CAPITAL STRUCTURE AND THE PERFORMANCE OF QUOTED INSURANCE INDUSTRY IN NIGERIA

Rafiu Oyesola Salawu
Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria
E-mail: osalawu02@yahoo.co.uk

Quadril Adebayo Lawal
Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria
E-mail: lawalquadril154@gmail.com

Ajani Babajide Adetunji
Department of Management and Accounting, Obafemi Awolowo University, Ile-Ife, Nigeria
E-mail:, jideadetunji@yahoo.com

Ofe I. Inua
Department of Financial Studies, Faculty of Management Sciences, National Open University of Nigeria, Nigeria
E-mail: oinua@noun.edu.ng
 +234 8169059934

Abstract
The study examined the pattern of debt and equity on the financial performance of twenty-nine (29) listed insurance firms in Nigeria between 2006 and 2014. Secondary data were employed and sourced from the Nigerian Stock Exchange Factbook and the audited annual report of the selected insurance companies. Data were sourced on the variables such as return on assets, leverage (capital structure) and other control variables, and data were analyzed using graphs, percentage, trend analysis and random effect model based on the outcome of LM-test and Hausman test. The empirical results lent some support to the pecking order and static trade-off theories of capital structure. The study revealed that capital structure (LEV) had significant negative effect on the financial performance of insurance companies in Nigeria. This implies that, the higher the debt relative to equity, the lower the performance of the insurance company financially. Thus, to improve the level of financial performance, the debt components of the capital structure should be reduced. The study recommended that insurance firms should try to increase the percentage of retained earnings in order to reduce the reliance on debt to finance the business.

Keywords: Capital Structure, Performance, Insurance Companies, Debt, Equity

Introduction
The importance of capital structure in the performance of business organisations cannot be over-emphasised, most especially the limited liability companies are strongly influenced by the structural nature of the distribution of capital. The capital structure of a firm is the various combinations of different sources of financing to the start-up and running of the business. The decision about the capital structure as presented by Ross, Westerfield and Jordan (2001) is the relative choice of debt and equity instruments needed to ensure profitability and improve the wealth of business owners (shareholders). In the process of sourcing for funds to manage an enterprise, funds can be generated depending on the position of the business; whether it is an entrant of an existing business. It follows that the business organisation will be underwritten by an investment bank based on the implied share value from the secondary market to

sell initial share offer. Meanwhile, a short and long term loan instrument can be acquired from the money and capital market respectively.

Efficacy in the capital structure decision is important to the general performance of the business firm. The performances of companies can be observed majorly through its ability to achieve the organisational set goals of earning returns on investment, satisfying their customers' need, expansion of business, financial stands, increased wealth of shareholders and a host of other indicators that reflect how the business organisation is performing depending on the organisational goal. Specifically, the financial performance of a firm relates to its motive to maximize profit both to shareholders and on assets (Chakravarthy, 1986); and the operational performance concerns with growth and expansions in relations to sales and 'market value (Hofer & Sandberg, 1987). Thus, the implementation of an appropriate capital structure cannot be over-emphasised as it directly relates to the performance of the firm.

The insurance companies are faced with serious decision making concerning the capital structure relative to their performance. An insurance company takes up risk on behalf of their customers by insuring them against hazard. It takes premium from the customers periodically and indemnifies them for the occurrence of the hazard. Its operation is based on getting this premium: from customers and investing the funds on various other businesses; either in the primary and secondary market, money and capital market, debt and equities of other companies, real estate business or other returns earning businesses. The indispensable fact about this industry is that profitability is based on ability to manage

risk; not just the risk of tradeoff between debt and equity but also the risk of taking up someone else's risk and investing the liability from such on risky assets. It is obvious that insurance not only facilitates economic transactions through risk transfer and indemnification but also promotes financial intermediation. In view of this, insurance industry can be used to promote financial stability, facilitate trade and commerce, and complement government security programmes (Adeyele & Maiturare, 2012). Therefore, it is important to ensure efficiency and effectiveness in the performance of this industry, most especially in terms of the capital structure.

Optimality in capital structure is relative to individual firms and industry (Deesomsak, Paudyal & Pescitto, 2004). The decision about how much debt and equity share a company should issue depends on the individual characteristic of each firm within an industry. If a wrong mix of finance is employed; the performance and survival of the business enterprise may be seriously affected. Survival and growth need resources but financing these resources has limitation (Weill 2007 & Mwaura, 2014). This has thus caught the attention of researchers such as Jensen and Meckling (1976) who suggested that the amount of debt in a firm capital structure affects the performance of the firm and breeds conflict between the shareholders and the managers. This impact on the management's investment decision thereby contributing to the amount of leverage in the capital which affect the firm's financial performance and subsequently the value. More so, Titman and Wessels (1998) are of the opinion that debt ratio is determined by asset levels, profitability, growth, products, and industry among other factors. Mixed feeling has been expressed by scholars in this area and

conclusions have not been reached as to how capital structure is related to company performance. The assessment of the actual impact of capital structure on corporate performance in Nigeria has been a major problem that has not been resolved among researchers. Hitherto, there has been different methodology, variables, theoretical framework and there is still no concrete conclusive empirical evidence in the literature about how capital structure influences corporate performance of insurance firms in Nigeria.

