Ownership Structure and Return on Assets of Commercial Bank in Nigeria

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Abstract
This study examined the effect of ownership structure on return on assets of deposit money banks in Nigeria. The objective was to investigate the relationship between the composition of ownership structure and deposit money banks return on assets. Cross sectional data was sourced from financial statement of fifteen quoted commercial banks. Return on assets was modeled as a function of domestic ownership, ownership concentration, foreign ownership institutional ownership and management ownership. After cross examination of the validity of the pooled effect, fixed effect and the random effect, the study accepts the fixed effect model. The result found that ownership concentration, management ownership and institutional ownership have negative relationship with the dependent variable while private ownership and management ownership have positive relationship with the dependent variable which is return on investment. While private ownership, ownership concentration, institutional ownership and foreign ownership have positive effect on the dependent variable which is return on assets while management ownership have negative effect on the dependent variable. We recommend that regulatory authorities such as the Securities and Exchange Commission, the Nigerian investment promotion council should encourage private investors to invest into the equity shares of the commercial banks and the need for commercial banks to increase their ownership structure through public listing, right issue and other means of attracting public and institutional investors.

Keywords: Ownership Structure, Return on Assets, Commercial Bank.

1. Introduction
However, the problem in ownership structure and its effect on corporate profitability borders on the role of the owners in influencing management decision. (Kobeissi and Sun, 2010) noted that it is rarely difficult to separate ownership and control within any firm, thus the controllers always have some degree of ownership of the equity of the firms they control, also in some cases owners by virtue of the size of their equity position they have some effective control over the firms they own (Denis and McConnel, 2003). Shleifer and Vishny (1997) reveal that ownership concentration is linked with legal protection and this is one of two main element of determinant of corporate governance which is one of the key determinants of corporate performance. Fractional ownership of the higher shareholders concentration exceeds a certain threshold; a higher ownership concentration raises the likelihood of tunneling and reduces firm efficiency. This situation is one of the main agency problems in countries with poor shareholder protection. The implication is that a rise in ownership concentration can decrease market liquidity as well as diversification of opportunities which consequently increases the cost of capital of a firm (Lannota, Nocera and Sironi, 2007). The limitations on managers’ discretionary powers, which tend to affect their efficiency and profitability, are usually imposed governance mechanism by the owners. Concentrated ownership considerably motivates major shareholders and Parallel to the increase of their share in company, their incentives to improve operations and controlling the management will increase
obvious benefits of concentrated ownership, but some discussion of the opposite is also true. First, the major shareholders are typically risk-averse. Dispersed ownership causes the ability to improve stock liquidity and provides investors with creating diversification to lower risk. Second, when the excessive control is done by concentrated ownership, internal stakeholders will be discouraged from costly investing. Thirdly, concentrated ownership may cause the agency problem in another way and it is that the conflict between major shareholders and minor shareholders components arises. Major shareholders will have the required incentives to use their controllable position so that they can obtain their specific interests through expense of minor shareholders (FazlZade, Mohammadzade and Tahbaz Hindi, 2009). It is therefore imperative to examine the relationship between ownership structure and profitability of Commercial banks in Nigeria.

The efficiency and profitability of the banking sector is of importance at macroeconomic level in a given nation. During the past decades, new movement of private ownership in the banking industry has significantly changed the banking ownership structure in many countries around the world while the ownership stake of foreigners and domestic companies & individuals witnessed increase; the involvement of government ownership has been reduced. As a result, the banking sector in Nigeria has experienced major changes in its operating environment. The transformation of the banking sector from government to private and foreign company’s ownership has increased competition amongst the banks, and played a great role in improving efficiency of the sector.

The financial theories and empirical reviews have all revealed that there is relationship between ownership structure and firm performance and that there is significance influence of firm owners to the way it conducts its business activities. The agency theory has revealed that agency conflicts can be reduced through ownership concentration which is more effective with investors with large stakes who proactively monitor and protect their investments thereby leading to a higher performance of the firm. According to the Stakeholder theory State-owned banks tend to implement plans that are subjective to the government strategies which restrict them to optimize their potential in the market which in tandem with the situation in Kenya. Foreign banks tend to implement products that have been rolled out in other regions which do not automatically suite in the developing economies where they operate thereby resulting to poor performance according to the institutional theory. The theories are better applied in the developed financial market rather than the developing financial market like Nigeria where the degree of market imperfection is greater than that of the developed country. The empirical studies examined above failed to establish the direction of causality that exists between the components of ownership structure and performance of corporate organizations. The studies of (Kim, Pattanapom, John, 2004; Kiuri, 2013; Kobeissi and Sun, 2010; Kosak and Cok, 2008; Lannota, Nocera and Sironi, 2007) failed to capture the various component of corporate ownership and its effect on corporate performance. This study therefore examines the relationship between ownership structure and profitability of Nigerian commercial banks by disaggregating commercial banks profitability into return on assets, return on equity and return on investment while ownership structure is disaggregated to have managerial ownership, government ownership, ownership concentration, foreign ownership and institutional ownership. Based on the above, this study intends to examine the effect of ownership structure on the profitability of the quoted commercial banks in Nigeria.

