

Capital Structure and Financial Performance of Quoted Insurance Companies in Nigeria

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Abstract

The epileptic state of performance of companies in Nigeria has become a great concern. Due to this, different scholars have tried to find a way out by discovering what actually influences performance. Therefore, this study tends to add to the body of knowledge by examining the impact of capital structure on the performance of quoted insurance companies in Nigeria because of the importance of such firms in modern economy. Secondary source of data collection was employed and the data were gathered from annual reports of the (23) quoted insurance companies in Nigeria for the periods of eleven years from 2011 to 2021. Data were analysed through the use of descriptive and inferential statistics. The study model expressed the effect of total debt-ratio, leverage, growth, liquidity ratio, assets tangibility and business risk on return on asset using OLS Panel Regression. The results based on the fixed effect model showed that all the explanatory variables except tangibility and growth have a positive influence on profitability. Based on the above findings, the study concluded that for most of the companies operating as risks mitigating mechanisms in Nigeria, the influence of optimal capital mix on their performance is positive and significant.

Keywords: Capital Structure, Debt ratio, Performance, Risk

Introduction

Background to the study

Over the years, there have been indications that the financial performance of firms in Nigeria without the exception of insurance companies has been deteriorating and worrisome. The performance of insurance companies continues to be poor, yet the industry has undergone various improvement and consolidations over the years. In actual fact, several financial literatures have concentrated on the concept of performance and various attempts have been made to provide solutions to several issues pertaining to erratic performance of firms in Nigeria. Likewise, the report release by the Nigeria Stock Exchange on the performance of firms in Nigeria in the year 2018 buttressed this claim that the performance of Nigeria's companies is nothing to write home about. As a result of this, enhancement of performance has become a pertinent apprehension for any entity especially the insurance companies because of the peculiarity of the services rendered. The major concern is to determine the areas of operation, financial strategy and identify the major factor which could influence performance.

A work revealed that the performance of over 60% of listed manufacturing companies in Nigeria is terribly bad to the extent that the probability of their continuous existence is extremely low¹. Another work revealed that the determination of insurers' performance is based on both the underwriting and investment performance which is the function of their capital structures². The progress and sustainability of any insurance company in Nigeria lies with the effective ways in which the management of such organisation could determine the optimal capital mix. Determination of optimal capital structure is very crucial because it reflects how competent a firm is in term of making a worthwhile financing decision. This will occur when the debt and equity can be pooled together to minimize the cost of capital and improve the firms'

performance. When a firm has an optimum capital structure, it can minimize its WACC and thereby enhancing its financial performance. However, when a firm fails to effectively manage its capital structure, its WACC will increase and hence adversely affect its financial performance³.

Research Objectives

The main purpose of this study is to investigate the impact of capital structure on the financial performance of insurance companies in Nigeria while specific objective are:

1. to examine whether capital structure has significant effect on returns on assets (ROA) of insurance companies in Nigeria.
2. to examine whether leverage has significant effect on returns on assets (ROA) of insurance companies in Nigeria.

Research Question

The research question is framed in order to provide constructive answer which will enable achievement of stated objective:

1. Does capital structure have significant effect on returns on assets (ROA) of insurance companies in Nigeria?
2. Does leverage have significant effect on returns on assets (ROA) of insurance companies in Nigeria?

Review of Related Literature

Concept Clarification

The capital structure of companies is considered to be one of critical decisions to be made by board directors. The capital structure of a corporation is made up of a variety of different securities¹⁶. Capital structure refers to the proportional relationship between debt and equity. The majority of debt is made up of long-term loans like debentures, whereas equity is made up of paid-up share capital, share premium, reserves, and surplus or retained earnings¹⁷. There are two types of capital which are equity capital and debt capital. Each type of capital has its own set of benefits and drawbacks. The determination of the best capital structure in terms of risk/reward payback for shareholders is a crucial part of sound corporate governance and management.

