Relationship between ownership concentration and financial performance of deposit money banks in Nigeria: Does a turning point exist?

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\textbf{A B S T R A C T}

This study seeks to establish a non-linear relationship between ownership concentration and financial performance of the listed Deposit Money Banks (DMBs) in Nigeria. The data were extracted from the annual reports and accounts of six (6) sampled DMBs from 2003 to 2014. A panel data regression technique was used to analyse the data collected. The study establishes that the relationship between ownership concentration and the financial performance of listed DMBs in Nigeria changes from negative to positive when the ownership concentration reaches 54.94%. This signifies that the relationship between ownership concentration and financial performance is negative if the concentration is below 54.94%. On the other hand, the relationship is positive if it is concentrated above 54.94%. Hence, it is recommended that the ownership of DMBs should not be concentrated below the cut-off point (54.94%) with the view to earning profits.

\textbf{1. Introduction}

Recently, works of literature show that ownership structure is found to be a vital aspect of corporate governance that affects the financial performance of firms (Phung & Hoang, 2013). Studies about the relationship between ownership structure and firms’ performance become topical in both transition and market economies (Claessens and Djankov, 1999). It is considered to be among the mechanisms of corporate governance that contribute to the enhancement of firms’ performance (George and Nyamboga, 2014). However, Isik and Soykan (2013) state that concentration of ownership leads to agency problems between large shareholders and managers, employees, external investors and creditors.

Traditionally, banks accept deposits from customers and provide loans (Isa et al., 2018) to individuals and corporate bodies. The banking industry in any economy generates funds from surplus

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sectors and transfers them to deficit sectors. Consequently, the sector is exposed to various agency problems. The complexity of agency problems which have been noticed in the banking industry is much bigger than in the other industries, hence costs of agency connected with the ownership concentration could be higher in the banking sector due to its peculiarities whereby large shareholders might conspire with the managers with a view to expropriating depositors (Isik and Soykan, 2013). Although in Sub-Saharan Africa, the Nigerian banking industry is considered among the vibrant ones (Abdullahi, 2016), the industry faces many crises mostly due to the ownership concentration whereby only 5% of the shareholders possessed two-thirds of the total outstanding shares of the banks. Okafor and Wilson (2010) stated that some chairmen/CEOs of the Nigerian DMBs had been found guilty of misusing their powers to misappropriate the banks’ resources at the expense of the depositors and minority shareholders. In the same vein, the Nigerian banking sector crises, inefficiencies and eventual distress happened as a result of ownership structure, whereby management ownership fails to act in the best interest of the shareholders (agency problem). It is for this reason that several DMBs like Alpha Merchant Bank Ltd, Savannah Bank Plc, Societe Generale Bank Ltd, All States Trust Bank Plc, African International Bank Plc all collapsed (Oluwagbemiga et al., 2014).

Moreover, Sanusi (2010) provided two significant reasons for banking sector’s failures in Nigeria: misleading the boards by executive management and incompetence of the board members to enforce good governance on the management, which leads to giving unsecured loans at the expense of the depositors. Besides, poor implementation of corporate governance gives room for misuse of power by insiders, non-compliance with supervisory, regulatory provisions and dominant directors’ interest in loans and advances or any credit facilities which are responsible for the crisis in the Nigerian banking sector (Ademola et al., 2013).

A number of studies were conducted with a view to establishing the relationship between ownership concentration and firms’ performance, such as Ammann, Din and Javid (2011), Mandaci and Gumus (2011), Oesch and Schmid (2011), Ongore and K’obonyo (2011), Anwunyovitor and Baah (2012), Isik and Soykan (2013), Anabestani and Shourvarzi (2014), George and Nyamboga (2014), Jusoh and Ahmad (2014), Vintila et al. (2014) and Zakaria et al. (2014) among others. However, none of these studies has established non-linear relationships between ownership concentration and firms’ performance, except that of Alimehmeti and Paletta (2012) and Phung and Hoang (2013). This study assumes that if ownership concentration influences the financial performance of DMBs negatively there has to be a level at the relationship will change to negative and vice-versa. Therefore, there is no perpetual linear relationship between ownership concentration and firms’ financial performance. This notion is similar to the law of variable proportion in economics, which states that continuous adding variable factors to a fixed factor will increase the total productivity up to a certain level at which any further increase in a variable factor will decrease the total productivity. It is also similar to the law of diminishing marginal utility, which means that as a consumer consumes an additional unit of a commodity the total utility increases up to a saturation level beyond which it starts decreasing.

