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Board Size And Retained Earnings of Deposit Money Banks in Nigeria

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ABSTRACT: *The study examined board size and retained earnings of deposit money banks in Nigeria. The objective of the study was to ascertain the relationship between board size and retained earnings of deposit money banks in Nigeria. The study adopted an ex-post-facto research design, covering the period between 2010 and 2019. Secondary data were extracted from the annual reports and accounts of sampled deposit money banks in Nigeria. Total assets, total deposits, statutory reserves, and number of branches, were the control variables of the study. Multiple regression and covariance analysis were used for data analysis. The covariance analysis revealed that total asset (p-value < 0.05), total deposit (p-value < 0.05), and number of branches (p-value < 0.05) have a strong and positive relationship with retained earnings (80% approx., 78% approx., 64% approx. respectively). Statutory reserve (p-value < 0.05) and board size (p-value < 0.05) have a strong and negative relationship with retained earnings of deposit money banks in Nigeria with the following coefficients Statutory reserve 73% and board size 53% approx. The findings imply that as a total asset, total deposits, and the number of branches are increasing, the banks' retained earnings also increase significantly and vice versa. On the other hand, as statutory reserve and board size are increasing, banks' retained earnings decrease significantly. Hence, these variables can be used to predict and make decisions on retained earnings of deposit money banks in Nigeria. The study, therefore, recommends that deposit money banks in Nigeria should keep a small or moderate board size since an increase in board size affects their retained earnings negatively.*

KEYWORDS: Board size, total asset, total deposit, statutory reserve, number of branches, retained earnings, Nigeria, deposit money banks

INTRODUCTION

Background of the Study

Banks are constantly in need of funds to finance their operations. These funds, whether domestically or externally obtained, have diverse effects on the overall success of these corporations. While there are various funding choices available, the three most prevalent ones are easily accessible to businesses: earnings retained, fresh equity, and debt. Hovakimian, Opler, and Titman (2001) opine that the possible options here are obvious: for enterprises with very high-growth potential, either fresh equity or earnings retention would be favoured. Companies with strong growth potential must maintain a high retained earnings ratio to net income because retained earnings are the lowest source of finance suggested by the pecking order theory (Myers and Majluf, 1984). According to Park and Pincus (2001), internal savings are the most important source of funding for a firm's fixed asset requirements. Corporate savings are the most appropriate source of financing for a variety of reasons. For example, companies are discouraged from acquiring new equity since additional equity can cause the share price to fall.

Walter (1963) states that equity funding minimises the share of cash flows necessary for dividends and reinvestment. Borrowing costs are high, and market conditions can often make it difficult for companies to raise funds, forcing them to turn to capital markets. As a result, businesses tend to hold as much of their earnings as possible to maintain a constant dividend payout. This is considered financially conservative behaviour by company finance professionals, yet it could destroy shareholder wealth in the long run.

Essentially, an entity seeking to raise funds from outside sources must be willing to meet the lender's demands. According to Bassey, Edom, and Aganyi (2016), the insignificant cost of sourcing funds through external means, such as interest payments on loans, debentures, and leases, dividends paid on shares, rent and royalty fees, debt repayments, redeemable debenture redemptions, redeemable preference share redemptions, and so on., serves as a significant impediment to collecting funds through this channel. Furthermore, the increased transparency requirements imposed on these corporations, particularly banks, hinder their capacity to obtain funds outside (Scott, 2003).

Internal financing, in which a bank uses its reserved profit, imposes no financial obligation on the firm because it avoids the transactional and other costs connected with borrowing external funds. However, the use of retained earnings contradicts shareholder demands for increasing dividend payout. Dividend payout difficulties have been a very significant decision in the contemporary corporate environment, particularly in terms of bank performance reviews. Dividend payout refers to the rules and standards that a firm follows to determine whether or not to pay out dividends to shareholders. The dividend payment decisions of an entity are the primary component of any business policy that is intended to benefit shareholders in exchange for their investment in the firm. Ajanthan (2013) defines these elements as financing constraints, investment possibilities and options, firm scale, shareholder pressure, and regulatory regimes.

Retained earnings are the most essential source of financing for a bank's growth. Gilchrist and Himmelberg (1994) submit that the amount of internally sourced funds transmits information about a company's growth possibilities. Banks that aspire to achieve the maximum potential growth pay lesser dividends, reinvest more of their revenues and deliver a higher percentage of their total returns in the form of capital gains. Banks with fewer investment options would pay a higher dividend than banks with many investment opportunities because they have more profitable uses for cash. As a result, growth is anticipated to increase the demand for domestically generated funds.

