Capital Structure and Its Effect on the Financial Performance of Nigerian Insurance Industry

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ABSTRACT
This study examines the effect of capital structure on the financial performance of Nigerian insurance industry. Secondary data was used for this study which was derived from the audited financial statements of the six (6) selected insurance companies for the period of 2012-2016. This study also made use of books and other related materials especially the Nigerian Stock Exchange Fact Book (2016). Some of the annual reports that were not available in the NSE fact book were downloaded from their corporate websites. Panel data methodology was adopted because it combines time series and cross sectional data. The methods of analysis were descriptive statistics, correlation and regression techniques. The result reveals that capital structure measured by debit ratio and debit-equity ratio has negative relationship with financial performance measured by ROA and ROE. Result also establishes that age has positive impact on the financial performance of Nigerian insurance industry. Subsequently, the study recommends that insurance companies should not rely on debt financing but to strike a balance between their choices of capital structure.

Key words: Capital Structure, ROA, ROE, Nigerian Insurance, Debt, Equity

INTRODUCTION
The significant contributions of insurance industry to the economic growth and development in advance and emerging economies have been documented in the literatures and recognized by scholars and researchers globally. By their unique nature, no country can experience a meaningful development without the presence of formidable insurance industry, thereby making insurance business in any nation indispensable irrespective of its quota to the Gross Domestic Product (GDP) or its level of awareness among the populace. According to Yinus and Akinlo (2013), the role of insurance sector in mitigating sudden and devastating occurrences thereby stimulating economic growth cannot be over emphasised. Both in developed and developing countries, insurance sector contributes to economic growth both sectorally and geographically.

In Nigeria, the industry has grown steadily and the total premiums have gone from about N75 billion in 2005 to over N300 billion currently. Consequently, foreign investors have shown a great interest in the Nigerian insurance sector through entry into the market. Despite of this positive signs of development, the sector is still lagging behind in term of its contributions to the economic growth and development. It only contributes 0.7% toward Gross Domestic Product (GDP). This is very low compared to other markets such as South Africa with penetration levels of around 12%. The National Insurance Commission confirms that about 10 insurance companies are currently facing serious financial issues, which may lead to bankruptcy. The situation, according to NAICOM, is already making the firms to operate below acceptable standards. This may be the consequence of management’s wrong capital structure decisions.

Capital structure has always been one of the main topics among the studies of finance scholars. Its importance derives from the fact that capital structure is tightly related to the ability of firms to fulfil
the needs of various stakeholders (Boodhoo, 2009). Studies have provided the evidence that capital structure is a major factor that influences organizational performance (Degryse, Goeij, & Kappert, 2010; Ebaid, 2009; Osuji & Odita, 2012; Akinlo 2011). The capital structure of companies refers to the way in which the company is financed through a mix of debt and equity capital. It is the proportion of resources attributed to the firm through different sources, which may include internal and external financiers. The successful selection and use of capital is one of the key elements of the firms’ financial strategy (Kajananthan, 2012). This implies that the survival of business organizations depends on capital structure decision. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected.

Statement of the Problem
Evidence from theoretical and empirical studies demonstrates that capital structure has influence on organization performance. However, studies have not reached a consensus on how and to which extent the capital structure of firms’ impacts on their value, performance and governance. More also, few available studies in Nigeria such as Akinlo (2011), Akinyomi (2013), Ogebe, Ogebe and Alewi (2013), Olokoyo (2012), Onaolapo and Kajola (2010), Osuji and Odita (2012) and Akintoye (2008) did not focus insurance industry.

In the light of this, there is no extensive of empirical studies in Nigeria concerning the relationship between of capital structure and performance in the context of the Nigerian insurance companies, which is, motivate the researchers to put their contribution on impact of capital structure on the financial performance of insurance companies.

Research Question
To what extent does capital structure (measured by debt ratio and debt-equity ratio) influence financial performance of Nigerian insurance industry?

Research Objective
The main objective of this study is to investigate the impact of capital structure (measured by debt ratio and debt-equity ratio) on financial performance of Nigerian insurance industry.