Basically, most of the literature in this area had focused more on developed markets like USA and European countries. Little empirical evidences were found for developing economies like Nigeria, where the capital market suffers from inefficiency and high level of information asymmetry, especially in the insurance industry. In Nigeria, studies on the relationship between capital structure and performance have emphasized more on the general corporate businesses and specifically on the banking firms listed on the stock market. However, despite the importance of the insurance sector in risk palliations, value creation and the growth of Nigerian economy, it has been under-investigated and ignored in this context. Therefore, this study examines the pattern of debt, equity, financial performance and the effect of capital structure on financial performance of twenty-nine listed insurance firms in Nigeria between 2006 and 2014.

Literature Review
Capital structure has a closed link with corporate performance (Tian & Zeitun, 2007). Corporate performance can be measured by variables which involve productivity, profitability, growth or, even, customers' satisfaction. These measures are

related among each other. Financial measurement is one of the tools which indicate the financial strengths, weaknesses, opportunities and threats. Those measurements are return on investment (ROI), residual income (RI), earnings per share (EPS), dividend yield, price earnings ratio, growth in sales, market capitalization etc. (Barbosa & Louri, 2005). Berger and Bonaccorsi (2006) had used profit efficiency as the performance measure. Managers' performances were evaluated by using profit efficiency because profit efficiency caters for the effectiveness of manager to raise revenue and control cost and is close to the concept of value maximisation. By measuring the profit efficiency, shareholder losses from agency costs are relatively close to the losses of potential accounting profits.

With the view of helping both growing and grown firms in structuring their finance efficiently, many studies have been undertaken home and abroad, that is; locally and internationally, on this area of study. Some of these studies are discussed in this section. To make this section easier, it is grouped under international and national. The following studies were undertaken locally, here in Nigeria.

Sulaimon, Adaramola and Fapetu (2005) aimed at establishing a realistic relationship between the capital structure and corporate performance of selected quoted firms in Nigeria. The study used panel data from fifty quoted firms for the year 2002. The data were further built into three different panels. Panel one comprised data from both banking and non-banking firms, panel two had data from 25 non-banking firms while panel three had data from 25 banking firms. The study employed the ordinary least square (OLS) regression method of estimation to analyse the variables used i.e.

Earnings per share (EPS) on leverage ratio, weighted average cost of capital and business risk. The study revealed that capital structure has no significant impact on the value of non-banking firms as all explanatory variables used in the panel for non-banking firms were not statistically significant from zero. On the other hand, the result showed that the value of the banking firms was positively affected by its capital structure. According to the authors, this result suggested that the concept of optimal capital structure is not applicable to the Nigerian banking institutions.

Salawu (2007) carried out an empirical analysis of the capital structure of 50 selected non-financial quoted companies in Nigeria between the period 1990 and 2004. The study investigated the main determinants of the capital structure of the selected quoted firms in Nigeria. The study employed two different analytical techniques namely the descriptive statistics and the inferential statistics (panel data econometrics techniques) in analysing secondary data obtained from the annual reports of the selected companies and reports of the Nigerian Stock Exchange. The empirical results showed that debt financing for listed companies in Nigeria for the period studied correspond mainly to a short term debt nature. Leverage was found to be negatively correlated with profitability. The size of the firms was however found to be positively correlated with total debts which according to the author, suggests that large firms can better support higher debt ratios than small firms.

Onaolapo and Kajola (2010) in line with Salawu (2007) studied the impact of capital structure on firm's financial performance using sample of thirty non- financial firms listed on the Nigerian Stock Exchange. The

study showed that a firm's capital structure surrogated by Debit Ratio (DR) has significantly a negative impact on the firm's financial measures (Return on Asset, ROA and Return on Equity, ROE). The study by these findings indicated consistency with prior empirical studies and provided evidence in support of Agency cost theory.

Conversely, the findings from Appah, Okoroafor and Bariweni (2013), Ishaya and Abduljeleel (2014) submitted that total debt has significantly a negative effect on the performance of corporate organisation as the equity shares have positive effect on returns on investment and assets. This is in line with the opinion of Owolabi and Inyang (2012), who suggested that firms with a huge portion of capital structure composed of external debt find it difficult to fulfil their debt obligations which lead to financial distress, bankruptcy threat, inability to pay dividends to mention a few of the reflection of the poor performance. By implication, when corporate business organisations maintain a high debt relative to equity share in its capital structure, their performance will drop; which is also supported by Simon-Oke and Afolabi (2011).

Moreover, probably because of the ability of some of the considered firms to determine the optimum level of capital structure, Semiu and Collins (2011), in their study suggested that there exists a positively significant relationship between a firm's choice of debt-equity ratio and its market value in Nigeria. That is, as the level of debt relative to the equity share of capital structure increases, there is increase in the performance of the business. Akinyomi (2013), in his take too, suggested that each of debt to capital, debt to common equity, total debt is significantly and positively

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related to financial performance using both returns on asset and returns on equity.

Garba and Abubakar (2014) examined the relationship between corporate board diversity and financial performance of insurance companies in Nigeria. The major objective of the study was to investigate the relationship between board diversity and financial performance of insurance companies with specific reference to how gender diversity, ethnic diversity, board size, board composition and foreign directorship affect financial performance of insurance companies listed on the Nigerian Stock Exchange. The study selected 12 listed insurance companies using non-probability sampling method in the form of availability sampling technique for a period of 6 years, that is, 2004 to 2009, using ROA, ROE and TOBIN's Q as measures of firm performance and applying Feasible Generalised Least Squares (FGLS) and random effects estimators. The findings of the study revealed that gender diversity and foreign directors have a positive influence on insurance companies' performance, but the findings indicated a negative and significant relationship between board composition and performance of insurance companies in Nigeria.