Moreover, this study is different from the one conducted by Alimehmeti and Paletta (2012) who investigated the relationship between ownership and firm value of listed Italian companies for individual years from 2006 to 2009. It is also not the same as the study carried out by Phung and Hoang (2013) examined the relationship between ownership concentration and value of Vietnamese listed firms between 2007 and 2017. Briefly, this study is entirely different from the previous studies in terms of the period covered and the country selected as a case study. In other words, to the best of the researchers’ knowledge, no any prior study was carried out to ascertain if a non-linear relationship exists between the ownership concentration and the financial performance of the Nigerian DMBs.
Given the above and considering the crucial perform by the DMBs to the Nigerian economy, this study intends to establish a non-linear relationship between ownership concentration and financial performance of the listed DMBs in Nigeria.

2. Literature Review

Depending on the laws of a country and the policies of a company, there are different forms of equity ownership. Al-Saidi (2013) states that there are two types of ownership structure: concentrated ownership and dispersed ownership. Ownership concentration refers to as a proportion of a firm’s shares possessed by one or a few shareholders which is adequate to give them the power to control the affairs of a company. On the other hand, dispersed ownership concentration is also known as diffused ownership concentration, which occurs when none of the shareholders has an adequate number of shares that could enable him/her to influence the affairs of the company. According to Wei (2007), holding substantial shares of a firm is not commonly found in the UK, USA and to a greater extent in Germany and Japan, but in Latin America, Africa and most of the Asian countries as well as Finland, Italy, Sweden and Turkey, shares of companies are highly concentrated. Therefore, in countries where ownership is not concentrated, such as the UK and USA, Japan and Germany conflict of interest exists between the managers and shareholders, whereas in Latin America, Africa and other developing economies the conflict happens between the majority shareholders and the minority shareholders (Al-Saidi, 2013).

Depending on the country, ownership composition could be a mixture of two or more of the following: government (state) ownership, institutional ownership, private ownership, foreign shareholders and insider (management) ownership. Most of the studies conducted on the US firms show that concentration of ownership in the hands of the state, domestic investors and foreign investors serve as a tool for reducing agency costs (Berger et al., 2005). Wei (2007), states that most of the quoted firms in China have three structures of ownership: the state, the legal persons and the individual investors. On average, each group possesses one-third share of each company and the shares owned by the state, and the legal persons could not be bought and sold on the stock exchange, while that of individual investors are publicly traded.

Most of the scholars are of the view that state ownership does not improve the firm’s performance (Ongore and K’Obonyo, 2011). This happens mostly in countries where corruption and indiscipline persist. State ownership influences a firm's performance negatively as a result of the appointment of incompetent persons as directors for political reasons, and the interest of shareholders is sacrificed for the enjoyment of the general public. Kyereboah-Coleman (2007) asserts that institutional ownership in a company serves as additional monitoring devices for effective operations of firms, which leads to an increase in their performance. In the case of foreign ownership, a firm could gain a powerful monitoring capability, but the fear of nationalization and indigenization are essential factors that make foreign investors not hold a firm's shares for a more extended period (Kiruri, 2013). Managerial ownership shares belong to managers of the firm. Substantial management ownership in a firm could negatively influence the firm's long-term value (Kurawa and Kabara, 2014).