Theoretical Review
This study anchors on Modigliani-Miller Theory and Pecking Order Theory, because these theories are relevant to this study since they have divergent views on the optimum capital structure.

Modigliani-Miller Theory
Modigliani-Miller Theory indicates that companies can maximize their value by employing more debt due to tax shield benefits allied with the use of debt. Modigliani and Miller (1963) argued that firm value and firm performance is an increasing function of leverage due to the tax deductibility of the interest payments at the corporate level. However, in the opinion of Brigham and Gapenski (1996), Miller-Modigliani (MM) theory is probably true in theory, but in practice, bankruptcy costs exist and they increase when equity is traded off for debt. Hence, they argue on an optimal capital structure that is reached when the marginal cost of bankruptcy is equal to the marginal benefit from tax-sheltering provided by the increase in the debt ratio. Many studies (Akinyomi, 2013; Olokoyo, 2012; Aburub, 2012; San & Heng, 2011) favour the theory that claims a positive relationship between capital structure and firm performance.

Pecking Order Theory
Pecking order theory states that there is a benefit to financing with internal funds. According to Getahun (2014), the theory assumes that growing firms depend on internal funds more than external funds. Pecking order theory therefore suggests that firms should follow a financing hierarchy in order to minimize information asymmetry between the parties. It states that companies prioritize their source of financing, from internal financing to equity financing, according to the principle of the least resistance, preferring to raise equity as a financing means of last resort (Getahun, 2014). Pecking order theory asserts that internal funds must used first and only when all internal finances have been depleted, firms can opt for debt. Many studies (Chechet & Olayiwola, 2014; Onaolapo & Kajola, 2010; Akinlo, 2011) favour pecking order theory. The theory claims a negative relationship between capital structure and firm performance.
Empirical Review and Hypotheses Formulation

Previous empirical studies on the relationship between capital structure and organization performance have conflicting results. For instance, Akinoryomi (2013) examines the impact of capital structure on firms performance using three manufacturing companies selected randomly from the food and beverage categories and a period of five years (2007-2011) using the static trade-off and the pecking order theory point of view. The results show that each of debt to capital, debt to common equity, short term debt to total debt and the age of the firms’ is significantly and positively related to financial performance. Patrick, Joseph and Kemi (2013) also investigate the impact of capital structure on firms’ performance in Nigeria using fixed effect regression estimation model. Results reveal that there is positive relationship between return on investment and leverage of the firm over a period of ten years. Olokoyo (2012) also examines the relationship between capital structure and corporate performance of Nigeria quoted firms. The study employed panel data approach by using fixed effect estimation, random-effect estimation and pooled regression model and it was discovered that maturity structure of debts effect on performance of firms significantly and the size of the firm has a significant positive effect on the performance of firms in Nigeria. In another study, Abu-Rub (2012) also investigates the impact of capital structure on the firm performance of companies listed in Palestine Stock Exchange during 2006 to 2010 which 28 companies were selected as samples. Results indicate that the capital structure has a positive effect on firm performance evaluation measures. San and Heng (2011) also examine the relationship between capital Structure and Corporate Performance of Malaysian Construction Sector during 2005 to 2008. 49 companies were selected as samples for their study. Results showed that there is a positive significant relationship between capital structure and corporate performance. In the same vein, Semiu and Collins (2011), using a sample size of 150 respondents and 90 firms were selected for both primary data and secondary data respectively for a period of five years (2005-2009) from the relevance, pecking order, the free cash flow, the agency cost and the trade-off theory point of view. They employed the descriptive statistics and Chi-square analysis and suggested that a positively significant relationship exists between a firm’s choice of capital structure and its market value in Nigeria.