Financial Performance

Performance controlling is critical for effective firm administration, through the development of more sophisticated valuation techniques such as internal rate of return, cash flow return on investments and discounted cash flow analysis, most 'Wall Street' analysts and investors focus on Return on equity (ROE) as their primary measure of company performance¹⁸. Another study claimed that return on assets (ROA) is a more reliable financial performance indicator than income statement profitability indicators like return on sales (ROS)¹⁹. There is no perfect statistic though multiple measurements are considered appropriate. For this study, returns on assets is considered appropriate measurement of financial performance and calculated by dividing net income divided with total assets at the end of the year.

Capital Structure

Capital structure is the mix of all types of capital meant to finance the activities of the corporations (financing mix or leverage). It could be referred to as long-term financing sources which are equity share

capital, reserves and surplus, preference share capital, loans, debentures, and other long-term financing sources. The proportion in which a corporation should have its own finance and outsiders money, especially debt finance, affects the weighted average cost of capital (WACC) and the value of the company. The WACC and the value of a company are affected by the proportion of financing²⁰. It is necessary to determine debt-to-equity ratio which will satisfy the firm’s objectives and thus could be referred to as financing decision to maximize shareholders’ wealth or improve the firm’s value as well as whether a change in the financing mix would have any impact on the firm’s worth. Inadequate management of companies’ resources may lead to liquidation of such companies by debenture holders, in the event of failure to meet up with repayment period.

Conceptual Framework

The conceptual framework provides a basis to recognize the impact of corporate governance and capital structure variables on firm performance and assists in development of hypotheses. This conceptual framework involves various dependent, independent and control variables. Therefore, the conceptual framework for this study is shown below as Figure 1

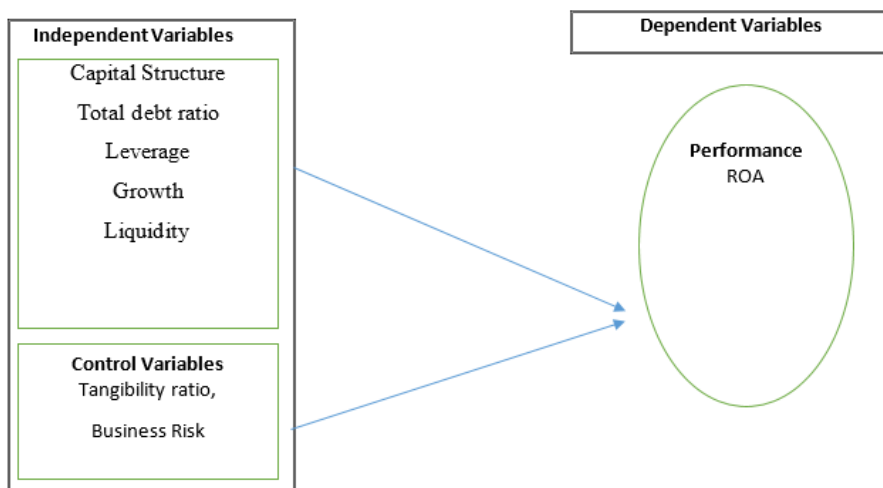


Figure 1 Conceptual Framework of the Study

Theoretical Review

In the extant literatures, there have been different views on capital structure and its effect on financial performance. In order to clear the air on this phenomenon, the last century has witnessed a continuous developing of few theories on the optimal capital structure. These theories include: MM Theory: This theory was propounded by Modigliani and Miller in 1958. It was the first to introduce the concept of capital structure and provided the basis for its modern thinking. It stated that the way a company is being financed has nothing to do with such firm’s value peradventure the market is efficient and taxes, bankruptcy costs and systematic information are absent. Also, the theory negates the conventional perspective which believed that firms’ value will be improved due to financial leverage²¹.

Pecking Order: This theory believed that companies have a preferred hierarchy for financing decisions and maximize value by systematically choosing to finance new investments using the cheapest available source of fund. The assumption is that internally generated revenue (retained earnings) is preferred to external funding, and if necessary, prefers debt to equity because of lower information costs associated with debt issues. A study exclaimed that companies would only issue equity as a last resort when their debt capacity has been exhausted²². A similar study indicated that businesses will rely on internally generated funds initially, such as undistributed earnings, but if there is no asymmetry, they will turn to borrow for more

money and issue shares to meet any remaining capital requirements. The order of preferences reflects the relative costs of various funding options²³. The main conclusion drawn from this theory is that there is a hierarchy of fair preferences with respect to the financing of investments. This hierarchy of preferences suggests that firms finance their investments first using internally available funds, followed by debt, and finally through external equity.