Other variables influence the retained earnings of Nigerian deposit money banks aside from the interest of shareholders, which forces banks to cut their alleged retained earnings to pay dividends to these shareholders. As a result, this study determined the association between board size and retained earnings of deposit money banks in Nigeria.

Statement of the Problem

Deposit money banks and other financial institutions play critical roles in any economy's economic development. Deposit money banks in Nigeria play a variety of roles, including providing funds for investment in various sectors of the economy, collecting and mobilising savings for investment in an industrial project, and providing funds to investors to enable them to finance new projects and complete existing ones. As a result, they can influence a country's primary saving habits and prospects. The presence of a strong financial institution, notably a robust banking system, can meet the need for sustainable economic growth in any country. The banking sector is a catalyst, engine, and live wire to

every other sector of the economy, whether it be the agriculture sector, manufacturing sector, mining sector, or even the services sector.

Banks' willingness to promote economic growth and development, on the other hand, is based on the general health, soundness, and stability of the system. The banking sector is one of the few in which shareholders' capital accounts for just a small fraction of the company's liabilities, emphasising the importance of a stable, trustworthy, and sustainable banking system. As a result, it's no surprise that banking is one of the most strictly regulated industries in the country. Emeritus CBN Governor Soludo of Nigeria announced the first stage in the country's banking sector reforms, which aim to help the banking system grow the stability required to support the country's economic growth by properly fulfilling its functions as the fulcrum of financial intermediation.

A key component of the 13-point reform agenda was the raise in the minimum capital base from N2 billion to N25 billion, with a deadline of December 31, 2005. Most banks were unable to raise this large sum before the deadline, resulting in the consolidation of banking institutions through mergers and acquisitions, reducing the number of deposit money banks in Nigeria from 89 to 23. (23). This consolidation was the result of these banks' insufficient capital creation funds. The CBN's proposed N100 billion minimum capital base for banks wishing to operate internationally may limit the ability of those banks that cannot meet the barrier to operate nationally, limiting the bank's potential for growth within the banking industry. The issue becomes the sources of finance available to these banks. Because the shareholders' funds were insufficient to provide the required capital basis, alternative sources of finance, such as debt and retained earnings, were used.

Because of the additional expenses associated with borrowing for recapitalization, retained earnings are the most accessible and cost-free source of finance available to these banks. The revenue retention capacity of these deposit money banks is expected to be explained by indices and/or characteristics that have yet to be identified. The study investigated several characteristics of Nigerian deposit money banks to determine their link with earnings retained after the fiscal year. When this is completed, the data will serve to provide a hint to the characteristics of deposit money banks that need to be focused on to increase the banks' retained earnings base and, by extension, the capital base.

As a result, this study investigates the board size and retained earnings of Nigerian deposit money banks. This was done to determine how board size can increase or decrease the bank's retained earnings, which is the most convenient source of financing available to a bank.

Objectives of the Study

The main objective of the study was to evaluate the relationship between board size and retained earnings of deposit money banks in Nigeria. While the specific objectives were to:

i. Examine the extent of the relationship between total assets and retained earnings of deposit money banks in Nigeria.
ii. Evaluate the extent total deposits relate to retained earnings of deposit money banks in Nigeria.
iii. Ascertain the relationship between statutory reserves and retained earnings of deposit money banks in Nigeria.
iv. Determine the nature and magnitude of the relationship between the number of branches and retained earnings of deposit money banks in Nigeria.
v. Investigate the relationship between board size and retained earnings of deposit money banks in Nigeria.

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REVIEW OF RELATED LITERATURE

Conceptual Review

Retained earnings

Harkavy (1953) argues that reinvesting corporate earnings boosts stock value. Retained profits are the most essential source of funding for a company's growth. The amount of internal funding a company has reveals its growth potential (Gilchrist and Himmelberg, 1995). Thirumalaisamy (2013) states that retained earnings growth is the funding structure of fast-growing companies. According to Bates and Henderson (1967), small companies have long relied on internal funding. Small companies won't. Public corporations will add more external funding. Many small firms can only grow if profits are retained. What percentage of earnings to save depends on factors such as expansion plans, expected growth, ownership, and market expectations. Small firms save more money than long ones. Earnings and dividends from the previous year determine the savings rate.

Internal cash helps companies grow physical assets. Williamson (1964) opines that board discretion influences a company's retention strategy. This makes me wonder if investors favour conserving earnings. Investors favour dividends in non-growth companies and retained earnings in growth industries, according to Friend and Puckett (1964). In a study of publicly listed US firms, Ball (1987) found no association between financial performance and shareholder enrichment. According to Ball, firms that do not reward their shareholders with dividends or market price appreciation can be remarkably profitable. Many of these firms' financial indices have shown to be promising investments. These firms were perceived to be very profitable by their shareholders based on conventional financial performance metrics, yet their shareholders lost money in the long run. Ball's study found that stock dividends were not beneficial to shareholders, and they are rare in Nigerian firms.