2. Literature Review

The Concept of Ownership Structure

Ownership structure is defined by the distribution of equity with regard to votes and capital as well as the identity of the equity owners (Jensen and Meckling, 1976). These structures are of major importance in corporate governance because they determine the incentives of managers and also the economic efficiency of the corporations they manage. Ownership structure is one of the main dimensions of corporate governance and is widely seen to be determined by country-level corporate governance characteristics such as the development of the stock market and the nature of state intervention and regulation (La Porta, Lopez de Silanes, Shleifer & Vishny, 1998). In addition, it affects the scope of a firm’s agency costs (Jensen & Meckling, 1976).

Managerial Ownership

Managerial Ownership ordinarily represents the proportion of shares owned by the firm’s directors to total number of shares issued. Warfield, Wild and Wild (1995) posited that corporations exhibit a myriad of manager- ownership structure extending from owner manager holding the vast majority of equity shares to professional managers whose ownership share is negligible. The separation of ownership and control begets questions of managers’ incentives to take action in the best interest of owners. The extent of proportion of share held by management may affect control over the firms’ decision (Jensen & Meckling, 1976). Rudiger and Rene (2007) in their study review theories of the determinants of managerial ownership and their implications for the relation between firm value and managerial ownership. They consider three theories: the agency theory, the contracting theory, and the managerial discretion theory. Rudiger and Rene (2007) assert that agency theory takes managerial ownership as given; greater managerial ownership aligns the interests of management better with the interests of shareholders. The contracting agency view
portrays that shareholders face trade-off. As the managers stake in the firm increases, their incentives become better aligned with those of shareholders in that, if they increase firm value by one dollar, their wealth increases by a greater fraction of that dollar.

**Institutional Ownership**
This ordinarily represents the proportion of shares owned by institutions to total number of shares issued by a firm. Institutional investors are organizations which pool large sums of money and invest those sums in securities, real property and other investment assets. They can also include operating companies which decide to invest their profits to some degree in these types of assets. Typical investors include banks, insurance companies, retirement or pension funds, hedges funds, investment advisors and mutual funds. Their role in the economy is to act as highly specialized investors on behalf of others. For instance, an ordinary person will have a pension from his employer. The employer gives that person's pension contributions to a fund. The fund will buy shares in a company, or some other financial product. Funds are useful because they will hold a broad portfolio of investments in many companies. This spreads risk, so if one company fails, it will be only a small part of the whole fund investment. (Wikipedia) An institutional investor can have some influence in the management of corporations because it will be entitled to exercise the voting rights in a company. Thus, it can actively engage in corporate governance. Furthermore, because institutional investors have the freedom to buy and sell shares, they can play a large part in which companies stay solvent, and which go under. Influencing the conduct of listed companies, and providing them with capital are all part of the job of investment management.

**Ownership Concentration**
Ownership concentration is a measure of the existence of large shareholders in a firm. Zhang (2006) defined ownership concentration as stockholders ownership proportion. It can also represent the concentration degree of ownership in firms, which means large shareholders proportion in a firm. Zhang (2006) further reiterated that there are three types of ownership structure. First, absolute concentration of ownership, that is, there is only one stockholder who has the absolute power to control the firm and usually keep 50% ownership; Second, absolutely dispersed ownership, implying that there are numerous stockholders; there is complete separation of ownership and control when the share ownership is highly concentrated than individual ownership as they keeps share below 10%. Third, where there coexists relative concentration of ownership and some large shareholders in a firm. However, in the firm, which has relative concentration of ownership and some large shareholders, ownership structure can almost decide the composition of board. It is always assumed that only shareholders who hold large share may closely monitor the management of board. Dispersed shareholders have little or no incentive to monitor the management and may have no power to decide for the board.

**Foreign Ownership**
There are several studies that have shown the importance of foreign ownership and its effect on the financial performance of banks. Moreover, Havrylek (2006) used data for 265 banks in Eastern and Central Europe for the period (1995-2003). She analyzed the differences in profitability between domestic and foreign banks. She found that foreign banks earn higher profits than domestic banks. In addition, she studied the benefits and costs of foreign ownership by analyzing the determinants of profitability for domestic banks. Indeed, the profits of foreign banks are less affected by macroeconomic conditions of the host country. Also, it should be noted that it is assumed for a long time that foreign banks in the developed countries have less profits than domestic banks (the inverse case in developing countries).

**Return on Assets (ROA)** is measures of firm’s performance that reveals to the users of financial statement how well a company uses its assets to generate income. A higher ROA denotes a higher level of firm performance. A rising ROA, for instance, may initially appear good, but turn out be unimpressive if compare with other companies in same line of activities or industrial average. Hence, if company’s ROA is below industrial average the company is not utilizing its full capacity. Booth, Berger and Clarke (1999) posit that this measure was used in their study because it was the only variable that can be calculated across countries. They conclude that country comparisons of profitability are therefore difficult. Among other authors that adopted this measure in their empirical studies are Zeitun and Tian (2007), Zeitun (2009), Tze-Sam and Heng (2011), Onaolapo and Kajola (2010) and Khan (2012). The ROA ratio may thus be more useful when compared to the risk free rate of return to be rewarded for the additional risk involved. If a firm’s ROA is equal or even less than the risk free rate, investors will be indifferent and better off just purchasing a bond with a guaranteed yield.

\[
\text{ROA} = \frac{\text{Profit before Interest and Tax}}{\text{Total Asset}}
\]
Theoretical Review
There are several theories done by scholars in the fields of banking, but the study will focus discussions on three financial theories in relation to the effect of ownership Structure on performance of commercial banks. Namely: institutional Theory, agency theory and the stakeholder theory.