Gugong, Arugu and Dandago (2014) investigated the impact of ownership structure on the performance of insurance firms in Nigeria. The study made use of panel data for 17 insurance firms between the period 2001 and 2010. The study focused on two aspects of ownership structure namely; managerial and institutional shareholding. Firm's performance was measured through Return on Asset (ROA) and Return on Equity (ROE). Findings indicated that there is a positive significant relationship between

ownership structure and firm's performance as measured by ROA and ROE. The study recommended that the code on owner's equity of listed insurance companies should be sustained and encouraged so that the firms can have a perpetual life, because the stake of this owners could serve as a check and balance mechanism to further strengthen the corporate governance of the insurance firms in order to give room for enhanced financial performance of the listed insurance companies in Nigeria.

This study was based upon Pecking order theory, also called the Pecking Order Model, which states that firms prioritize their sources of financing (from internal financing to equity) according to the law of least effect, or of least resistance, preferring to raise equity means 'of last resort' (Akinsulire, 2014). Myers (1984) and Myers and Majluf (1984) propounded the pecking order theory.

It is observed in the literature that most of the studies in this area are concentrated on the developed countries and very few of these studies are based on less developed countries, most especially Nigeria. More so, it is observed that most of these studies in this area on Nigeria are also concentrated most especially on the banking sector and the non-financial sector; empirical studies have not been evident on the relationships between capital structure and performance of insurance companies in Nigeria, specifically, the financial performance; hence this study.

Methodology
The methodology deals with model specification, data requirements and sources of data. Secondary data were employed and sourced from the Nigerian stock exchange factbook and the audited annual report of the

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selected insurance companies in Nigeria between 2006 and 2014 for 29 quoted insurance firms. Data were sourced on the variables such return on assets, leverage (capital structure) and other control variables. Data were analysed using graphs, percentage, trend analysis and random effect model based the outcome of LM-test and Hausman test.

Model Specification

Pecking Order theory states that there are three sources of financing to a firm which are: retained earnings, borrowings and equity (Myers & Majluf, 1984). The theory is based on the idea of prioritising the need to adopt each of the sources; by moving from internal to external. Thus, considering the severity of the effect of each source of financing, they would prefer retain earnings to issue debt instrument and will prefer going for loan to sell equity. Therefore, the model specified was based on this source of finance and was specified as in equations 1 and 2. Thus the model was specified in two forms as follows:

$$ROA_{it} = \alpha_0 + \alpha_1 LEV_{it} + \alpha_2 SIZE_{it} + \alpha_3 AGE_{it} + \alpha_4 GROWTH_{it} + \varepsilon_{it}$$
……………….(1)
$$ROA_{it} = \alpha_0 + \alpha_1 TLA_{it} + \alpha_1 TCA_{it} + \alpha_2 SIZE_{it} + \alpha_3 AGE_{it} + \alpha_4 GROWTH_{it} + \varepsilon_{it}$$
……….(2)

where α_0, α_1, α_2, α_3, α_4 and ε_{it} represent intercept and coefficients

LEV = leverage,
SIZE = size of the firm,
AGE = firms' age
GROWTH = firms' growth
ε_{it} = error term .

A priori expectation: α_1, α_2, α_3 & $\alpha_4 > 0$

The financial performance was captured using the Returns on Asset (ROA) which was the returns on total amount invested in the business; that is, the returns on sum of debts and equity assets. The capital structure is majorly determined by the ratio of debt to total assets. This ratio can be split into two: the total long term liabilities as a ratio of total assets (TLA) and total current liabilities as a ratio of total assets. Retained earnings is not really common among these firms, therefore, it was not included in the model. As control variables, we included the size (SIZE) of the firm which was the log of the total assets and growth which was used to capture growth of firms' (GROWTH).

Based on the propositions from the pecking order theory, there was no definite a priori expectation stated for each of the composition of the capital structure variable. The major emphases were placed on the prioritization of the sources of finance from the severity of effect of their returns on the profit of the company. Thus, the managers are said to prefer retaining earnings to issuing loan securities and they prefer issuing loan securities to issuing equity share.

Results and Discussion

Patterns of Debt, Equity and Financial Performance in the Nigerian Insurance Industry

This section examines the pattern of capital structure and profitability of insurance companies in Nigeria with the aid of descriptive and trend analysis. The trend was as presented in the figures 1 to 3. In figure 1, the highest average total debt was recorded in 2009 showing consistent

increase from the preceding years. However, this dropped to ₦3.71 in 2010. After the drop in 2009, the Nigerian insurance industry had nevertheless experienced considerable and sustained increase in the total liabilities as shown in table 1. In the same view, the median of the average liabilities between 2006 and 2014 on the average amounted to ₦1.15, ₦1.68, ₦2.73, ₦2.33, ₦2.66, ₦2.9, ₦3.74, ₦5.13 and ₦5.08 billion showing that the middle liabilities in the Nigerian insurance industry have been increasing consistently over the years.
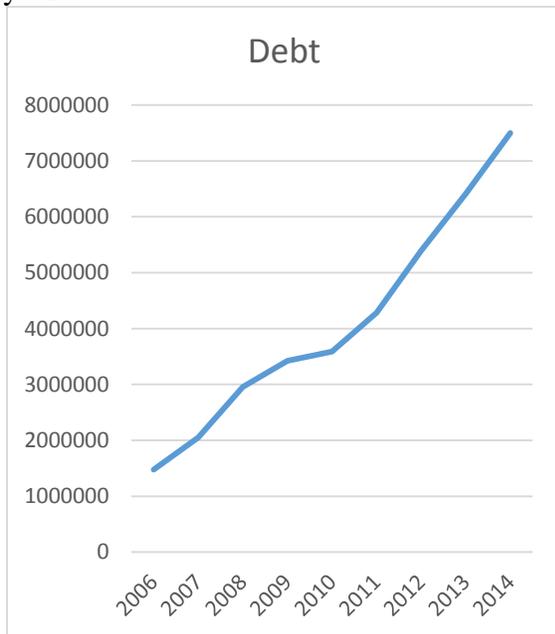