However, the study of Lawal, Edwin, Monica and Adisa (2014) who examine the effect of capital structure on firm’s performance with a case study of manufacturing companies in Nigeria from 2003 to 2012. Results show that capital structure measures (total debt and debt to equity ratio) are negatively related to firm performance. Chechet and Olayiwola (2014) also examine capital structure and profitability of the Nigerian listed firms from the agency cost theory perspective with a sample of seventy (70) out of population of two hundred and forty-five firms listed on the Nigerian change (NSE) for a period of ten (10) years: 2000 – 2009. The results show that debt ratio is negatively related with profitability. Ogebe, Ogebe and Alewi (2013) also investigate the impact of capital structure on firm performance in Nigeria from 2000 to 2010. Results reveal a significant negative relationship between leverage and performance. Akinlo (2011) also examines the determinants of capital structure of 66 firms listed on the Nigerian stock exchange during the period of 1997 to 2007 musing panel data. The results show that there is a negative relationship between leverage and growth opportunities and legibility, but negatively related to liquidity as well as size. Onaolapo and Kajola (2010) also investigate the effect of capital structure on financial performance of companies listed on Nigeria Stock Exchange. This study was performed on 30 nonfinancial companies in 15 industry sectors in a 7-year period from 2001 to 2007. The results showed that the capital structure (debt ratio) has a significant negative effect on financial measures (ROA and ROE) of these companies.

Base on the above empirical studies; it is therefore hypothesized that:

$H_{01}$: there is no positive significant relationship between debt ratio and organizational performance.

$H_{02}$: there is no positive relationship between debt-equity ratio and organizational performance.

Overview of the Nigerian Insurance Industry

Osoka (1992) argues that some forms of traditional social insurance had been in existence in every part of Nigeria before the creation of insurance agencies of United Kingdom in Nigeria by the British colonial trading companies. According to Osoka (1992), twenty-five insurance companies were established in 1960 but only seven were indigenous and their total market share was far below 10%, which as a result of inadequacy of capital, were unable to pay claims at as when due. This inadequacy
found that there is low level of acceptance for insurance policy among the people and institutional clients. Consequently, the insurance industry in the country in terms of contribution to economic growth and development has underperformed in all metrics. Studies also reveal that the industry contributes only 0.7% to the Gross Domestic Product compare with other countries in Africa.

As result of dwindling syndrome in the sector, government through its agency in 2005 increased the minimum capital based of insurance companies from 150 million Naira, 200 million Naira, 350 million Naira and 350 million Naira for life insurance, general insurance, composite insurance and reinsurance respectively to 2 billion Naira for life insurance, 3 billion Naira for general insurance and 10 billion Naira for reinsurance. This excise reduced number of insurance companies from 103 to about 49 which had to be re-certified in order to operate effectively and efficiently. In spite of this exercise, insurance industry’s penetration and contribution to the nation’s GDP remained at a low level that was less than 1% (Babalola, 2008). A survey conducted (2013) by Business Monitor International (BMI) Ltd supports the claim of Babalola (2008) by confirming that that Nigeria’s overall Insurance Business Environment Rating (IBER) was low compared with South Africa, Morocco, Egypt and Tunisia respectively. By this measure, Nigeria’s overall insurance sector is the least attractive of any of the African countries covered in the survey by BMI. Insurance companies depend heavily on insurance brokers many of whom collect premiums on behalf of customers and do not pay the insurers timorously therefore resulting in liquidity problems for the insurers to support this claims, EFInA (2012) discovers that about 86.6 million Nigerians have no form of insurance.

Report produced by Pan African Capital (2013) attributes this fiasco to capital structure saga. Findings from NAICOM also show that as at August 27, 2013, out of the total of 29 listed insurance firms on the NSE, only six (6) of the insurers had their results approved by NAICOM, fourteen (14) firms have not submitted their results at all, one (1) insurance firm’s response is under review, four (4) results are being reviewed and four (4) companies’ results are being queried.

METHODOLOGY
From the population of twenty nine (29) insurance companies listed on the Nigerian Stock Exchange (NSE) market, a sample of six (6) were selected (AIICO Insurance Plc, Custodian & Allied Insurance Plc, Cornerstone Insurance Company Plc, Crusader Insurance Plc, Continental Reinsurance Company Plc, and Consolidated Hallmark Insurance Plc) from the adjudged 10 best insurance companies (https://www.nigerianinfopedia.com/top-10-insurance-companies-nigeria). Secondary data was used for this study which was derived from the audited financial statements of the selected insurance companies for the period of 2012 - 2016. This study also made use of books and other related materials especially the Nigerian Stock Exchange Fact Book (2016). Some of the annual reports that were not available in the NSE fact book were downloaded from their corporate websites. Panel data methodology was adopted because it combines time series and cross sectional data. The methods of analysis were descriptive statistics and regression technique.