There are a lot of empirical studies carried out across the globe to establish the relationship between ownership concentration and firms’ financial performance. For instance, Claessens and Djankov (1999) conducted their study in the Czech Republic in order to determine the association between ownership concentration and corporate performance from 1992 to 2007 by selecting a sample of 706 Czech companies and a significant positive relationship is discovered between ownership concentration and firms’ value. Lskavyan and Spatareanu (2006) sought to find the relationship between ownership concentration and firm’s performance in the UK, Czech Republic and Poland. The sample utilized for the
study was made up of 561 firms selected from the three countries: 411 firms from the UK; 83 firms from Poland and the rest 67 from the Czech Republic. The study discovers that ownership concentration is not a significant factor that influences a firm’s performance (ROA) in the studied countries.

Anwunyo-vitor and Baah (2012) undertook their study to evaluate the association between ownership concentration and financial performance of Ghanaian quoted companies, and they found a positive association. Also, Isik and Soykan (2013) selected a sample of 164 listed industrial companies in Turkey in order to determine the effect of a significant shareholding on corporate performance between 2003 and 2010. They found that substantial shareholding has a significant positive impact on corporate performance. Another similar study was carried out by Vintila et al. (2014) who examined the effect of ownership concentration and origin on firm’s value listed on the Bucharest Stock Exchange (BSE) of Romania over the period 2007 – 2011. It was found that ownership concentration has a significant positive relationship with the firm’s value. Gugongi et al. (2014) explored the relationship between ownership structure and financial performance of the quoted insurance companies in Nigeria from 2001 to 2010 and a significant positive relationship was established.

In contrast, an Iranian study conducted by Foroughi and Fooladi (2011) assessed the association between corporate ownership structure and firms’ performance by selecting a sample of forty-five (45) listed companies on the Tehran Stock Exchange between 2002 and 2004. The study established a negative relationship between ownership concentration and firm’s performance. More so, Ongore and K’obonyo (2011) selected some corporate governance characteristics (including ownership concentration) intending to find their effect on a company's performance in Kenya. They found that ownership concentration has a significant negative impact on a company’s performance.

However, other studies were conducted on the same issues, but they established an insignificant relationship between ownership concentration and firms’ financial performance. For example, Okafor and Wilson (2010) investigated the effect of ownership concentration on the profitability of Nigerian banks by generating data from a sample of eighteen (18) quoted banks from 1998 to 2007 and an insignificant negative relationship between ownership concentration and profitability of the banks was found. Thi (2011) conducted a similar study in order to evaluate the effect of corporate governance on the performance of Vietnamese listed companies. The study used five measurements of the performance: ROA, ROE, Tobin’s q, Economic Value Added (EVA), Market Value Added (MVA), Market Book Value Ratio and weak relationships were found between ownership concentration and all these corporate performance measurements. In Pakistan, the same result (insignificant relationship) was obtained by Ahmed et al. (2012), who examined the relationship between ownership concentration and performance of 100 selected non-financial listed firms from 2004 to 2010.

Moreover, Warrad et al. (2013) selected some non-financial firms in Jordan intending to examine the impact of both managerial ownership and non-managerial ownership on their performance (ROA, ROE and Tobin’s Q) from 1994 to 2005 and insignificant relationships were found. In Sri Lanka, Pathirawasam and Wickremasingh (2012) revealed an insignificant positive relationship between ownership concentration and profitability of the firms in the country. Another study obtained a similar result carried out in Malaysia by Huan et al. (2014) whereby ownership concentration has no significant impact on firms’ performance.