Agency theory
Agency theory suggests that the firm can be viewed as a nexus of contracts between resource holders. An agency relationship arises whenever one or more individuals, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decision-making authority to the agents. The primary agency relationships in business are those between stockholders and managers; and between debt holders and stockholders. These relationships are not necessarily harmonious; indeed, agency theory is concerned with so-called agency conflicts, or conflicts of interest between agents and principals. This has implications for, among other things, corporate governance and business ethics. When agency occurs it also tends to give rise to agency costs, which are expenses incurred in order to sustain an effective agency relationship. Accordingly, agency theory has emerged as a dominant model in the financial economics literature, and is widely discussed in business ethics texts. Agency theory in a formal sense originated in the early 1970s, but the concepts behind it have a long and varied history (Bowie & Edward, 1992).

Stakeholder Theory
This theory states that managers react to pressures put forth by owner-stakeholders because of legitimacy, power, and urgency considerations. Freeman (1984) suggests that the firm stakeholders influence the top managers who are in charge of strategy development and implementation through resource usage and withholding mechanisms. Murtha and Lenway (1994) suggest that states are able to influence management because they control authority, markets, and property rights which are the main strategic resources by their involvement in the appointment of a firm’s top management as well as board members and providing direct or indirect government subsidies and incentives. States involvement in the markets can negatively affect the degrees of openness (free market) or control (closed market). This influence can also manifest itself through property rights in countries where the government has undue powers in regard to property ownership. The implication of this theory is that most of the policies and market approaches implemented by commercial banks owned by the government are highly subjective to government strategies being rolled out in that period. The assumption is that the state as the major stakeholder supplies resources to these banks but with a lot of ‘strings attached’. Therefore, state owned banks will perform well if and only if the ruling government influences competitive strategies.

Empirical Review
Barros, Ferreira and Williams (2007) are less commonly found in countries outside US and UK. Concentrated ownership structure is found to be more pronounced especially in the developing countries. Hartzell and Starks (2003) indicates that more than 40 percent of publicly traded firms in nine East Asian countries are controlled by family.

Chen, Guo and Mande (2003) finds that about 80 percent of non-financial companies in Thailand are family owned, while (Claessens, 2003) corporate finds that majority of companies listed on Bombay Stock Exchange are controlled by families. Although studies addressing the issue of ownership structure and bank performance have increased rapidly in the past few years, but the theoretical and empirical evidences did not conclusively resolve the issue. Furthermore, most of the studies are centered on non-financial firms and developed countries and very limited study done on financial institutions and developing countries such as Malaysia. As developing countries are characterized with different characteristics such as high dependency on banks as source of funding, concentrated ownership structure, less expertise and skills, technology, management and compensation and wages, it creates concern whether the results of the studies on developed countries could be generalized or applicable to the developing countries.

Gursoy & Aydogan (2002) finds that ownership structure in Malaysian banks in 2002-2003 are highly dominated by family and government ownerships with shareholdings of up to 60.9 percent, and 64.4 percent respectively. They argue that the merger exercised of the domestic banking system in the year 2000 has no significant impact on the ownership structure of the domestic banking industry; concentrated ownership structure with large shareholdings continues to exist in the domestic banking institutions, government shareholdings in Malaysian banks for the year 2000-2003 is 40 percent. They indicate that Malaysia has the highest percentage of government controlled banks compared to Thailand (30%), Republic of Korea (28%) and Indonesia (26%). Further, they also find that Malaysia has the highest percentage of family shareholding in banks which is 30 percent, followed by Thailand (17%) and Indonesia (9%).
Morck, Daniel and Bernard (2005) in their study of UK firms, in his study of firms in Switzerland find that insider ownership has a positive relationship with firm performance. However, a study finds that insider ownership has an unambiguous negative effect on firm performance while insider ownership boosts risk taking strategies among managers. Standard & Poors 500 firms find that family-owned firms perform better than the non-family firms. They indicate that family ownership is an effective organizational structure as compared to the non-family-owned firms. Nguyen Hong Son (2012) finds that firm’s profitability is lower when the controlling family’s ownership is lower. Pei Sai (2004) finds that family-owned firms have lower performance and lower risks while Olayemi, (2006) argues that due to the high concentration of wealth in the business and the concern for the family legacy, family-owned firms tend to display an excessive risk aversion and forego profitable expansion strategies. As for the impact of government ownership to performance, Nguyen and Tran (2014) in their studies of ownership structure of 179 countries around the world finds that government-owned banks in developing countries have lower profitability and higher costs than their private counterparts. Sun and Tong (2003) finds that higher government ownership of firms in 1970 is associated with the slower subsequent financial development and lower economic growth while Thorsten and Pedersen (2006) finds that government-owned banks have less profits than the privately-owned banks in spite of their lower costs.

Tran, Thanh, Pham and Phung (2014) found that government-owned banks have high risk taking and high performance while Uwalomw & Olamide, (2012) in their study of 11 transition countries finds that government-owned banks performs better than the domestic private banks.

Vethanayagam, Yahya and Haron (2006) found that government ownership has a positive relationship with performance. They noted that most investors are more confident to conduct business with government-owned firms as they believe that the government would assist the firm in the time of trouble.