Model Specification
The economic model used in the study is given as: Organizational performance = f (capital structure). Organization performance is measured by the following: Return on Asset (ROA) and Return on Equity (ROE), while capital structure is be measured by debt ratio and debt-equity ratio. This study also includes age as a controllable variable since it is also one of the factors that may impact on organizational performance (Osuji & Odita, 2012; Roanne, 2013). Mathematically, the models are express as follows;

Model I
Return on Asset = f (debt ratio, debt-equity ratio, age)
ROA=β0 + β1 dbr+ β2 der+ β3 age +μ.................(1)

Model II
Return on Equity = f (debt ratio, debt-equity ratio, age)
ROE = $\beta_0 + \beta_1 \text{dbr} + \beta_2 \text{der} + \beta_3 \text{age} + \mu_i$ \hspace{1cm} (2)

Where;

- $\beta_0$ = intercept
- $\beta_1 - \beta_3$ = Regression coefficient
- $\mu_i$ = Stochastic error term

ROA = it is measured as net profit after tax divided by total asset.

ROE = it is measured as net profit after tax divided by Total number of ordinary shares in issue.

Debt-Equity ratio = it is measured as total debt divided by net worth. Where net worth = equity share capital + preference share capital + reserve and surplus.

Total debt ratio = it is measured as total debt of a firm divided by its total asset.

Age = number of years of the firm from the date of its incorporation.

**Multicollinearity Test**

This test was performed to check if there is any inter-association among the independent variables; the result is shown in Table 1.

**Table 1  Multicollinearity Test (VIF)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt ratio</td>
<td>0.295</td>
<td>3.392</td>
</tr>
<tr>
<td>Debit-equity ratio</td>
<td>0.215</td>
<td>4.659</td>
</tr>
<tr>
<td>Age</td>
<td>0.568</td>
<td>1.769</td>
</tr>
</tbody>
</table>

*Source: Researchers’ Computation 2017*

The variables in the model; debt ratio shows VIF coefficient (3.394 > 1), debit – equity ratio (4.659 > 1) and age (1.769 > 1) greater than 1 but less than 10 which was the bench mark for multicollinearity.

**Heteroskedasticity Test**

Heteroskedasticity test was employed as a post test tool to ascertain the reliability of data used. This test is basically on the variance of the error term. It helps to ascertain whether the variance of the error term is constant or not. The Table 2 below shows the result of the test:

**Table 2: Heteroskedasticity Test**

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients(^a)</th>
<th>(t)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
<td>t</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.022</td>
<td>.098</td>
<td>-.223</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>.679</td>
<td>.651</td>
<td>1.037</td>
</tr>
<tr>
<td>Debt-Equity</td>
<td>-.267</td>
<td>.252</td>
<td>-1.236</td>
</tr>
<tr>
<td>Age</td>
<td>-.001</td>
<td>.001</td>
<td>-.686</td>
</tr>
</tbody>
</table>

\(^a\) Dependent Variable: AbsUt

The p-value (0.407, 0.400 and 0.439) for debt ratio, debit-equity and age respectively is > 0.05, this indicates that is no heteroskedasticity problem.

**RESULTS AND DISCUSSIONS**

**Table 3: Descriptive Statistics for the period 2012-2016**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets</td>
<td>6</td>
<td>.31</td>
<td>.40</td>
<td>.3533</td>
<td>.03011</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>6</td>
<td>.12</td>
<td>.28</td>
<td>.2150</td>
<td>.05612</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>6</td>
<td>.19</td>
<td>.24</td>
<td>.2067</td>
<td>.02066</td>
</tr>
<tr>
<td>Age</td>
<td>6</td>
<td>27.00</td>
<td>45.00</td>
<td>35.0000</td>
<td>6.84105</td>
</tr>
</tbody>
</table>

*Source: Data Analysis, 2017*
Table 3 the average value of the performance ratios measured by ROA and ROE, sample Nigerian insurance industry is 35.3 percent and 21.5 percent with a maximum and minimum value of 0.4, 0.28 and 0.31, 0.12 respectively. The results indicate that on the average, for every N1 worth of total assets of the firms, mere 35 kobo was earned as profit after tax, while 22 kobo was earned as after tax profit on every N1 equity share issued. The above analysis shows that the selected insurance companies have a low accounting performance during the period of study.