Another study was carried out by Karaye (2014) to make a comparison between Nigeria and Turkey on the relationship between corporate governance mechanism and corporate performance of listed companies in the countries. Data were generated from the annual reports and accounts of 242 and 373 companies quoted on Nigerian and Turkish Stock Exchange respectively for the year 2012. The study
revealed an insignificant positive relationship between block holding and the performance of firms in Nigeria. However, in the case of Turkish firms, an insignificant positive relationship was found between ownership concentration and ROA, contrarily, ownership concentration influences ROE negatively. Further, Ci and Itodo (2014) assessed the impact of the equity ownership structure on the performance of the Nigerian Banks from 2002 to 2011. A sample of 18 banks was selected out of 21 banks operating in Nigeria. Using pooled cross-sectional regression, it was discovered that the ownership structure has not significantly influenced the banks’ performance. The result, therefore, shows poor investor protection as a result of misappropriation of banks’ resources for personal gains by insiders. Surprisingly, a similar study was carried out by Oluwagbemiga et al. (2014) to find the effect of ownership concentration on the value of the listed banks in Nigeria over the period 2008-2012. They established that ownership concentration has a significant positive relationship with the banks’ value.

Some empirical studies look at the relationship between two or more forms of ownership concentration and firms’ performance, like Mandaci and Gumus (2011), George and Nyamboga (2014), Jusoh and Ahmad (2014) and Zakaria et al. (2014). Mandaci and Gumus (2011) examined the impact of ownership concentration and managerial ownership on the financial performance of non-financial listed firms on the Istanbul Stock Exchange on both firms’ profitability (ROA) and Value (Tobin’s Q). The study established that although ownership concentration has a significant positive impact on firms’ value and profit, managerial ownership has statistically influenced firms’ value negatively. Moreover, Kiruri (2013) undertook a study to find out the effect of ownership structure on the profitability of Kenyan banks by generating both primary and secondary data through administering questionnaires and using annual reports and accounts respectively. The study established that ownership concentration and state ownership have significant negative impacts on the profitability of banks, but foreign ownership and private ownership have significant positive relationships with the profitability of the banks. Jusoh and Ahmad (2014), selected a sample of 730 public quoted companies on the Bursa Stock Exchange of Malaysia. The study found that managerial ownership affected both the ROA and Tobin's Q negatively, while institutional ownership has a significant positive impact on ROA and Tobin's Q. Zakaria et al. (2014), evaluated the relationship between ownership concentration and the performance of firms in the trading and service sector in Malaysia. They discovered that ownership concentration, managerial ownership and foreign ownership (after the crisis) have significantly increased the financial performance of the firms, while government ownership has significantly decreased firms’ financial performance.

Briefly, all of the above-presented studies attempted to establish a linear relationship between ownership concentration and firms’ performance. However, few studies attempted to establish a non-linear relationship between ownership concentration and financial performance of the firms, such as Alimehmeti and Paletta (2012) and Phung and Hoang (2013). Alimehmeti and Paletta (2012) investigated both linear and non-linear relationships between ownership concentration and the value of Italian listed firms by generating data from a sample of 186, 201, 188 and 224 Italian listed firms in 2006, 2007, 2008 and 2009 respectively. Using OLS regression for each year, a positive relationship was established between ownership concentration and firms’ value except in 2008 where a non-linear relationship was found. Further, the study found 33.87 % the optimal level of ownership concentration. This implies that if the shares are concentrated above 33.87%, the financial performance of the firm will start declining. Therefore, firms should not concentrate their shares above 33.87%. Similarly, Phung and Hoang (2013) generated data from the Ho Chi Minh Stock Exchange and the Hanoi Stock Exchange between 2007 and 2012 to establish the relationship between ownership concentration (state and foreign ownership) and financial performance. This study revealed that state ownership has an inverted U-shaped association with the financial performance of the firms, but foreign ownership has a U-shaped association with financial performance.

In summary, it is noticeable that so far the empirical studies reviewed establish linear relationships between ownership structure and firms’ financial performance except Alimehmeti and Paletta (2012) and
Phung and Hoang (2013). These two studies established non-linear relationships between ownership structure and firms’ financial performance in countries other than Nigeria.

3. **Methodology**

For this study, the *ex-post facto* research design was adopted as the most suitable method. The selection was made because both the dependent and independent variables of the study could be found in the annual reports and accounts of the Nigerian (DMBs).