Board Size

Board size is the number of directors on the corporate board. The size of the board is a significant characteristic of board dynamics with a large, strategic impact on board independence and overall corporate governance efficiency (Jensen 1993; Donaldson and Muth 1998; Shivdasani and Zenner, 2002). Board size is crucial to board effectiveness and greater firm efficiency, especially in terms of resource reliance, which places a larger focus on the board's ability to co-opt restricted and finite capital from external ties (Kiel and Nicholson, 2003). Board size affects member dialogue and the board's ability to create optimal corporate members. The optimal board size must be a contested issue in corporate governance literature.

Lipton and Lorch (1992), early proponents of board size proxy, advised 7-9 board members. Jensen (1993) advocated for a board size of eight, however, Shaw (1981) advocated for a board size of five, which was backed by further empirical findings (e.g. Mak and Yuanto, 2003). It's crucial to identify the optimal board size because the size might hinder board effectiveness beyond a certain point (John and Senbet, 1998; Yermack, 1996). According to Bennedsen et al. (2008), optimal board size depends on firm age, size, industry, and the need for monitoring and value addition (Connelly and Limpaphayom, 2004).

Theoretical Framework

This research employed Jensen and Meckling's Agency Theory (1976). This is a theory on the relationship between the principal (shareholders) and the principal's agent (business executives). This

makes the firm a hub for property owners' contracts. Principals engage agents to perform a service and convey decision-making authority to them to form an agency partnership. Berle and Means (1932) proposed the agency theory, which states that when a company's equity ownership dwindles, ownership and management separate. This permits management to pursue their interests above shareholders'.

Jensen and Meckling (1976) proposed minimising agency expenditures caused by managers' competing interests with lenders and debt holders to determine the optimum debt ratio in a capitalist system. They want managers' corporate ownership stakes increased to better balance their interests with those of owners or debt consumers paid to decrease managers' wasteful extra expenditure. Jensen (1986) examines an agency using free cash flow. He proposed solving the problem of free cash flow by increasing management's share in the company or increasing leverage in the capital structure, hence limiting the amount of "free" cash accessible to them.

Proper bank management is the key to good capital structure and growth. Effective bank management requires good corporate governance. The study was based on agency theory to ensure principal-agent power separation which will guarantee earnings retention and growth.

Empirical Review

Aminu, Aisha and Muhammad (2015) used a sample of 5 banks listed on the Nigerian Stock Exchange to determine the effect of board size and board composition on the financial performance of banks in Nigeria over 9 years. A multivariate regression model was used to analyze the data obtained for the study. Findings revealed that Board size had a negative and significant effect on the Bank's performance (measured by ROI) as a result, an increase in board size would lead to a better return on investment. Hermassi, Adjaoud and Aloui (2015) investigated the relationship between corporate governance, ownership structure and capital structure in Canada from 2008 to 2011. A sample of 117 firms listed on the Toronto Stock Exchange over the period 2008-2011 was used for the study. Correlation analysis was adopted for the study. Findings show that duality and CEO compensation are negatively associated with leverage, while CEO entrenchment affects capital structure positively. The result further shows that board size and board independence do not have a significant effect on leverage.

Iraya, Mwangi and Muchoki (2015) studied the effect of corporate governance practices on the earnings management of companies listed at the Nairobi Securities Exchange. A sample of 49 companies was reviewed for the period 2010 – 2012. Using a linear regression model, the findings reveal that Board size and Board independence were negatively related to earnings management.

Nath, Islam and Saha (2015) examined the influence of board structure on a firm's financial performance in the Pharmaceutical industry of Bangladesh. Correlation analysis was adopted for the study. Four major board attributes (board composition, board size, board ownership and CEO duality) were selected to identify their influence on the firm's financial performance. The findings from the study showed a significant negative relationship between board size and a firm's financial performance.

Imoleayo, Eddy, Egbide and Olamide (2016) explored the role that board structure plays in earning management using a sample of 137 firms listed on the Nigeria Stock Exchange for the period 2003 to 2010. Ordinary least square regression technique and the Pearson product-moment correlation coefficient were used as the statistical tool of analysis. Findings from the analysis disclose a negative relationship between board size, gender and board composition with earning management and a positive significant relationship between a board meeting and earning management.

Olfa, Mighri and Karim (2016) work on earnings management and board characteristics used board size, independence and duality of Chief Executive Officer as variables for board characteristics and their relationship with earnings management on a sample of 70 French firms listed on the Paris Stock Exchange. For a period of 4 years (2008 – 2012). Discretionary accruals were used as a proxy for earnings management. The finding reveals that board size was negatively associated with earnings management whereas board meetings had a positive relationship with earnings management.