Wang (2005) argues that institutional ownership advances firm performance. Wen (2010) suggests that institutional ownership affects the relationship between ownership and firm value whereby increased in voting power and control enhances the firm performance. Further, studies which looked at the direct impact of institutional ownership on performance such as (Beiner and Cornett, 2005) found that institutional ownership is positively related to firm performance.

Detragiache & Gupta (2006) finds that institutionally-owned firms does not adopt the Code of Best Practice, have weak and even negative relationship with firm value. Ayorinde (2001) founds that there is no significant relationship between institutional ownership and firm performance. On the relation between foreign ownership and bank performance (Demsetz & Villalonga, 2001) argues that due to the advantages of foreign banks such as large capital, diversification, high expertise, superior ability to diversify risks and the ability to offer services to multinational clients, foreign banks perform better that the domestic banks. Dages, Linda and Kinney (2000) in their study on Argentina found that foreign banks have better performance than the domestic banks.

Zaini (2003) found that foreign-owned banks are the most cost-efficient and provide better service than other banks Antoniadis, Lazarides and Sarriamides (2010). Berger et al, (2005) found that foreign banks in Pakistan are less effective at recovering impaired loans than the domestic banks.

Aggarwal & Klapper (2003) finds that a rise in foreign ownership negatively affects bank performance. Mian (2003) indicates that foreign banks in developed countries are less profitable than the domestic banks but perform better than the domestic banks in developing countries.

Claessens et al. (1998) did a study on how foreign entry affects domestic banking markets in eighty countries across the world using seven thousand nine hundred observations. Using regression analysis they investigated how overhead, taxes, net interest margins, and profitability differ between foreign and domestic banks. They used accounting data and macroeconomic data for the period 1988-1995. The findings revealed that foreign owned banks are more profitable than the domestic owned banks in developing countries but in well developed countries, the domestic banks perform better than foreign banks.

Bonin, Hasan and Wachtel (2004) did a study on Bank performance, efficiency and ownership in transition countries. Using data from the period between 1996 and 2000 they investigated the effects of ownership, especially by a strategic foreign owner on bank efficiency for eleven transition countries in an unbalanced panel consisting of 225 banks and 856 observations. Applying stochastic frontier estimation procedures, they computed profit and cost efficiency taking account of both time and country effects directly. In second-stage regressions, they used the efficiency measures along with return on assets to investigate the influence of ownership type. The result revealed that privatization of banks is not enough to enhance their performance. They also concluded that state owned banks are not more inefficient that domestic and private owned banks.

Dadson (2012) did a study on concentrated share ownership and financial performance of listed companies in Ghana. Data on listed firms at the Ghana Stock Exchange over a period of ten years between 1999 and 2008 was
used. The study used panel data regression analysis and performance was measured by using Tobin's Q and ROA. Significant statistical relationships were found in this research. The findings showed that share ownership on the Ghana Stock Exchange is heavily concentrated in the hands of Ghanaians and that ownership concentration, institutional and insider ownership precipitate higher firm financial performance. He recommended that there is the need to encourage concentrated ownership structure and those investments by insider and institutional ownerships should be promoted in order to ensure proper monitoring, reduced agency costs and improve performance.

Mwathi (2009) studied on the relationship between commercial banks’ financial performance and their ownership structure. She categorized them as be private banks, government banks, foreign banks, domestic banks. Using regression analysis, the study was centered on banks where the top 10 shareholders hold more than 50% of the shares for the period between 2004 and 2008 in Kenya. Using ROA as the performance measure, the study revealed that bank ownership structure had a fair positive influence on performance. The findings also showed that both private and state owned banks had a negative correlation with performance. She underscored that both banks that are foreign owned and those owned domestically had a positive correlation with performance. The study hypothesized that commercial banks that are state owned perform dismally than the foreign or domestic commercial banks. The study concluded that widely held banks perform well than closely held ones.

Bwire (2012) did a correlation study to establish whether there are any differences between the profitability of foreign and local banks listed at the NSE by examining the determinants of their profitability. The sample involved 3 foreign commercial banks and 6 local commercial banks listed at the NSE. Data was scrutinized using correlation analysis, descriptive analysis, and regression analysis. The study showed that there were no significant differences between the performance of foreign and domestic listed banks. The regression findings also revealed that foreign ownership did not affect bank profitability. The study also found that none of the variables had a significant influence on ROA or ROE. The study hypothesized that listed foreign banks in Kenya do not outperform the domestic listed banks.

Maina and Ondongo (2013) studied on the effect of capital structure on financial performance of firms listed at the NSE from year 2002 to 2011 using their financial statements as the secondary data. They conducted their research using Causal research design and Gretl statistical software to perform the panel regression analysis. Its output will be significant to the management of quoted companies and government. The results showed that debt and equity are the main determinants of financial performance of firms listed at the NSE. The findings demonstrated a negative and significant relationship between capital structure (debt equity) and performance implying that the more debt firms use as a financial source the more likely they will perform dismally. The study also showed that firms listed at NSE used more short-term debts than long term.

Xiao and Zhang (2014) found that private banks are more efficient than state owned ones; state ownership of the banks is related to the low productivity of the bank. Sukhdey and Spong, (2016) also conducted study on the performance of Indian banks, and concluded that Private sector banks perform better than public owned banks.