3.1 **Population and Sample of the Study**

The population of the study involves all DMBs quoted on the floor of the Nigerian Stock Exchange as at 31 December 2014. The DMBs with their year of listing are as follows: Access Bank Plc (1998), Diamond Bank Plc (2005), Eco Bank Plc (2006), Fidelity Bank (2005), First Bank of Nigeria Plc (2005), First City Monument Bank Plc (2004), Guaranty Trust Bank Plc (1996), Skye Bank Plc (2005), Stanbic IBTC Bank Plc (2005), Sterling Bank Plc (1993), Union Bank Plc (1970), United Bank for Africa Plc (1970), Unity Bank Plc (2005), Wema Bank Plc (1991) and Zenith Bank Plc (2004). However, a filter is used to find the working population of the study. Firstly, for any bank to be part of the working population must have been quoted on or before 2003 and must have prepared and published annual reports and accounts throughout the study as well as published in the Nigerian Stock Exchange Annual Factbooks within the period of the study. Thus, the working population comprises of six (6) DMBs, Access Bank Plc, First Bank of Nigeria Plc, Guaranty Trust Bank Plc, United Bank of Nigeria Plc and United Bank for Africa Plc. Since the working population is not large, 100% is adopted as a sample of the study.

3.2 **Variables and their Measurements**

The variables of the study are grouped into two: the dependent variable and explanatory (independent and control) variables:

a) **Dependent Variable**

The dependent variable that measures the financial performance of the DMBs is the Return on Equity (ROE), which is consistent with the works of Agye and Marfo-yaadom (2011), Ranti (2011), Kiruri (2013) and Osegbue et al. (2014) who used as ROE to measure the firm’s financial performance. It is measured by \( \frac{\text{Profit before interest and tax (PBIT)}}{\text{Equity}} \).

b) **Explanatory Variables**

The explanatory variables consist of independent variables and control variables:

i. **Independent Variables**

The independent variable is ownership concentration, and for this study, ownership concentration is measured as the percentage of shares owned by the largest group of shareholders in the shareholding analysis. This is in line with studies like Soliman (n.d), Babatunde and Olaniran (2009) and Oluwagbemiga et al. (2014). Also, in order to find the non-linear relationship, ownership concentration is squared \( (\text{oc})^2 \) and included in the model as used by Alimehmeti and Paletta (2012).

ii. **Control Variables**

The study used to control variables: age and leverage. Age is the number of years from the date when the company is quoted (Soliman, nd; Kantudu, 2006 and Samaila, 2014). Leverage (LEV) is
measured as the ratio of total liabilities to total equity (Martinez-Sola et al., 2013; Amidu, 2007; Warrad et al., 2013; and Huan et al., 2014).

3.3 Multiple Regression Technique

The financial performance (ROE) is estimated as a function of ownership concentration (OC). In order to find the cut-off level of ownership concentration, the ownership concentration is squared and included in the model.

\[
\text{ROE}_{it} = \beta_0 + \beta_1 \text{OC}_{it} + \beta_2 (\text{OC})^2_{it} + \beta_3 \text{AGE}_{it} + \beta_4 \text{LEV}_{it} + \epsilon_{it}
\]

From the above general equation, the regression model is derived as follows;

\[
\text{ROE} = \beta_0 + \beta_1 \text{OC}_{it} + \beta_2 (\text{OC})^2_{it} + \beta_3 \text{AGE}_{it} + \beta_4 \text{LEV}_{it} + \epsilon_{it}
\]

In line with the study by Alimehmeti and Paletta (2012) and Martinez-Sola et al. (2013) the cut-off (peak) point of each model is determined by using the formula \(\beta_1 / -2*\beta_2\).

Where:
- ROE = Return on Equity
- OC = Ownership Concentration
- \((\text{OC})^2\) = Ownership Concentration Squared
- \(\beta_0\) = constant
- \(\beta_1\) - \(\beta_4\) = coefficients of or partial derivatives of the explanatory variables.