Ines and Chokri (2017) investigated the impact of board characteristics and firm specifics on corporate financial leverage in Tunisia-listed firms. A sample of 33 firms listed in the Tunis Stock Exchange from 2006 through 2015 was selected for the study while a multiple linear regression model was adopted in analyzing the secondary data collected for the study. The result from the analysis shows that board size is significantly positively related to corporate leverage.

El-Maude, Shamaki and Bawa (2018) studied the effect of Board Size, Board Composition and Board Meetings on the financial performance of listed consumer goods in Nigeria. A sample of 10 Companies was selected from the consumer goods companies listed on the Nigeria Stock exchange during the period. The period under study was a period of 10 years (2006 to 2015). A regression model was adopted and the findings showed that board size had a negative significant effect on the Return on Assets of selected Firms.

Yameen, Farhan, and Tabash (2019) investigated the effect of corporate governance practices on firms' performance, with a special reference to the Indian tourism sector. The study uses a panel dataset of 39 hotels listed on the Bombay Stock Exchange (BSE) for the period from 2013/2014 to 2015/2016. The ordinary least square regression model is run for estimating the results. Findings show that board directors' size negatively impacts the performance of Indian hotels measured by accounting proxies. Results also reveal that board directors' size positively impacts the Indian hotels' performance measured by marketing proxies.

Koji, Adhikary, and Tram (2020) explored the relationship between corporate governance and the financial performance of publicly listed family and non-family firms in the Japanese manufacturing industry. The study obtains data from Bloomberg over the period 2014–2018 and covers 1412 firms comprising 861 non-family and 551 family firms. Board size encourages the performance of non-family firms, while such influence is not observed for family firms.

Okoye, Olokoyo, Okoh, Ezeji, and Uzohue (2020) explored the nexus between governance practices and bank profitability in Nigeria. It adopts the size of the bank board and directors' stake as proxies for corporate governance, with return on assets and returns on equity as representations for financial performance. The research incorporates firm size as a controlled variable. The estimation technique of the Generalized Method of Moments was employed.

Evidence from the research reveals that board size, directors' equity, and firm size substantially affect Nigerian banks' financial performance. Besides, the study shows a robust effect of lagged return on equity on the current level of performance. Therefore, the study asserts that governance in business entities strongly affects their financial performance and recommends maintaining optimum board size to minimize boardroom conflicts.

Owiredu and Kwakye (2020) examined the influence of corporate governance principles on banks' financial performance in Ghana. Data for the study was gathered from the annual reports and the

financial statements of the sampled banks from the period 2007-2016. A random effect model was used to analyse the data. This study found a significant positive relationship between board size and financial performance measured by ROA and ROE of banks in Ghana.

Umar, Norfadzilah, Hussaini, and Habibu (2020) investigated the relationship between corporate governance in the board of directors and the financial performance of Nigerian banks. The study made use of secondary data obtained from the annual reports of fifteen (15) banks listed in the Nigeria Stock Exchange for the year 2013 to 2015. This study utilized a panel data method on 15 banks with 45 firm-year observations. The random-effect model was used to examine the effect of the predictors on financial performance. The relationship between board genders, board size and ROA were negatively insignificant.

Gap in Empirical Review

From the foregoing literature, it could be observed that there is scanty work on retained earnings of companies in Nigeria. The few studies conducted such as Soyemia and Olawale (2019), Kyere and Ausloos (2019), Yameen, Farhan, and Tabash (2019), Akparhuere, Duru, and Ogbu (2019), Efuntade and Akinola (2020), Shrivastav and Kalsie (2020), Vianney, Iravo, and Namusonge and so on, were conducted in other sectors other than the banking sector. The period studied also created a study gap because most of the prior studies were conducted earlier than 2015 with different sets of variables. This created a gap in the literature which this study filled by evaluating new sets of characteristics and retained earnings of banks in Nigeria from 2010 to 2019.

METHODOLOGY

The study adopted an *ex post facto* (after the facts) research design. The research adopted an *ex post facto* design because it made use of data which are already in existence in annual reports and accounts of banks in Nigeria. The research was conducted in Nigeria's banking sector of the economy. The study made use of secondary data. Panel data from 2010 to 2019 were extracted from the annual report and accounts of the selected banks in Nigeria. The study purposely sampled 10 deposit money banks listed on the Nigerian Stock Exchange. Descriptive Statistics, covariance analysis, and panel multiple regression was used as the statistical tool for data analysis. Total assets, total deposits, statutory reserves, and the number of branches are the control variable for the study.