Several other research results (Allen and Cornette, 2009; Alejandro and Reeb, 2007; Muhammet Mercon and Nagid, 2003; Micco, Berger, Clarke, Cull, Klapper and Udell, 2005; Mian, 2006; Micco, Panizza and Yanez, 2004; La Porta et al., 2002; Sapienza, 2004; Berger et al., 2005; Giuliano and Iannotta, 2007) have been documented that; State ownership of banks negatively affects financial development and economic growth, and hence efficiency and profitability.

Faizul & Rehnuma (2016) also found that government ownership of banks is positively related to default risk, and negatively associated with bank profitability in a study conducted on Indian banks. On the other hand, Zhao Shi-Feng, (2013); Mohammad Alipour, (2013); and Toni Aburime, (2008), have found in their study and concluded that state and private ownership structure has no significant impact on the profitability of commercial banks.

Yidersal and Wang (2017) conducted to examine the effect of state and private Ownership on the Profitability of the Commercial Banking Sector in Ethiopia initiated following the emergence of researches, in different economic set ups, with varied results on the effect of Ownership structure on the performance of banks. The research used panel data set of 8 banks operating in the sector for more than 10 years in Ethiopia, where the financial sector is at its infant stage and closed for foreign investors, for the period covering 2005 to 2014. The mean Profitability of the commercial Banks under study were described, compared, and then tested for the relationship between Banks’ Profitability and Ownership Structure using pooled OLS Regression model with Dummy Ownership Variable. After performing some statistical tests, Return on Equity (ROE) has been used as a measure of Profitability. The result shows that there is a significant outperformance of state owned commercial banks than private competitors during the period. Of the control variables used, bank size, liquidity, loans and advances, and bank capitalization have been found to have significant effect on profitability of the commercial banking.
Shaqhelany Lor (2012) has addressed the relationship between capital structure, ownership concentration and firm performance in his study. The results showed that there is a significant inverse relationship between the financial leverage (capital structure index) with Q Tobin and the ratio of price-to-earnings (performance index). Also there is a significant direct relationship between the ownership share of the five greater shareholders (ownership concentration index) with Q Tobin and the ratio of price to earnings. On the other hand, there is a significant inverse correlation between the ownership share of the largest shareholder (ownership concentration index) and Q Tobin and finally, no relationship was found between the ownership share of largest shareholder and the ratio of price to earnings.

Ebrahimi and Kordlor (2010) examined the impact of institutional ownership type on the performance of listed companies in Tehran Stock Exchange during the years 1998 to 2006 began. To measure company’s performance, three in dices of Q Tobin, return on assets and net profit margin has been applied. Research’s find in as generally represent a significant positive relationship between both institution al ownership (both active and passive) with the company’s performance. Rahmani and Silanes (2010) examined the effect of ownership structure type on company’s performance in their study. The criteria was considered for the performance of return on assets rate, the return on of asset cash flow, return on sales, productivity (sales per capita and asset per capita) and Q Tobin's ratio. The results acquired of hypotheses testing using regression test showed that the ownership structure affect son firm performance. The results also showed that the companies which their major shareholders are the Quasi-government al public groups, have better performance than others. Governmental and state groups, non-governmental public groups, and the private sector respectively are in the next category.

Namazi and Juana (2009) studied the impact of institutional ownership on the past and future financial performance of listed companies in Tehran Stock Exchange. The study period was over 2004 to 2006 and the selected sample includes 72 companies. In this study, the results of this research hypotheses test using the method of partial least squares related to partial regression suggest that there is a significant relationship between institutional ownership and firm performance. Further analysis of these findings indicates a significant positive relationship between performance and institutional ownership. Namazi and Juana (2008) studied the impact of ownership structure on the performance of companies listed in the Stock Exchange of Tehran. The main hypothesis of the study is that there is a significant relationship between companies’ ownership structure and their performance. Research’s findings indicate that there is a significant negative relationship between institutional ownership and firm performance and there is a positive and significant relationship between firm ownership and firm performance. Managerial ownership significantly and negatively affects the performance and about foreign ownership, information representing ownership of foreign investors in the statistical sample firms has not been observed. The major ownership is better to be in possession of company investors in private ownership. In general, there is a significant relationship between firm ownership structure and their performance.

Bhattacharya and Graham (2009) addressed the relationship between institutional ownership and firm performance from the disaggregated view of Finnish companies. A system approach includes using the potential size of the two way causal relationship between performance and ownership structure. Evidence shows the problem of being endogenous between firm performance and institutional ownership. They achieved the results that more than an equal distribution of voting power among the largest institutional shareholders may lead to enforce positive effects on performance. They also found the significant difference related to firm performance and ownership equality between two categories of institutional investors.

Tsaia and Gu (2007) studied the relationship between institutional ownership and firm performance in the casino industry for the years 1999 to 2003. Institutional ownership is the percentage of the share held by state companies from the total capital stock, and these companies include insurance companies, financial institutions, banks, state companies and other components of government. They showed that institutional investing in the casinos may help the industry’s investors so the agency problems resulting from the separation of management and ownership decreases. Mueller and Spitz (2006), analyzed the relationship between managerial ownership (which includes the stock held by family members of the board of directors) and performance of medium and small private enter pries in German with motivation al hypothesis testing. In their research, they used a sample of 356 firms in the service sector associated with the trade, for the years 1997 to 2000. This research’s findings show that the companies’ performance with percentage of managerial ownership above 40 percent, is improving.