Figure 1: Trend and Pattern of Debt of Insurance Firms in Nigeria (2006-2014)

Source: Authors' Computation (2017)

In addition, the highest liability in the industry was recorded in 2014 by AIICO insurance Plc amounting to ₦46 billion while the least indebted firm in the industry was the Custodian & Allied Insurance Plc owing ₦0.59 billion in 2013. However, liability and debt growth in the industry has been heterogeneous. This was explained by

the standard variation, the variation between the highly indebted and the least indebted firms increased over the years. These rose from ₦0.12, ₦2.76, ₦3.74, ₦5.04 to ₦8.85 in 2006, 2008, 2009, 2012 and 2014 respectively. This was further attested to by figure 1.

In figure 2, unlike the liability in the industry, the growth in equity was not consistent. Between 2006 and 2010, consistent growth was recorded in the industry. There was an increase recorded from ₦90 to ₦173 and further increased to ₦213 billion in 2006, 2007 and 2008 respectively. However, this increase was not sustained as falls were witnessed in the succeeding three years from ₦202 to ₦191 and further to ₦167 billion respectively. Nevertheless, the equity in the Nigerian insurance industry has been recovering from these shocks as the last three years in the industry showed sustained and continuous growth (*i.e* from ₦168 to ₦185 and ₦224 billion in 2012, 2013 & 2014 respectively). This is shown in figure 2. Like the sum of equity over the years of analysis, the mean of equity did not show a consistent growth over the years of analysis too. There was consistent growth recorded from 2006 to 2008 with ₦3.92, ₦5.8 and ₦7.37 billion respectively. However, this decreased from ₦6.99 to ₦5.82 billion in the following four years. The industry, however, witnessed increase in the last two years under study showing a recovery from the fall of the past years.
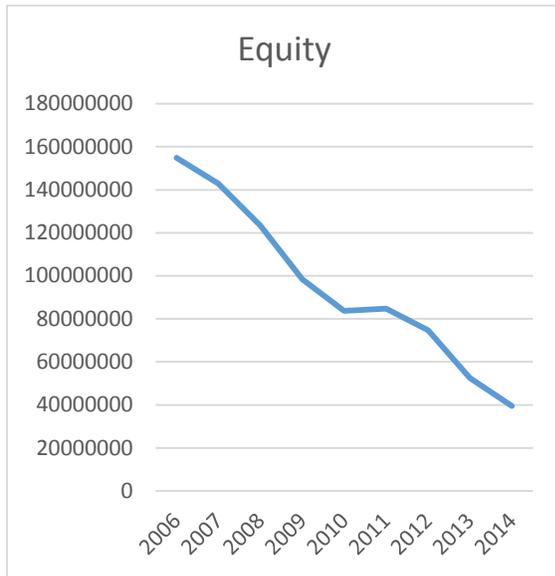
Figure 2: Trend and Pattern of Equity in Insurance Firms in Nigeria (2006-2014)

Source: Authors' Computation (2017)

Also, in figure 2, the data showed that the insurance firm having highest equity was the Standard Alliance Insurance Plc and this was recorded in 2008 with ₦23 billion. On the other side, Equity Assurance Plc showed the lowest equity in the industry with ₦0.3 billion in 2006. In terms of deviation, the data showed that the firms in the industry deviated from the average with ₦3 billion showing that the industry was fairly homogeneous. Lastly, the median ranged between ₦2.47 and ₦5.68 billion over the years under consideration showing that an average Nigerian insurance firm had the maximum median of ₦5.58 and minimum of ₦2.47 respectively.

Regarding the total assets in figure 3, continuous and steady growth has been recorded over the years of analysis. Aside

from 2010 when a decrease of ₦75 billion was witnessed the sector's growth in total assets was sustained as shown figure 3. The total assets in the industry increased from ₦134.4, ₦234.9 to ₦302.5 and further increased to ₦305.4 billion in 2006, 2007, 2008 and 2009 respectively. However, this fell to ₦22.9 billion in 2010. Recovering from this shock, the industry experienced sustained and continuous growth and increase in total assets within 2010 to 2014 respectively as shown in figure 3. In terms of the mean of the total assets in the industry, considerable and sustained growth has also been witnessed as shown in table 1. From 2006 to 2008, the mean of total assets in the industry grew from ₦4.64 to ₦8.1 and further to ₦10.43 billion respectively while further growth of ₦10.05, ₦ 11.12, ₦12.78 and ₦14 billion respectively were recorded in 2011, 2012, 2013 and 2014 respectively. The differences in term of total assets among Nigerian insurance companies were, however, high. This is confirmed by the values of our yearly standard deviation as shown in table 1 above.