The models for this study were specified as follows:

$r=[1/(n-1)] \times \sum[(TA - \overline{TA})/S_{TA})X(RETEARN - \overline{RETEARN}) /S_{RETEARN})]$……(1)

$r=[1/(n-1)] \times \sum[(TDP- \overline{TDP})/S_{TDP})X(RETEARN - \overline{RETEARN}) /S_{RETEARN})]$….(2)

$r=[1/(n-1)] \times \sum[(STRV- \overline{STRV})/S_{STRV})X(RETEARN - \overline{RETEARN})/S_{RETEARN})]$….(3)

$r=[1/(n-1)] \times \sum[(NOB- \overline{NOB})/S_{NOB})X(RETEARN - \overline{RETEARN})/S_{RETEARN})]$….(4)

$r=[1/(n-1)] \times \sum[(BSIZE- \overline{BSIZE})/S_{STRV})X(RETEARN - \overline{RETEARN})/S_{RETEARN})]$….(5)

Where;

n = number of observations in the sample
$\sum$ = summation symbol
RETEARN = the value of retained earnings
$\overline{RETEARN}$ = the sample mean of retained earnings
$S_{RETEARN}$ = the sample standard deviation of the retained earnings
TA = the value of total asset
$\overline{TA}$ = the sample mean of the total asset
S_{TA} = the sample standard deviation of total asset
TDP = the value of total deposit
$\overline{TDP}$ = the sample mean of total deposit

S_{TDP} = the sample standard of total deposit
STRV = the value of statutory reserve
$\overline{STRV}$ = the sample mean of statutory reserve
S_{STRV} = the sample standard deviation of statutory reserve
NOB = the value of the number of branches
$\overline{NOB}$ = the sample mean of the number of branches
S_{NOB} = the sample standard deviation of the number of branches
BSIZE = the value of board size
$\overline{BSIZE}$ = the sample mean of board size
S_{BSIZE} = the sample standard deviation of board size

Multiple regression model was specified as follows:

$$Log(RETEARN)_{t\,i} = \beta_o + \beta_1 Log(TA)_t + \beta_2 Log(TDP)t + \beta_3 log(STRV)_t + \beta_4 log(NOB)_t + \beta_5 log(BSIZE)_t + \varepsilon_t$$ - [Equation (6)]

Where;

RETEARN = Retained Earnings
TA = Total Assets
Log = Log Transformation
TDP = Total Deposits
STRV = Statutory Reserve
NOB = Number of Branches
BSIZE = Board Size
ε = Stochastic disturbance (Error) Term
β_o = Coefficient (constant) to be estimated
$\beta_i - \beta_5$ = Parameters of the independent variables to be estimated
t = Current period

4.0 DATA ANALYSIS

Table 4.2.41: Descriptive Statistic of the Industry-Level Panel Data

	RETEARN	TA	TDP	STRV	NOB	BSIZE
Mean	33575.71	2283760.	1608163.	45108.46	385.9600	14.85000
Median	30321.00	1786558.	1261570.	27177.50	313.3000	15.00000
Maximum	427874.0	7146610.	5442193.	298878.0	1000.000	25.00000
Minimum	-2657472.	277111.0	203270.0	179.4000	145.0000	6.000000
Std. Dev.	297703.8	1572044.	1142650.	53634.49	223.1730	3.108720
Skewness	-0.424466	0.126191	0.168794	0.713299	0.236339	0.029018
Kurtosis	1.874710	2.469550	2.759730	2.990720	2.647517	2.568971
Jarque-Bera	18671.99	22.05709	25.17295	430.2015	2.722257	1.362902
Probability	0.748546	0.877012	0.621003	0.124552	0.644125	0.505882
Sum	3357571.	2.28E+08	1.61E+08	4510846.	38596.00	1485.000
Sum Sq. Dev.	8.77E+12	2.45E+14	1.29E+14	2.85E+11	4930813.	956.7500
Observations	100	100	100	100	100	100

Source: Computed by Researcher Using Eviews 10.0 Statistical Software

The normality of the distribution of the data series is shown by the coefficients of Skewness, Kurtosis, and Jarque-Bera Probability. From Table 4.2.41, the probability of the Jarque-Bera Statistics for all the explanatory variables have insignificant p-values as follows, Retained Earnings (0.748546), Total Assets (0.877012), Total Deposits (0.621003), Statutory Reserves (0.124552), Number of Branches (0.644125), and Board Size (0.505882). The insignificance of the p-values depicts normal distribution for all the variables. This is further confirmed by the skewness coefficients which operate around figure one in all the variables under study. The kurtosis coefficient also provides a second level of confirmation

that all the explanatory variables are normally distributed with Retained Earnings (1.874710), Total Assets (2.469550), Total Deposits (2.759730), Statutory Reserves (2.990720), Number of Branches (2.647517), and Board Size (2.568971). The kurtosis of all the variables is not far from figure 3 (three).