4. Results and Discussion

4.1 Descriptive Statistics

Table 4.1 presents the descriptive statistics for variables used in the study, that is return on equity (ROE), ownership concentration (OC), ownership concentration square \([(\text{OC})^2]\), age and leverage. The statistics include mean standard deviation, minimum and maximum value.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>72</td>
<td>0.09</td>
<td>0.66</td>
<td>-3.94</td>
<td>2.4</td>
</tr>
<tr>
<td>OC</td>
<td>72</td>
<td>0.44</td>
<td>0.26</td>
<td>0.05</td>
<td>0.91</td>
</tr>
<tr>
<td>((\text{OC})^2)</td>
<td>72</td>
<td>0.26</td>
<td>0.25</td>
<td>0</td>
<td>0.81</td>
</tr>
<tr>
<td>AGE</td>
<td>72</td>
<td>25.41</td>
<td>13.09</td>
<td>5</td>
<td>44</td>
</tr>
<tr>
<td>LEV</td>
<td>72</td>
<td>10.28</td>
<td>25.16</td>
<td>-7.22</td>
<td>191.21</td>
</tr>
</tbody>
</table>

Source: Generated by the Author from Annual Reports and Accounts of DMBs Using Stata

Table 1 shows the descriptive statistics of both dependent and independent variables of the study, and it could be seen that the number of observations is seventy-two (72), because a sample of six (6) DMBs was selected between 2003 and 2014. It indicates that over the 12 years, the banks have an average ROE of 0.66 over the period, while the minimum and maximum values are -3.94 and 2.4 respectively. Besides, the standard deviation of 0.66 shows a diversity of ROE among DMBs. The table also shows that averagely ownership is concentrated at 44%. The standard deviation of 0.26 shows a low level of...
dispersion of ownership concentration. The minimum value of ownership concentration is 5% (approximately to 2 decimal places) while the maximum value of ownership concentration is 90.10%. Age as a control variable has a mean value of 25.41 years with minimum and maximum values of 5 and 44 years respectively. This implies that each of the sampled DMBs must have been quoted five years at least as at 2003 and must not exceed 45 years as at 2013 31st December 2014. More so, it shows that the mean value is 9.5 times with a standard deviation of 24.45.

4.2 Regression Results

Table 2 presents the regression results on the association between OC, (OC)², AGE and LEV and the financial performance of the Nigerian DMBs using Pooled Ordinary Least Square (OLS) and Fixed Effect (FE) regression results. Based on the hausman test, the prob>chi2 is 0.0355, which implies that the Fixed Effect (FE) is more efficient than the Random Effect since it is significant. Therefore, the discussion is limited to OLS and FE regression results. It is believed that since the data are a panel, it is better to present the FE results as they are likely to be more consistent and unbiased than the OLS results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pooled OLS</th>
<th>Fixed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Constant</td>
<td>1.0403</td>
<td>2.251</td>
</tr>
<tr>
<td>OC</td>
<td>-2.2095</td>
<td>-4.079***</td>
</tr>
<tr>
<td>(OC)²</td>
<td>2.1398**</td>
<td>3.7124***</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.0143***</td>
<td>-0.0457***</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.0174***</td>
<td>-0.0178***</td>
</tr>
<tr>
<td>Rsquared</td>
<td>0.4931</td>
<td></td>
</tr>
<tr>
<td>Fvalue</td>
<td>5.04</td>
<td></td>
</tr>
<tr>
<td>Rsquared:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td>0.5626</td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>0.2233</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.3483</td>
<td></td>
</tr>
<tr>
<td>Prob&gt;F</td>
<td>0.0013</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Generated by the Authors from the Annual Reports and Accounts of the DMBs Using Stata***, ** and * indicate 1%, 5% and 10% significant levels respectively

The OLS regression result as presented in Table 2 indicates that the coefficient of determination is 0.4931, which means that the ownership concentration, ownership concentration squared, age and leverage accounts for 49.31% variation in the return on equity of the DMBs. Therefore, the remaining 50.69% change in the return on equity is explained by variables not captured in the model. The OLS F-statistics value is 5.04 which revealed the fitness of the model at a 1% significance level. Similarly, the overall results of FE revealed that ownership concentration, ownership concentration square, age and leverage account for 34.83% change in return on equity, whereas 65.17% change in the return on equity is explained by variables that have not been captured in the model. Also, the FE overall probability is significant at 1% level.