This ranged between ₦3.19 to ₦10.66 in 2006 and 2014 respectively showing that as the industry grew over the years, the size of Nigerian insurance companies varied significantly. Lastly, the biggest insurance firm in Nigeria, being AIICO Insurance Plc, has the total assets of ₦55.59 billion while the smallest in term of size as measured by total asset is the Goldlink Insurance Plc having ₦2.14 billion as at 2014 in the Nigerian insurance industry.

More so, the profitability of the industry, measured as profit before tax (PBT), has been very volatile though positive as shown in figure 4. Increasing from ₦7.5 billion to all time highest profit of ₦14.9 billion between 2006 and 2007, the profit fell to ₦9.3 in 2008. Still further fell to ₦1.8 was experienced in the industry in 2009. However, the total profit increased to ₦5.3 in 2010 but later fell again in the following year to ₦2.6 billion. An increase from ₦2.6 in 2011 to ₦9.5 billion was later experienced in the industry in 2012 but this also later declined to ₦5.7 in 2013. Lastly, an increase to ₦11.9 billion was recorded in the industry in 2014. Figure 4 shows that profit in the industry though positive has not been consistent in term of its growth over time in the Nigerian insurance industry.

Similarly, the highest equity of Nigerian insurance firm amounted to ₦23.07 billion while the that of total liability was ₦46.22 billion in the Nigerian insurance industry indicating that liability was higher than equity in the industry with the total of ₦23 billion. Similarly, the industry has witnessed the highest total asset of ₦55.6 billion while the firm with the lowest total assets in the industry possessed ₦0.49 billion between 2006 and 2014 with the highest loss of ₦4.46 recorded in a year by a firm in the industry. Furthermore, within the same industry, the differences among the firms were high over the years of analysis as shown by the standard deviation in table 2. This shows the deviation of ₦7.02 billion in terms of total assets informing us that the difference between the biggest and lowest firm in the industry. Similarly, the variation

in terms of total liability and equity were high amounting to ₦5.04 and ₦3.66 billion respectively. In terms of skewness, while equity, total assets and total liabilities were positively skewed with ₦1.24, ₦2.21 and ₦3.7 billion the profit in the industry was negatively skewed showing that high insurance firms were recording loss in Nigerian insurance industry. Lastly, having observed the firms year observations of 261, the addition of equity, profit, total assets and total liabilities in the Nigerian insurance industry amounted to ₦1,585.6, ₦6.85, ₦2,670 and ₦1,112.5 billion in the years of analysis.

The debt-equity ratio was observed to fall from ₦65.9 to ₦34.4 billion at the inception of the recapitalization policy of NAICOM, reflecting that at the time of implementation of the policy, most of the insurance companies resolved to boost their level of finance as required by issuing equity stocks to the public. This made the proportion of debt to equity to fall. Within this period, the proportion of assets that came from debts to supply the missing idea was observed to fall and was quite less proportional to that of equity share. Immediately after the period of reconsolidation and recapitalisation, the debt instrument gained much relevance in the financing of insurance firms around the period of 2007-2010 as the debt-equity ratio rose from ₦34.4 billion to around ₦72.3 billion. This could be warranted by the need to finance the business. Taking a closer look at the debt-total asset ratio, it as well reflected the fall in the level of importance of debt security at that time falling from ₦34.4 billion to ₦23.4 billion. This period

was reflected to be associated with increased level of financial performance.

Immediately after the period of reconsolidation and recapitalisation, the debt instrument gained much relevance in the financing of insurance firms around the period of 2007-2010 as the debt-equity ratio and the debt-total asset ratio witnessed increases. The debt-equity ratio rose from ₦34.4 billion to ₦61.8 billion as the debt-total asset ratio moved from ₦23.4 billion to ₦33.1 billion. This period was associated with dropping financial performance as the level of returns on asset fell continuously ₦6.75 billion to ₦1.59 billion. The sharp drop in financial performance could be attributed to the global economic meltdown 2007-2009 which was majorly crisis in the financial space of the world economy. The debt-equity ratio and debt-total asset ratio maintained an upward movement after the year 2010 but the debt-equity ratio dropped through to the year 2014. In between this period, return on asset dropped so much that loss was experienced with negative ROA for the year 2011 and afterward dwindling earnings was witnessed.

On the overall, it is observed that the debt-equity ratio has experienced a number of sharp increases as presented in figure 3. Its rise has not really been much significant. The debt-total asset ratio has shown a phenomenal increase even though an initial drop was observed. This is suggesting that over time, the debt components of the capital structure have been increasing. However, the financial performance of the insurance company has not really been impressive as it has fallen over time, even falling to a negative sign. This shows that the capital structure variables in the insurance company have moved in opposite direction of the financial performance of the insurance companies. This is not to say that the financial structure was the cause of such unimpressive outcome for the financial performance, but mere showing how the variables have behaved over time. The next section explains how these variables were related.