Table 4.2.42: Result of Panel Unit Root Tests

Variable	ADF P-value at levels	Decision	ADF P-value at 1st difference	Decision	ADF P-value at 2nd Diff.	Decision	Order of Integration
RETEARN	0.0000	Reject Ho					I (0)
TA	0.9305	Do not reject Ho	0.4663	Do not Reject Ho	0.0007	Reject Ho	I (2)
TDP	0.9972	Do not reject Ho	0.3941	Do not Reject Ho	0.0497	Reject Ho	I (2)
STRV	0.0591	Do not Reject Ho	0.0006	Reject Ho			I (1)
NOB	0.3985	Do not Reject Ho	0.4508	Do not Reject Ho	0.0115	Reject Ho	I (2)
BSIZE	0.0094	Reject Ho					I (0)

Source: Computed by Researcher Using Eviews 10.0 Statistical Software

The table above is a representation of the stationarity test of the variables used in this study. This test is necessary to determine if a variable has a unit root, i.e. if the variable is non-stationary. For the sake of the current study, and to obtain a result that is robust enough for prediction and forecast, these variables must not have a unit root, which is to say that they are stationary. The test has a null hypothesis, which is that a variable has a unit root or that the variable is non-stationary. The null hypotheses are rejected or not rejected depending on the probability value of the Augmented Dickey-Fuller Test for Unit Roots. A probability value less than 0.05 means that the null hypothesis will be rejected, meaning that the variable does not have a unit root, i.e. the variable is stationary over time.

Subsequently, from the table, the probability value of ADF for retained earnings, denoted as RETEARN, is 0.0000 which is less than 0.05. This means that the null hypothesis is rejected, thereby concluding that the variable has no unit root. However, this probability value was achieved at levels, which is to say that the variable RETEARN is stationary at levels. Total assets, represented by TA have an ADF probability value of 0.0007 after the 2nd difference, meaning that the variable TA is integrated of order two (2), or that it is stationary at the 2nd difference. Total deposit, represent with TDP, achieved a probability value of 0.0497 after the 2nd difference, indicating that the variable is integrated of order two (2). Furthermore, statutory reserves denoted by STRV, showed an ADF probability value of 0.0006 after the first difference, which means that the variable is stationary at the first difference, or integrated of order one (1). The variable number of branches was shown to be integrated of order two (2), after recording a probability value of 0.0115 after the 2nd difference. Lastly, the board size, denoted by BSIZE has a probability of ADF of 0.0094 at levels, which is less than the threshold of 0.05. This shows that the variable is integrated at levels.

Summarily, retained earnings and board size were found to be stationary at levels. Total assets, total deposit and statutory reserve were further found to be stationary after the second difference. Then, number of branches was found to be stationary after the first difference.

Table 4.2.43: Results of Kao (Engle-Granger based) Co-Integration Test

Residual Variance	**HAC Variance**	**ADF**	
5.770325	4.238611	**t-statistic**	**Probability**
		-3.263414	0.0006

Source: Computed by Researcher Using Eviews 10.0 Statistical Software

H_0: There is no co-integration
Decision Rule: Reject the null hypothesis if the p-value of ADF is less than 0.05.
Decision: The result of the Kao (Engle-Granger-based) Co-integration test shows that there is a stable long-run relationship between the variables under study. This is because the probability value of the ADF is less than 0.05. in other words, the variables are co-integrated. This means that the dependent variable, retained earnings, and the independent variables; total assets, total deposit, statutory reserve, board size and number of branches, share a long-run relationship, and as such, a regression analysis can be conducted on them.

Table 4.2.44: Covariance Analysis Result of the Industry-Level Panel Data

Covariance Analysis: Spearman rank-order
Date: 01/19/21 Time: 16:36
Sample: 2010 2019
Included observations: 100

Covariance Correlation t-Statistic Probability	RETEARN	TA	TDP	STRV	NOB	BSIZE
RETEARN	833.2500 1.000000					
TA	667.8900 0.801548 13.27065 0.0000	833.2500 1.000000 ----- -----				
TDP	646.6900 0.776106 12.18366 0.0000	820.4800 0.984674 55.89247 0.0000	833.2500 1.000000 ----- -----			
STRV	-361.2800 -0.733582 -4.763262 0.0000	543.1250 0.651819 8.508567 0.0000	542.0650 0.650547 8.479756 0.0000	833.2400 1.000000 ----- -----		
NOB	367.1850 0.640719 3.860378 0.0000	566.4300 0.679866 9.177674 0.0000	578.7900 0.694701 9.560961 0.0000	324.4275 0.389401 4.185220 0.0001	833.0500 1.000000 ----- -----	
BSIZE	-192.9200 -0.533049 -2.372388 0.0196	-88.70500 -0.107156 -1.066936 0.2886	-73.76000 -0.089103 -0.885593 0.3780	-4.920000 -0.005943 -0.058838 0.9532	81.69500 0.098700 0.981874 0.3286	822.4050 1.000000 ----- -----

