory power, an indication that the model between the two variables are weak or did not fit well.

5. Conclusion and Recommendation

In accordance with the results obtained from the regression analysis, with positive and significant relationship between capital adequacy and return on equity suggested that banks with more equity capital are perceived to have more safety and such advantage can be translated into higher profitability if truly the equity capital is managed well. The higher the equity ratio, the more profitable a bank should be. Capital adequacy functioned in various ways such as providing cushion against losses not covered by current earnings. It has also been a confidence booster to the depositors, public and the regulatory authority in Nigeria. The study hereby recommends the following;

1. Central Banks should effectively regulate the capital and the resources owned by the Deposit Money Banks (DMBs) in Nigeria by ensuring that a certain level of capital is kept with the Central Bank of Nigeria (CBN) for DMBs' financial soundness and stability. This will enable them to continue to absorb losses and manage risk exposure with shareholders.
2. The DMBs operating in Nigeria should put more emphasis on credit risk minimization and encourage diversity of revenue. This is because when credit risk is improperly managed it might lead to reduction in financial performance of DMBs, and it might affect the asset quality of the entity and also raise loan losses as well as non-performing loans which could ultimately distress financial institutions. The banks should also increase their size to certain extent by increasing their asset level to achieve economies of scale which in turn reduces the costs of operation so that their financial performance will be induced. Thus, government should strive at achieving stable macro-economic environment that is conducive for economic activities.

References

- i. Aburime, T. (2008). *Determinants of bank profitability: company-level evidence from Nigeria*. Second Annual Conference, Department of Finance, University of Lagos, 1-6.
- ii. Al Karim, R., & Alam, T. (2013). *An evaluation of financial performance of private commercial banks in Bangladesh: Ratio analysis*. *Journal of Business Studies Quarterly*, 5(2), 65- 68.
- iii. Almazari, A. A., & Alamri, A. M. (2016). *The effect of capital adequacy on profitability: a comparative study between samba and Saab banks of Saudi Arabia*. *Global Journal of Business Research*, 8(4), 22-25.
- iv. Athanasoglou, P., Delis, M., & Staikouras, C. (2006). *Determinants of bank profitability in the South Eastern European region*. *Journal of international financial Markets, Institutions and Money*, 2(2), 42-48.
- v. Aymen, B. M. M. (2013). *Impact of capital on financial performance of banks: the case of Tunisia*. *Banks and Bank Systems*, 8(4), 47-54.
- vi. Berger, A. N., & Bouwman, C. H. (2013). *How does capital affect bank performance during financial crises?* *Journal of Financial Economics*, 109(1), 146-176.
- vii. Berger, A. (1995). *The relationship between capital and earnings in banking*, *Journal of Money, Credit and Banking*, 27, 432-456.
- viii. Copeland, T.E., Koller, T. & Murrin, J. 1996. *Valuation: measuring and managing the value of companies*. 2nd Edition. New York: Wiley & Sons.
- ix. Correia, C., Flynn, D., Uliana, E. & Wormald, M. 2003. *Financial management*. 5th Edition. Cape Town: Juta.
- x. Cotter, R. V. (1966). *Capital ratios and capital adequacy*. *National Banking Review*, 3(3), 333-346.