On the other hand, the debt ratio value of the sample insurance companies, which measured by total debt over total asset is 20.67 percent with the maximum and minimum value of 24 and 19 percent respectively. The standard deviation is .02066. This indicates that more than 20% of the total assets are financed with debt. The mean debt-equity ratio is .20 and the average age of the firm is about 35 years. This shows that the firms are not relatively young.

**Table 3: Correlations (Pearson) ROA as a dependent variable**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt ratio</td>
<td>-.171</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt-Equity ratio</td>
<td>-.456</td>
<td>.804</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.573</td>
<td>-.255</td>
<td>-.565</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Data Analysis, 2017

Table 3 reveals that ROA was negatively correlated with debt ratio and debt-equity ratio for the coefficient estimates of correlation - .171 and -.456 respectively. Result also shows that age (r = .573) has positive relationship with the firm’s performance measured by ROA.

**Table 4: Correlations (Pearson) ROE as a dependent variable**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Equity</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt ratio</td>
<td>-.362</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt-Equity ratio</td>
<td>-.250</td>
<td>.804</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.525</td>
<td>.626</td>
<td>.243</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Data Analysis, 2017

Table 4 shows that ROE is negatively correlated with debt ratio and debt-equity ratio for the coefficient estimates of correlation - .362 and -.250 respectively. Result also shows that age (r = .525) has positive relationship with the firm’s performance measured by ROE.

This finding is in support of pecking order theory, which claims a negative relationship between capital structure and firm performance. This study also corroborate with work of Lawal et al., (2014), Chechet and Olayiwola (2014), Ogebe et al., (2013), Onaolapo and Kajola (2010) and Akinlo (2011) that there is negative relationship between capital structure and firm performance. however, the result of this study contradict the findings of Akinyomi (2013), Patrick et al., (2013), Olokoyo (2012) Aburub (2012) and San and Heng (2011) who claimed that capital structure has positive relationship with firm performance.

**Table 5: Regression Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>ROA (co-efficient)</th>
<th>ROE(co-efficient)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt ratio</td>
<td>-.509</td>
<td>-1.987</td>
</tr>
<tr>
<td>Debt-equity ratio</td>
<td>-0.257</td>
<td>-0.550</td>
</tr>
<tr>
<td>Age</td>
<td>0.002</td>
<td>0.004</td>
</tr>
</tbody>
</table>

Data Analysis, 2017

Table 5 shows that capital structure measured by debt ratio and debt-equity ratio has negative influence on firm performance measured by ROA and ROE. Furthermore, result reveals that debt ratio (β = -.509) and debit-equity ratio (β = -0.257) have negative impact on firm performance. This implies that the higher the debt ratio and debit-equity ratio, the lower the financial performance of Nigerian insurance companies. Therefore, null hypotheses (H₀₁ and H₀₂) which states that there is no positive significant relationship between debt ratio, debt-equity and organizational performance is accepted.
The finding of this study contradicts the Modigliani-Miller theory and trade-off theory but supports pecking order theory which claims that capital structure has negative relationship with firm performance.

CONCLUSION AND RECOMMENDATION
This study examines the impact of capital structure on the financial performance of Nigerian insurance industry between 2012 and 2016. The result reveals that capital structure measured by debit ratio and debit-equity ratio has negative relationship with financial performance measured by ROA and ROE. The negative relationship implies that management of insurance companies should be careful of dependence on debt in their capital structure. Furthermore, result also establishes that age has positive impact on the financial performance of Nigerian insurance industry. Subsequently, the study recommends that insurance companies should not rely on debt financing but to strike a balance between their choices of capital structure.

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