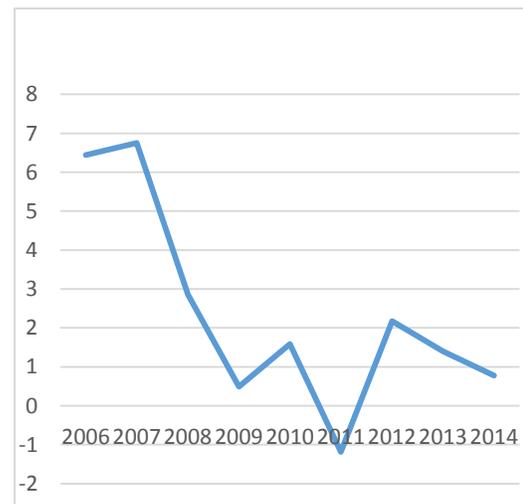*Figure 3: Trend and Pattern of Financial Performance of Insurance Firms in Nigeria (2006-2014)*
        Source: Authors' Computation (2017)

Analysis of the Relationship between Capital Structure and Financial Performance of Insurance Companies in Nigeria

This section investigated the relationship between capital structure and the financial performance of insurance companies in Nigeria. The table 1 displays the descriptive

statistics of the variables of interest within the study period of 2006 to 2014. The ROA ranging from (₦59.76) billion to ₦22.98 billion was having a mean ₦2.37 billion with a standard deviation of ₦9.74 billion. Also, the distribution was non-normal with more negative ROA than positive and peaked kurtosis. The LEV ranged from ₦1.73 to ₦281.63 billion with mean of ₦39.65 billion and standard deviation of ₦31.52 billion. There were more positive changes in LEV than negative changes with peaked distribution. The total long term liability-total asset ratio fell between ₦0.13 and ₦81.68 billion with mean of ₦11.85 billion, standard deviation of ₦0.14 billion; it was positively skewed and leptokurtic.

Table 1: Summary of Descriptive Statistics

Statistics	ROA	LEV	TLA	TCA	SIZE	AGE	GROWTH
Mean	2.372876	39.6496	11.8478	28.5454	15.93508	32.98276	1.293727
Median	3.883949	36.06584	6.6176	24.1896	15.97118	32.5	1.063711
Max	22.98286	281.6291	81.6817	199.9474	17.83359	56	12.81097
Min	-59.7565	1.725707	0.1342	1.0968	13.09269	12	0.383989
SD	9.743755	31.51772	0.14593	0.231664	0.670916	13.61116	1.011091
Skewness	-1.97267	3.739159	2.045942	3.817456	-0.60876	0.096148	7.352827
Kurtosis	10.98108	24.81812	7.433763	24.89836	4.895195	1.489536	76.14055
N	261	261	261	261	261	261	232

Note: ROA, LEV, TLA, TCA, SIZE, AGE and GROWTH represent leverage, total long term liability, total current liability, size of the firms, age of the firm and growth of the firms respectively.

Authors' Computations (2017)

The total current liability-total asset ratio fell between ₦0.13 and ₦1.09 billion with mean of ₦199.95 billion, standard deviation of ₦0.14 billion; it was positively skewed and leptokurtic. The size of firms had the minimum value of ₦13.09

billion and a maximum value of ₦17.83 billion with the mean of ₦15.94 billion and standard deviation of ₦0.67 billion. The minimum and maximum of firms' growth were respectively ₦12.81 and ₦0.38 billion with respective mean and standard deviation of ₦1.29 and ₦1.01 billion. The mean age of the firms was ₦32.98 billion with maximum of ₦56 and minimum of ₦32 billion.

Table 2: Correlation Matrix

	ROA	LEV	SIZE	AGE	GROWTH
ROA	1				
LEV	-0.3657	1			
SIZE	0.1186	0.0174	1		
AGE	0.1186	0.0297	0.1661	1	
GROWTH	0.1479	0.1788	-0.0346	-0.081	1

	ROA	TLA	TCA	SIZE	AGE	GROWTH
ROA	1					
TLA	-0.3194	1				
TCA	-0.2981	0.3368	1			
SIZE	0.1186	0.0805	-0.0304	1		
AGE	-0.1709	0.0005	-0.0692	0.1661	1	
GROWTH	0.1479	-0.1203	-0.1572	-0.0346	-0.081	1

Note: ROA, LEV, TLA, TCA, SIZE, AGE and GROWTH represent leverage, total long term liability, total current liability, size of the firms, age of the firm and growth of the firms respectively.
Source: Authors' Computation (2017)

Table 2 revealed that there was no perfect correlation between any of the variables which included ROA, LEV, SIZE, AGE and SALES. More so, since there was no set of

variable with as high correlation as 0.9, thus, there was no threat of multicollinearity in the model. The findings revealed that ROA correlated negatively with LEV, TLA, TCA and AGE; it correlated positively with SIZE and GROWTH. LEV correlated positively with SIZE and AGE and negatively with GROWTH. SALES correlated positively with AGE but negatively with GROWTH and AGE correlated negatively with GROWTH. Meanwhile, TLA correlated positively with TLC, SIZE and AGE but negatively with GROWTH. TCA in the other hand correlated negatively with SIZE, AGE and GROWTH.

Table 2: Correlation Matrix

	ROA	LEV	SIZE	AGE	GROWTH
ROA	1				
LEV	-0.3657	1			
SIZE	0.1186	0.0174	1		
AGE	0.1186	-0.0297	0.1661	1	
GROWTH	0.1479	-0.1788	-0.0346	-0.081	1

	ROA	TLA	TCA	SIZE	AGE	GROWTH
ROA	1					
TLA	-0.3194	1				
TCA	-0.2981	0.3368	1			
SIZE	0.1186	0.0805	-0.0304	1		
AGE	-0.1709	0.0005	-0.0692	0.1661	1	
GROWTH	0.1479	-0.1203	-0.1572	-0.0346	-0.081	1

Note: ROA, LEV, TLA, TCA, SIZE, AGE and GROWTH represent leverage, total long term liability, total current liability, size of the firms, age of the firm and growth of the firms respectively.
Source: Authors' Computation (2017)

This study carried out an array of panel unit root tests in order to ensure the robustness and reliability of our econometric estimates in table 3.The following panel unit root tests were adopted in order to determine the appropriateness of econometrics technique to use: LLC (Levina, Lin & Chu, 2002), the ADF- and PP-Fisher chi-square. The summary of the results of these tests was presented in table 3. It is to be noted that LLC assumed common unit root processes among cross-sectional units while ADF-Fisher and PP-Fisher Chi-square, on the other hand, assumed individual unit root processes across cross-sectional unit. In running these tests, Schwarz Information Criterion (SIC) were used for selecting the optimal lag length.