3. Research Methodology

This study adopted the ex-facto research design which involves the examination of causal relationship between the dependent and independent variables. According to Asika (1991) the population is a census of all the elements or subject of interest and may be finite or infinite. The full set of cases from which the sample is taken is called the population. The major types of data collection methods are questionnaire, interview, participant observation these
are called primary data source and the source from published material such as Central Bank of Nigeria Statistical Bulletin and annual report which is known as secondary data. The data in this study comprises a cross sectional data which will be sourced from the financial statement of the 15 quoted commercial banks.

The study adopts the panel data method of data analyses which involve the fixed effect, the random effect and the Hausman Test. The technique used in this study is the Ordinary Least Square (OLS) estimation technique. The test instruments in the OLS are the T-statistics and F-test which were used to test the significance of variables and the overall significance of the regression respectively. Other test instruments also employed were the Durbin Watson test which was used to test the presence or absence of auto correlation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.  

From theories, principles and empirical findings, the models below are specified in this study.

\[
ROA = \sum_{t=1}^{T} (DO, OWC, FO, INO, MO)
\]

3.1

It is empirically stated as

\[
ROA = \beta_0 + \beta_1PO + \beta_2OWC + \beta_3FO + \beta_4INO + \beta_5MO + \mu
\]

3.2

Where:

- ROA = Return on Assets
- DO = Domestic Ownership
- OWC = Ownership Concentration
- FO = Foreign Ownership
- INO = Institutional Ownership
- MO = Managerial Ownership
- \(\beta_0\) = Intercept Term
- \(\beta_1, \beta_5\) = Coefficients
- \(\mu\) = Error term

**Pooled Effect**

The study adopts the panel data method of data analyses which involve the pooled effect, fixed effect, and the random effect and the Hausman Test.

**Pooled Effect Model**

\[
ROA = \beta_0 + \beta_1PO + \beta_2OWC + \beta_3FO + \beta_4INO + \beta_5MO + \mu
\]

3.5

**Fixed Effects**

The fixed effects focus on the allowance between ownership structure and profitability of commercial banks differences by using a fixed intercept for each of the different cross-sectional structures. If we assume that the dummy variable for a bank is either 1 or 0, then \(D_i\), which is the dummy variable for bank \(i\), can be expressed as:

\[
D_i = \begin{cases} 
1, & j - 1 \\
0, & otherwise 
\end{cases}
\]

The regression of total samples can be expressed as

\[
Y_{it} = \sum_{i=1}^{N} \beta_{0i} D_i + \beta_1 D_s + \beta_2 D_{ma} + \beta_3 s_1 + \beta_4 D_2 s_2 + \epsilon_{it}.
\]

3.7

The dummy variables are expressed as follows: if \(j = i\), then \(D_{ij} = 1\); otherwise \(D_{ij} = 0\).\(^2\)

To further investigate the fraud effect, Adebayo (2012) analyzed whether ownership structure affects profitability of commercial banks. The regression of the effect ownership structure affects profitability of commercial banks is specified.

\[
ROA_{it} = \sum_{i=1}^{N} \beta_0 + \beta_1PO + \beta_2OWC + \beta_3FO + \beta_4INO + \beta_5MO + \mu
\]

3.9

Because the fixed effects account for both cross-sectional and time-series data, the increased covariance caused by individual-bank differences is eliminated, thereby increasing estimation-result efficiency.

**Random Effects**

Random effects focus on the relationship with the study sample as a whole; thus, the samples are randomly selected, as opposed to using the entire population. The total sample regression (a function of the random effect) can be expressed as:

\[
Y_{it} = \sum_{i=1}^{N} \beta_0 + \beta_1 D_i + \beta_2 D_s + \beta_3 D_{ma} + \beta_4 s_1 + \beta_5 D_2 s_2 + \epsilon_{it}.
\]

3.7

\(\beta_{0i}\) = Intercept Term for bank \(i\)

\(\rho\) = Correlation between \(D_i\) and \(\epsilon_{it}\)

\(\sigma^2\) = Variance of \(\epsilon_{it}\)

\(\sigma^2 + \rho \sigma^2\) = Variance of \(Y_{it}\)
\[ \text{ROA}_t = \sum_{t=1}^N \beta_0 + \beta_1 \text{PO} + \beta_2 \text{OWC} + \beta_3 \text{FO} + \beta_4 \text{INO} + \beta_5 \text{MO} + \mu \]

If this is represented with random variables, then \( \beta_{oj} = \beta_0 + \mu_j \), which indicates that the difference occurs randomly, and the expectation value of \( \beta_{oj} \) is \( \overline{\beta_0} \).

**Hausman Test**

The Hausman test (Yair Mundlak 1978) is the most commonly used method for evaluating fixed and random effects. If variables are statistically correlated, then the fixed-effects estimation is consistent and efficient, whereas the random-effects estimation is inconsistent, and the fixed-effects model should be adopted. Conversely, if the variables are statistically uncorrelated, then the random-effects estimation is consistent and efficient, whereas the fixed-effects estimation is consistent but inefficient, and the random-effects model should be adopted.