- xi. Dell'Araccia, G., & Marquez, R. (2004). *Information and bank credit allocation. Journal of Financial Economics*, 72(1), 185-214.
- xii. Ekundayo, O. U., & Odhigu, F. (2016). *Determinants of human capital accounting in Nigeria. Journal of Accounting*, 1, 5-7
- xiii. Ezike, J. E., & Oke, M. O. (2013). *Capital adequacy standards, basle accord and bank performance: the Nigerian experience (A case study of selected Banks in Nigeria). Asian Economic and Financial Review*, 3(2), 146-149.
- xiv. Finegan, P.T. 1991. 'Maximising shareholder value at the private company', *Journal of Applied Corporate Finance*, 4(1):30-45.
- xv. Firer, C., Ross, S.A., Westerfield, R.W. & Jordan, B.D. 2004. *Fundamentals of corporate finance. 3rd South African edition. New York: McGraw-Hill.*
- xvi. Flamini, V., Schumacher, M. L., & McDonald, M. C. A. (2009). *The determinants of commercial bank profitability in Sub-Saharan Africa (No. 9-15). International Monetary Fund.*
- xvii. Gudmundsson, R., Ngoka-Kisinguh, K., & Odongo, M. T. (2013). *The role of capital requirements on bank competition and stability: The case of the Kenyan banking industry. Kenya Bankers Association-KBA Centre for Research on Financial Markets and Policy Working Paper Series.*
- xviii. Gul, Sehrish, Irshad Faiza and Zaman Khalid (2011), "Factors Affecting Bank Profitability in Pakistan", *The Romanian Economic Journal*, Year XIV, No.39, pp.61-84.
- xix. Hashem, (2006), "Determinants of Egyptian Banking Sector Profitability: Time Series Analysis from 2004-2014", *International Journal of Business and Economics Sciences Applied Research*, 9(2):73-78.
- xx. Jaffe, J., Jeffrey, K. & Westerfield, R. (2004). *Corporate finance (7th ed.). New York: Tata McGraw-Hill Education.*
- xxi. Lone, F. A., & Ahmad, S. (2017). *Islamic finance: more expectations and less disappointment. Journal of financial intermediation*, 5(2), 174 -183.
- xxii. McAleer, M. (2009). *The Ten Commandments for optimizing value-at-risk and daily capital charges. Journal of Economic Surveys*, 23(5), 831-849.
- xxiii. Monteiro, A. (2006), "A Quick Guide to Financial Ratios," *The Citizen: Money web Business Insert*, 6 May: 3.
- xxiv. Nzotta, S. M. (2004). *Money, banking and finance: Theory and practice (2nd ed.). Owerri: Hudson—Jude Nigeria Publishers.*
- xxv. Obadan, M. I. (2004). *Foreign Capital Flows and External Debt: Perspectives on Nigeria and the LCDs Group (1st ed.). Lagos: Broadway Press.*
- xxvi. Onoh, J. K. (2002). *Dynamics of money, banking and finance in Nigeria: an Emerging Market. Lagos: Astra Meridian.*
- xxvii. Ongore, V. O., & Kusa, G. B. (2013). *Determinants of financial performance of commercial banks in Kenya. International journal of economics and financial issues*, 3(1), 237-252.
- xxviii. Petria, N., Capraru, B., & Ihnatov, I. (2015). *Determinants of banks' profitability: evidence from EU 27 banking systems. Procedia Economics and Finance*, 20, 518-524.
- xxix. Pringle, J. J. (1975). *Bank capital and the performance of banks as financial intermediaries: Journal of Money, Credit and Banking*, 7(4), 545-550.
- xxx. Pyatt, Graham. "A measure of capital." *The Review of Economic Studies* 30, no. 3 (1963): 195-202.
- xxxi. Rappaport, A. (1986), *Creating Shareholder Value: A Guide for Managers and Investors. New York: The Free Press.*
- xxxii. Reimann, B.C. 1989. *Managing for value: a guide to value based strategic management. Oxford: Basil Blackwell.*
- xxxiii. Rose-Krasnor, L. (1997). *The nature of social competence: A theoretical review. Social development*, 6(1), 111-135.

- xxxiv. *Sufian, F., & Chong, R. R. (2008). Determinants of bank profitability in a developing economy: empirical evidence from the Philippines. Asian Academy of Management Journal of Accounting & Finance, 4(2), 546- 549.*
- xxxv. *Sheefeni, J. P. S. (2015). The Macroeconomic Determinants of Profitability among Commercial Banks in Namibia. Journal of Emerging Issues in Economics, Finance and Banking, 4(1), 1414-1431.*
- xxxvi. *Stowe, J. D., Robinson, T. R., Pinto, J. E., and McLeavey, D. W. (2002), Analysis of Equity Investments: Valuation. Baltimore, MD: Association for Investment Management and Research (AIMR).*
- xxxvii. *Tarawneh, M. (2006). A comparison of financial performance in the banking sector: Some evidence from Omani commercial banks. International Research Journal of Finance and Economics, 3(3), 101-112.*
- xxxviii. *Thumbi, G. (2014). Effects of credit risk and working capital on capital adequacy for commercial banks in Kenya. (Unpublished MBA thesis). University of Nairobi.*
- xxxix. *Van Horne, J. C., & Wachowicz, J. M. (2008). Fundamentals of financial management (2nd ed.). London: Pearson Education.*