The unit root tests revealed that returns on assets was stationary at levels as the entire test (LLC, ADF-Fisher and PP-Fisher) suggested stationarity at mostly 1% significance. Leverage (LEV) was found to be stationary at level given the fact that all the tests but ADF-Fishers suggested the absence of unit root both with intercept and intercept and trend. Both total long term liability as a ratio of total asset (TLA) and total current liability (TCA) were revealed to be stationary at trend and intercept but not at intercept. The firm size was majorly stationary at levels given that all the tests at 5% significance showed stationarity. The unit root could not be conducted for AGE as it was not a ratio variable. The growth of the firm is shown below:

Table 3: Panel Unit Root Tests

	LEVELS			
	LLC	ADF-Fisher	PP-Fisher	Decision
ROA(C)	-5.4143***	73.9515*	118.715***	
p-value	0.0000	0.0772	0.0000	
ROA(C/T)	-7.4956***	65.5866	138.665***	
p-value	0.0000	0.2305	0.0000	I(0)
LEV(C)	-3.6982***	36.8453	172.684***	
p-value	0.0001	0.9864	0.0000	
LEV(C/T)	-4.7213***	51.554	154.785***	
p-value	0.0000	0.7122	0.0000	I(0)
TLA(C)	1.30668	53.3604	109.937***	
p-value	0.9043	0.6482	0.0000	
TLA(C/T)	-4.0686***	56.0424	139.457***	
p-value	0.0000	0.5484	0.0000	I(0)
TCA(C)	-1.15535	44.6647	68.9963	
p-value	0.124	0.9006	0.153	
TCA(C/T)	-2.3322***	47.4107	140.564***	
p-value	0.0098	0.8383	0.0000	I(0)
SIZE(C)	2.00496	78.8245**	78.8245**	
p-value	0.9775	0.0358	0.0358	
SIZE(C/T)	-46.725***	112.712***	112.712***	
p-value	0.0000	0.0000	0.0000	I(0)
AGE	NA	NA	NA	
GROWTH(C)	-68.037***	86.7044***	307.257***	
p-value	0.0000	0.0000	0.0000	
GROWTH(C/T)	-32.29***	141.128***	307.257***	
p-value	0.0000	0.0087	0.0000	I(0)

Note: (1) ROA, DER, DTR, SIZE and SALES represent return on asset, debt-equity ratio, debt-total asset ratio, size of the firms and growth of the firms respectively.
(2) C and T represents constant and trend dependence
Source: Author's Computation (2017)

The Relationship between Capital Structure and Financial Performance of Insurance Company in Nigeria

This section presents the analysis and interpretation of the relationship between capital structure and financial performance of insurance companies in Nigeria. It was set to achieve objective two of the study. The table 4 reported the pooled, random and fixed regression results obtained by testing the relationship between capital structure and financial performance of insurance companies in Nigeria. The Breusch-Pagan Lagrange multiplier test value of 34.87 with p-value less than 0.05 (P<0.05) showed that there was difference in the coefficients of the cross-sections. Thus the pool model was not appropriate enough for the relationship since there was evidence of difference across firms. Then, we were left to choose between fixed effect and random effect. Therefore, the study proceeded to conduct the Hausman test. The Huasman test had a test value of 3.96 with p-value greater than 0.05 (P>0.05), suggesting non-rejection of the null hypothesis of difference in coefficient was not systemic and settled for Random Effect model. The F-statistic value for the random effect model was 10.58 which measured the overall significance of the model's coefficients. It had a p-value less than 0.05 (P<0.05) which indicated that all the estimated regression coefficients were highly statistically significantly different from zero.

From the random effect model, the returns to assets (ROA) being the proxy for financial performance, the findings from the table 4 below revealed that leverage (LEV) had negative relationship with the financial performance of insurance companies in Nigeria. This is more like the conclusions reached by Iwarere and Akinyele (2010), Adeyemi and Collins (2011) and Akinyomi (2013). The effect of leverage on financial performance is significant, as against the position of Taiwo (2012). This conclusion implied that the financial performance in insurance companies in Nigeria is negatively affected by leverage. Thus the leverage is revealed to impact on the level of performance in insurance firms in Nigeria. The higher the debt relative to equity, the lower the performance of the insurance company financially.