Source: Computed by Researcher Using Eviews 10.0 Statistical Software

Table 4.2.44 suggests that there is a strong (80% approx) and positive relationship between Retained Earnings and Total Assets with t-Statistic: 13.27065 and Probability: 0.0000. Retained Earnings and Total Deposits also share a positive and strong relationship (77.6% approx) with t-Statistic: 12.18366 and Probability: 0.0000. However, Statutory Reserves and Retained Earnings have a negative and strong relationship at approximately (73.4%) with t-Statistic: -4.763262 and Probability: 0.0000. On the relationship between Retained Earnings and Size of Board of Directors, there is a negative but strong association at 53.3% with t-Statistic: -2.372388 and Probability: 0.0196. Retained Earnings and Number of Branches of the banks, also have results which are in tandem with Total Assets. The two variables (Retained Earnings and Number of Branches of the banks) share a strong (64% approx.) and positive relationship with t-Statistic: 3.860378 and Probability: 0.0000.

Table 4.2.45: Regression Analysis Result of the Industry-Level Panel Data

Dependent Variable: RETEARN
Method: Panel EGLS (Cross-section random effects)
Date: 01/19/21 Time: 16:54
Sample: 2010 2019
Periods included: 10
Cross-sections included: 10
Total panel (balanced) observations: 100
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TA	19.50050	6.590008	2.959101	0.0039
TDP	-11.67723	6.848730	-1.705021	0.0915
STRV	-1.828571	0.623164	-2.934333	0.0042
NOB	-0.002497	0.002767	-0.902151	0.3693
BSIZE	-0.306695	0.102504	-2.992043	0.0035
C	-34.44037	9.142188	-3.767191	0.0003
	Effects Specification			
			S.D.	Rho
Cross-section random			2.352789	0.5319
Idiosyncratic random			2.207186	0.4681
	Weighted Statistics			
R-squared	0.337675	Mean dependent var		0.804698
Adjusted R-squared	0.302444	S.D. dependent var		2.661894
S.E. of regression	2.223208	Sum squared resid		464.6096
F-statistic	9.584837	Durbin-Watson stat		2.367703
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.268863	Mean dependent var		2.829390
Sum squared resid	988.8634	Durbin-Watson stat		0.642604

Source: Computed by Researcher Using Eviews 10.0 Statistical Software

Table 4.2.45 reveals that Total Assets have a significant and positive effect on Retained Earnings with a probability value that is less than 0.05 (0.0039) and a t-Statistic that is greater than 2 (2.959101). Total Deposit and Number of Branches have a negative and insignificant effect on Retained Earnings of Deposit Money Banks in Nigeria with probability values that are greater than 0.05 (Total Deposit - 0.0915 & Number of Branches - 0.3693) and t-Statistic that is less than 2 (Total Deposit - 1.705021 & Number of Branches - 0.3693). However, Statutory Reserves and Board Size have negative and significant effect on Retained Earning of Deposit Money Banks in Nigeria with probability values that is less than 0.05 (Total Deposit - 0.0042 & Number of Branches - 0.0035) and t-Statistic that is greater than 2 (Total Deposit - 2.934333 & Number of Branches - 2.992043).

The table further depicts that a unit change in Total Assets will increase Retaining Earnings by 19.50050. While a unit change in Total Deposit, Statutory Reserves, Number of Branches, and Board Size results in 11.67723, 1.828571, 0.002497, and 0.306695 decreases in Retained Earnings respectively. The adjusted R-squared (R^2) indicated that about 30% of the changes in Retained Earning is accounted for by the explanatory variables. The remaining 70% could be explained by other factors capable of influencing retained earnings Deposit Money Banks in Nigeria. The probability of the F-statistic is significant which shows the statistical fitness of the multiple regression results. There is an absence of serial autocorrelation in the panel data extracted from annual reports and accounts of deposit money banks in Nigeria as suggested by Durbin-Watson stat of 2.367703.

Test of Hypotheses

Statement of Decision Rule: Reject H_0 if the P-value tabulated is less than the A-value calculated (0.05), the t-statistic is > 2, and if the correlation coefficient is > 0.50 and accept the null hypotheses if reverse becomes the case.

H_0 Board size does not have a strong association with retained earnings of Deposit Money Banks in Nigeria.