**A-priori Expectation of the Result**

The elasticity parameter also known as the a-priori expectation of the variables proposes that an increase in the independent variables ownership structure will reduce bank profit. Therefore it can be mathematical stated as follows:

\[ \alpha_1, \alpha_2 > 0, \alpha_5 > 0 \]

**4. Analysis and Discussion of Findings**

Table 1. Test of Models

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>1.183289</td>
<td>(12,55)</td>
<td>0.3179</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>10.393651</td>
<td>5</td>
<td>0.1586</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Correlated Random Effects - Hausman Test</th>
<th>Chi-square Statistics</th>
<th>D.f</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>10.393651</td>
<td>5</td>
<td>0.0048</td>
</tr>
</tbody>
</table>

Source: extract from E-view 9.0

Again, in testing the validity of the models, the fixed effects on the cross section Redundant Fixed Effect-Likelihood Ratio, the P-value is 0.0000 indicating that the effects are significant. Select the random effect and perform the Correlated Random Effects- Hausman test, testing the random effects model against the fixed effects model. The null hypothesis in that case is that both tests are consistent estimators and the fixed effects model is efficient. Under the alternative hypothesis, only the fixed effect is consistent. Since the P-value is 0.000, the null hypothesis is rejected and, therefore, the fixed effects model is to be preferred.

Table 2. The Effect of Ownership Structure on Return on Assets of Quoted Commercial Banks in Nigeria

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pooled Effect</th>
<th>Fixed effect</th>
<th>Random effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta ) coefficient</td>
<td>T. stat</td>
<td>p. value</td>
</tr>
<tr>
<td>PO</td>
<td>-0.139002</td>
<td>-0.923149</td>
<td>0.3592</td>
</tr>
<tr>
<td>OC</td>
<td>-0.125156</td>
<td>-1.053310</td>
<td>0.2960</td>
</tr>
<tr>
<td>MO</td>
<td>0.172699</td>
<td>0.999882</td>
<td>0.3210</td>
</tr>
<tr>
<td>INO</td>
<td>-0.508699</td>
<td>-2.400715</td>
<td>0.0191</td>
</tr>
<tr>
<td>FO</td>
<td>-0.150157</td>
<td>-1.730337</td>
<td>0.0882</td>
</tr>
<tr>
<td>C</td>
<td>59.94781</td>
<td>6.244941</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: extract from E-view 9.0
Table 2. Above indicates the effect of ownership structure of return on assets on the quoted commercial banks in Nigeria. Evidence from the pooled effect model proved that the independent variables can explain 10.3% and 3.6% variation on the dependent variable which is return on assets of the quoted commercial banks. The F-statistics from the pooled effect model shows that the model is statistically not significant while the Durbin Watson statistics is greater than 2.00 but less than 2.50, this proved the presence of serial auto correlation. The β coefficient shows that private ownership, ownership concentration, institutional ownership and foreign ownership have negative relationship with return on assets of the commercial banks while management ownership have positive relationship on the dependent variable.

From the fixed effect model, the independent variables can explain 34.9% and 14.8% variation on the dependent variable. The F-statistics and the F-Probability shows that the model is significant whereby we reject the null hypothesis in favor of the alternate. The Durbin Watson statistics indicates the absence of negative serial autocorrelation while the β coefficient of the variables shows that private ownership, ownership concentration, institutional ownership and foreign ownership have positive effect on the dependent variable which is return on assets while management ownership have negative effect on the dependent variable.

The random effect result, the independent variables can explain 9.9% and 3.1% variation on the dependent variable. The F-statistics and the F-Probability shows that the model is not significant whereby we accept the null hypothesis. The Durbin Watson statistics indicates the absence of negative serial autocorrelation while the β coefficient of the variables shows that private ownership, ownership concentration, institutional ownership and foreign ownership have positive effect on the dependent variable which is return on assets while management ownership have negative effect on the dependent variable.

Table 3. Presentation of Granger Causality Test

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Obs</th>
<th>F-Statistics</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO does not Granger Cause ROA</td>
<td>56</td>
<td>7.91769</td>
<td>0.0004</td>
</tr>
<tr>
<td>ROA does not Granger Cause PO</td>
<td></td>
<td>0.66563</td>
<td>0.5184</td>
</tr>
<tr>
<td>OC does not Granger Cause ROA</td>
<td>56</td>
<td>0.55490</td>
<td>0.5776</td>
</tr>
<tr>
<td>ROA does not Granger Cause OC</td>
<td></td>
<td>0.55288</td>
<td>0.5787</td>
</tr>
<tr>
<td>MO does not Granger Cause ROA</td>
<td>56</td>
<td>4.91539</td>
<td>0.0177</td>
</tr>
<tr>
<td>ROA does not Granger Cause MO</td>
<td></td>
<td>2.06006</td>
<td>0.1379</td>
</tr>
<tr>
<td>INO does not Granger Cause ROA</td>
<td>56</td>
<td>3.54753</td>
<td>0.0026</td>
</tr>
<tr>
<td>ROA does not Granger Cause INO</td>
<td></td>
<td>0.54581</td>
<td>0.5827</td>
</tr>
<tr>
<td>FO does not Granger Cause ROA</td>
<td>48</td>
<td>0.50295</td>
<td>0.6083</td>
</tr>
<tr>
<td>ROA does not Granger Cause FO</td>
<td></td>
<td>0.07624</td>
<td>0.9267</td>
</tr>
</tbody>
</table>

Source: extract from E-view 9.0

The causality test above shows that there is unidirectional relationship from private ownership to return on assets, from management ownership to return on assets and from institutional ownership to return on assets. This means we reject the null hypothesis and accept the alternate. The remaining variables have no causal relationship between the dependent and the independent variables, this means we accept the null hypothesis and rejects the alternate that there is no causal relationship among the variables.