Meanwhile, the capital structure variables of the second model (TLA and TCA) revealed the same findings to have negative relationship with the financial performance of insurance companies in Nigeria and there is significant effect of both on financial performance. That is, the total long term liability as a ratio of total asset and total current asset as a ratio of total asset are both negatively and significantly affecting the level of performance of insurance industry in Nigeria. By implication, it becomes unfavorable for the insurance company when the debt components of the total assets of the insurance companies rise as there is negative effect from the rising liabilities of the firm. This shows that as the tax evasion reason for the choice of debt is not paying off. Thus to improve the level of financial performance the debt components of the capital structure should be reduced. This conclusion is in line with the finding Abor

(2005), Abor (2007), Salawu (2007), Appah et al (2013), Ishaya & Abduljeleel (2014), Owolabi & Inyang (2012) and Simon-Oke & Afolabi (2011) who also found a negative relationship between rising debt composition of the capital structure have negative effect on the profit level of the firms. This then violates the pecking order theory

Table 4: Regression Result

	Dependent Variable (ROA)		
	Pooled OLS	Fixed Effect	Random Effect
LEV	-0.11522***	-0.07418***	-0.09704***
	(0.0000)	(0.0128)	(0.0000)
SIZE	2.904736***	5.342963***	3.722745***
	(0.0082)	(0.0076)	(0.0065)
AGE	-0.14946***	-0.270288	-0.14782**
	(0.0010)	(0.4052)	(0.0402)
GROWTH	0.719223	1.0887	0.994121
	(0.2343)	(0.0624)	(0.0723)
C	-36.17356**	-73.4135***	-50.4286**
	(0.0381)	(0.0104)	(0.0204)
N	232	232	232
R-sq	0.20	0.45	0.16
F-Statistics	13.8898 (0.0000)	5.1340 0.0000	10.5770 0.0000
L-M Statistics	34.87 (0.0000)		
Hausman Test	3.9567(0.4119)		
Heteroscedasticity Test		1.93 (0.1744)	
Ramsey Reset Test	1.51 (0.3002)		

*Note: (1) The values in the bracket ( ) are the p-value, **, *** represent the levels of significance at 5% and 1% respectively*
(2) ROA, TLA, TCA, SIZE, AGE and GROWTH represent return on asset, total long term liability-total asset ratio, total current liability-total asset ratio, size of the firms, age of the firm and growth of the firms respectively.
Source: Author's Computation (2017)

Table 5: Regression Result

	Dependent Variable (ROA)		
	Pooled Effect	Fixed Effect	Random Effect
TLA	-17.4318***	-13.1824	-16.237***
	(0.0001)	(0.0593)	(0.0023)
TCA	-9.123***	-6.1190	-7.482***
	(0.0011)	(0.1029)	(0.0123)
SIZE	3.0594***	4.7706***	3.5722***
	(0.0053)	(0.0204)	(0.0094)
AGE	-0.1532***	-0.25296	-0.1510**
	(0.0007)	(0.4292)	(0.0380)
GROWTH	0.7291	1.0954	1.0073
	(0.2247)	(0.0604)	(0.0681)
C	-38.4443**	-64.4436**	-47.7122
	(0.0275)	(0.0301)	(0.0291)
N	232	232	232
R-sq	0.21	0.46	0.17
F-Statistics	12.0196 (0.0000)	5.0456 (0.0000)	9.1419 (0.0000)
L-M Statistics	34.36 (0.0000)		
Hausman Test	2.8908(0.7168)		
Heteroscedasticity Test (0.1854)	2.54		
Ramsey Reset Test	1.76 (0.1765)		

*Note: (1) The values in the bracket ( ) are the p-value, **, ***
represent the levels of significance at 5% and 1% respectively
(2) ROA, TLA, TCA, SIZE, AGE and GROWTH represent return
on asset, total long term liability total asset ratio, total current
liability-total asset ratio, size of the firms, age of the firm and
growth of the firms respectively.*
Source: Authors' Computation (2017)

Moreover, in both models, it is revealed that the size of the insurance companies is positively related to the level of performance, the effect of which is significant. This conclusion is reached given that the p-values for size variable in the short and long run are both less than 0.05. This is in line with the conclusions of Rajan and Zingales (1995) alongside Deesomsak, *et al* (2004), Mwaura (2014) and Danbolt (2002) that concluded that the size of a firm is significant in affecting the profit potential of the firm and contrary to Mykhailo (2013). By implication, the bigger the size of the asset of the insurance company, the better the financial performance in Nigeria. Thus, as the insurance firm is growing in size, the financial performance improves.

As revealed from both model estimation tables, the age of the firms is negatively related to the financial performance of insurance companies in Nigeria with a significant effect. This implies that as the insurance firms grow older, there financial performance drop. This could be as a result of diminishing returns to scale. This finding is contrary to that of Lawal, Edwin, Monica & Adisa (2014). The growth of the firm is shown to be positively and significantly related to financial performance. These conclusions are also reached as the p-values have values less than 0.05. This is contrary to the findings of McConnell and Servaes (1995) and Agarwal and Zhao (2007) but it confirms the conclusions of Bevan and Danbolt (2004). Therefore, as the insurance firms expand, the financial position of such insurance firm is better off.

Conclusion and Recommendations

Given the inferences generated from the above findings, it is concluded that capital structure is influential in the outcome of the performance of insurance companies in Nigeria. Most especially, leverage, total long term liability ratio and total current liability ratio are having negative and significant relationship with financial performance. This suggests that as debt increases relative to equity and total assets, the financial performance of the insurance companies is adversely affected.

Based on the findings of the result, the following actions are recommended as against the suggestion of pecking order theory that suggests debt before equity, insurance firms should try as much as possible to reduce the debt component of their capital structure as their activity is more of a liability on them and incurring much of such debt will increase the burden on the profitability of the firms. The firms should try to put fixed amount or a percentage of the total profit that is retained as capital to running of the business in order to reduce the reliance on debt to finance the business.

Since these firms do not have control over the amount of indemnity payable in a year, the management should be more prudent in the kind of investment they embark on from the gross premium. They can pool their portfolio such that short term or more liquid assets are invested on to reduce the debt they incur in the process of indemnifying the hazard wrecked customers.

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