Besides, the OLS results establish that ownership concentration has an insignificant negative relationship with return on equity of the Nigerian DMBs, but surprisingly the ownership concentration
squared has a significant positive relationship with the ROE at 5% significance level. Thus, the cut-off level of ownership concentration = $\beta_1/-2*\beta_2 = -2.2095/-2*1.398 = 51.63\%$. This finding implies that the impact of ownership concentration on the financial performance of the DMBs is negatively insignificant until it reaches 51.63\% beyond which the financial performance of DMBs will start improving as the ownership concentration is increased.

The FE regression results show that ownership concentration and ownership concentration squared are statistically significant at 1% level. The ownership concentration has a negative relationship with the financial performance of the DMBs. However, the ownership concentration squared has a significant positive relationship with the financial performance of the DMBs. The cut-off point is therefore $= \beta_1/-2*\beta_2 = -4.0790/-2*3.124 = 54.94\%$. The 54.94\% is the point after which the relationship changes from negative to positive. Briefly, it is established that as the ownership concentration is increased the financial performance of the DMBs would decrease up to 54.94\% level of concentration. However, if the concentration exceeds this percentage, the financial performance of the DMBs starts improving positively and significantly as the ownership concentration is increased. This study proves the existence of discharging monitoring role by large shareholders. It is believed that large shareholders that own a substantial fraction of all voting shares in public companies have the incentive to monitor and improve performance of companies as well as solve problems of modern capital markets at large (Zeckhouser and Pound, 1990). Therefore, the incentive of large shareholders to discharge monitoring roles is directly proportionate to their holdings. This is because an increase in shareholdings of large shareholders means they are investing their additional wealth in the firm and if it incurs a loss they are going bear such a loss substantially. Hence, they monitor the firm diligently in order to achieve the firm’s objectives efficiently and effectively. This finding implies that although the ownership concentration is among the major factors responsible for poor performance and eventually collapses of many Nigerian DMBs, their performance could be enhanced if their ownership is concentrated above 54.94\%. It is believed that expropriation activities occur as a result of the low level of ownership concentration. This finding is almost in line with that of Phung and Hoang (2013) who established a U-shaped relationship between foreign ownership and financial performance. On the other hand, it contradicts what was discovered by Alimehmeti and Paletta (2012) who found 33.87\% to be an optimal level of the relationship between ownership concentration and firm’s performance, beyond which the performance decreases as the ownership concentration increases.

5. Conclusion

Banks perform critical roles towards the economic growth and development by transferring funds from surplus sectors to deficit sectors. The objective of this study is to explore a non-linear relationship between ownership concentration and financial performance of the Nigerian DMBs, from 2003-2014. Data were generated from the annual reports and accounts of the banks, and multiple regression techniques were applied in the methodology. The study establishes that 54.94\% to be the level of ownership concentration from which the relationship between ownership concentration and financial performance would change from negative to positive. This signifies that concentration of ownership below 54.94\% affects the performance of the Nigerian DMBs negatively and the performance improves increase as the ownership concentration is increased above 54.94\%. It is, therefore, a turning point from which the financial performance changes from negative to positive. In other words, the block holders expropriate the minority shareholders if the shares are concentrated below 54.94\%, but they act in the interest of the entire shareholders if the shares are concentrated above the cut-off. Based on the findings, it is recommended that ownership of the Nigerian DMBs should be concentrated above 54.94\% with the view to maximizing their financial performance.
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