H_1 Board size does not have a strong association with retained earnings of Deposit Money Banks in Nigeria.

Decision: From the panel covariance analysis in Tables 4.2.44, the P-value of 0.0196 < 0.05 A-value, the 5.372388 t-statistic > 2, and the correlation coefficient of 0.533049 > 0.50. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that board size has a strong relationship with retained earnings of Deposit Money Banks in Nigeria.

DISCUSSION OF FINDINGS

In the test of hypothesis five, the covariance analysis result reveals that board size has a strong and negative relationship with retained earnings of Deposit Money Banks in Nigeria. This implies that as board size increases retained earnings decrease. The result is not surprising because in our context, appointment to the board, instead of being a call to duty, is a call to partake in the sharing of a cake baked by the untiring efforts of others who earn a paltry non-living wage. The cost of maintaining a board in Nigeria, especially in banks, is usually very high and could push profits into humongous losses. The finding is consistent with the findings of Yameen, Farhan, and Tabash (2019) who found a negative and significant relationship between board size and performance. However, Owiredu and Kwakye (2020) found a positive and significant relationship between board size and financial performance. Meanwhile, Iraya (2015), Nath, Islam and Saha (2015), Aminu, Aisha and Muhammad (2015), Imoleayo, Eddy, Egbide and Olamide (2016), Olfa, Mighri and Karim (2016), Ines and Chokri (2017), El-Maude, Shamaki and Bawa (2018), Yameen, Farhan, and Tabash (2019), Okoye, Olokoyo, Okoh,

Ezeji, and Uzohue (2020), Koji, Adhikary, and Tram (2020) found a significant or negative relationship between board size and financial leverage/performance/earnings management. Hermassi, Adjaoud, and Alouic (2015), Umar, Norfadzilah, Hussaini, and Habibu (2020) found an insignificant relationship between board size and financial performance.

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

Conclusion

The essentiality of revenue retention to investment, expansion and diversification needs of banks in Nigeria cannot be stressed enough. The banking industry is capital oriented and as such requires more capital than any other business. The above assertion is supported by the Central Bank of Nigeria's (CBN) minimum capital base of twenty-five billion naira before a bank can operate in Nigeria, they are proposing a further increase of this capital requirement to one hundred billion naira so that Nigerian banks can compete globally. A well-organized attempt at creating enough retained earnings as the buffer is therefore very important to make sure that funds are available when due.

Retained earnings provide deposit money banks with the avenue for a cost-free fund for investment purposes as suggested by Myers and Majluf (1984) in their Pecking Order Theory. This is because retained earnings provide the bank management with internally generated funds without cut-throat interest rates or diluting the control or ownership structure of the company through the issue of shares. However, numerous bank characteristics affect banks' ability to retain the amount of profit they wish to retain. This study examined the relationship between board size and retained earnings of these deposit money banks.

From the data analysis, total assets, total deposit, statutory reserve, and number of branches have a strong and positive relationship with retained earnings, while board size has a strong and negative relationship with retained earnings. The adjusted R-squared in the regression result shows that the extent of the effect that these explanatory variables exert on the focal variable is 30%. Therefore, this study concludes that the selected banks' characteristics have a strong relationship with retained earnings of deposit money banks in Nigeria. However, these variables exert a moderate effect on the retained earnings of deposit money banks in Nigeria.

Recommendations

The study made the following recommendations:
They should maintain a small or moderate board size because of the huge cost implications of having a large board size in Nigeria. Large board size, most times, slows decision-making processes and promotes board squabbles. The study found that a board size of 13 members or less has a positive relationship with retained earnings. The finding was supported by Uwaigbe and Fakile (2012) who conclude that a board size below 13 is better than a board size above thirteen members when related to financial performance. Members of the board should however possess critical financial, investment and management attributes that promote vibrancy.

Contribution to Knowledge

The reason for every research is to increase the existing reservoir of knowledge. The purpose of this study is to evaluate bank characteristics that determine retained earnings of deposit money banks in Nigeria. The reviewed works of literature show that there is scanty work on retained earnings of companies in Nigeria. The eight studies conducted were conducted in other sectors other than the banking sector. The period studied also created a study gap because most of the prior studies were

conducted earlier than 2015 with different sets of variables. This study added to the already existing knowledge by evaluating the bank's characteristics and retained earnings of banks in Nigeria. The additional knowledge contributed is that in line with the expectations, a smaller board size relates more positively to retained earnings than an elaborate board size in total disagreement with the "Two Heads are Better than One" theoretical framework and in support of the "Too Many Cooks" theory. Lastly, retained earnings will always increase whenever profits increase regardless of the investment needs of the banks. This implies that in Nigeria context, earnings are simply retained for contingencies and not based on needs assessment at the time.

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