5. Discussion of Findings

The study found that private ownership has positive and significant impact on the profitability of the commercial banks in Nigeria. The results show that investors have the tendency of improving the profitability of the quoted commercial banks. Evidence from the coefficient shows that a unit increase on private ownership will increase 3.0% on return on assets and 1.0% on return on investment. This finding confirms our earlier expectation and validates the shareholders’ theory. It is also in line with the findings of Chen et al., 2003 and the findings of Nguyen et al. 2012. The implication is that more private investors into the shareholding of the commercial banks will increase the profitability of the banking industry. The finding also validates the findings of Hu and Zhou (2006); Cheung, Fung and Tsai, (2007); Din and Javid, (2011); Ioraver and Wilson, (2011) and not in line with Wang, (2003).

It is also evidence from the findings that ownership concentration have negative and significant impact on return on investment but positive and significant impact on return on assets. The implication is that increase ownership concentration will reduce return on investment by 2.2% while it will increase return on assets by 3.4%. The positive impact of ownership concentration on return on assets confirms the a-priori expectation of the results and validates the stakeholders’ theory. It is in line with the findings of Hu and Zhou (2006); Cheung, Fung and Tsai, (2007); Din
and Javid, (2011); Ioraver and Wilson, (2011) and not in line with Wang, (2003). However, the negative impact of ownership concentration is contrary to the findings of Henry and Wang, (2003), Zheng (2007); Per-Olof et al., (2007); Jean and Hidaya, (2010); Shoreh et al., (2015) but confirm the findings of Prasad and Michael, (2007); Charfeddine and Abdelaziz, (2011).

Management ownership has a negative and insignificant impact on the profitability of commercial banks in Nigeria. The negative coefficient of the variables shows that a unit increase will reduce profitability of commercial banks by 2.7% and 2.3%. The findings are contrary to expectation of the results and validate that agency theory formulated by Jensen and Meckling in 1973. The negative impact can be traced to the fact that management objectives conflict the shareholders’ objective. This finding confirms the impact of management ownership on the performance of commercial banks in Nigeria such as the management role of Cecilia Ibru in the Acquired Oceanic Bank. The findings are contrary to the findings of Hu and Zhou (2006); Cheung, Fung and Tsai, (2007); Din and Javid, (2011); Ioraver and Wilson, (2011) and not in line with Wang, (2003). However, the negative impact of ownership concentration is contrary to the findings of Henry and Wang, (2003), Zheng (2007); Per-Olof et al., (2007); Jean and Hidaya, (2010); Shoreh et al., (2015) but confirm the findings of Prasad and Michael, (2007); Charfeddine and Abdelaziz, (2011).

The effect of institutional ownership on the profitability of Nigerian quoted Commercial Banks shows that institutional ownership has negative and significant impact on return on investment but positive and significant impact on return on assets. The implication is that a unit increase on institutional ownership will reduce return on investment by 7.3% but increase return on assets by 6.1%. The positive impact or the independent variable on the dependent variable confirms the a-priori expectation of the results while the negative impact is contrary to the expectation of the results. The positive effect of the independent variable confirm the findings of Henry and Wang (2003), Zheng (2007), Per-Olof et.al (2007), Jean and Hidaya (2010), Shohreh et.al (2015) while the negative impact confirm the findings of Prasad and Micheal (2007), Charfeddine and Abdelaziz (2011).

The impact of foreign ownership shows positive and significant impact on return on investment and return on assets of the quoted commercial banks such that a unit increases in the variable with result on 0.4% increase on return on investment and 4.0% on return on assets. This finding is confirming the a-priori expectation of the results and validates the theory of portfolio diversification as one of the objective of cross border banking is to diversify investment from domestic economy. The findings confirm the findings of It is also in line with the findings of Chen et al., 2003 and the findings of Nguyen et al. 2012. The implication is that more private investors into the shareholding of the commercial banks will increase the profitability of the banking industry. The finding also validates the findings of Hu and Zhou (2006); Cheung, Fung and Tsai, (2007); Din and Javid, (2011); Ioraver and Wilson, (2011) and not in line with Wang, (2003).

6. Conclusion
Private ownership has positive significant impact on profitability of the 15 quoted commercial banks, which means that having more private owners in the banking industry will enhance the profitability of the banking institution. Ownership concentration, management ownership and institutional ownership have negative relationship with the dependent variable while private ownership and management ownership have positive relationship with the dependent variable which is return on investment. Private ownership, ownership concentration, institutional ownership and foreign ownership have positive effect on the dependent variable which is return on assets while management ownership has negative effect on the dependent variable.

7. Recommendation
- The regulatory authorities such as the Securities and Exchange Commission, the Nigerian investment promotion council should encourage private investors to invest into the equity shares of the commercial banks and ownership structure have significant impact, therefore we recommend the need for commercial banks to increase their ownership structure through public listing, right issue and other means of attracting public and institutional investors.
- Nigerian commercial banks should increase their foreign ownership as foreign ownership has positive and significant impact on the profitability of the quoted commercial banks and management ownership should be properly integrated to the profitability objectives of the commercial banks to avoid conflict of interest between shareholders and management.

References


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