Static Trade-Off Theory: This theory, stated that for a firm to achieve optimal capital structure, there must be a trade-off among corporate and personal taxes, bankruptcy costs and agency costs, etc²⁴. Based on this theory, as indicated by Frank and Goyal, 2009 defined capital structure as the determination of how much debt and equity finance to be chosen by the company to ensure balancing of the cost and benefits. With respect to the theory, Capital structure if not properly and efficiently managed and utilized, it could result to bankruptcy and has adverse effect on the performance of the firm²⁵.

Agency theory: is concerned with separation of ownership, control and conflicts of interest between the principal and the agent. One of the problems that cause conflict between managers and shareholders is free cash flow. Thus, in the companies that have high cash flow and profitability, increasing of debts can be used as a tool of reducing the scope for managers until resources of company may not be waste as a result of their individual purposes. High leverage reduces agency cost by constraining or encouraging managers to act more responsibly in the interest of the shareholders by reducing cash flows available for spending to managers. The contribution of agency cost theory is that leverage firms are better for shareholders as debt level can be used for monitoring the managers²⁶. Thus, high leverage is expected to lower agency cost, reduce inefficiency, and thereby lead to improvement in firm's performance.

Review of Previous Empirical Studies

Several evidences have shown that capital structure has implication on performance of companies in different sectors but with different views from different scholars.

A study analyzed the effect of capital structure on firm performance by controlling the effect of firm size, tangibility and growth rate of manufacturing firms listed in the Nepal Stock Exchange using a sample of 8 companies during the period 2004 to 2014. The results discovered that the firm performance was positively associated to the firm size while it negatively associated to the leverage and tangibility. The study concluded that capital structure, firm size and tangibility were major determinants of firm performance of Nepalese manufacturing companies²⁷. A similar study was conducted on the capital structure impact on a firm's performance in Morocco for eight years from 2009 to 2016. The results concluded that out of seven variables, only four are more significant with negative impact thus- return on asset, asset tangibility, size, and liquidity while firm size is positively significant²⁸. In the same vein, a positive connection was found between capital structure and profitability in another study carried out. The study considered the banking sector in Ghana and data were gathered from the annual reports of the 17 selected banks listed on the stock exchange of Ghana for the periods 2007 to 2013. The data used were analysed through both descriptive and inferential statistics²⁹.

Methodology

Data were obtained from all the quoted insurance companies in Nigeria totaling twenty-three within the periods of 2011-2021. Several statistical techniques such as pool OLS, Hausman test to decide between fixed effect and random effect were employed in the analysis of the data obtained.

Model Specification

The study is concerned with the effect of capital structure on the performance of quoted insurance

companies in Nigeria. The dependent variable “Performance” was proxied with Return on Assets (ROA) while the independent variable “Capital Structure” was captured by total debt-ratio, leverage, growth, liquidity ratio; assets tangibility and business risk. A functional equation that relates capital structure to performance is specified as follows:

$$ROA_{it} = B_0 + B_1 TDR_{it} + B_2 GRW_{it} + B_3 LIQ_{it} + B_5 TANG_{it} + E_{it}$$

$$ROA_{it} = B_0 + B_1 LEV_{it} + B_2 BR_{it} + E_{it}$$

Where:

ROA represents Return on Asset which was used to proxy Financial Performance.

is the constant term, ,..... B_4 are the slopes of the regression to be estimated and captures the stochastic error term. The a priori expectation ,..... B_4 will be greater than zero to show relationship between independent variables and ROA..

TDR = Total debt Ratio of insurance

LEV = Leverage of insurance

GRW = Growth of insurance firms

LIQ = Liquidity

TANG =Tangibility of assets

BR = Business Risk of insurance

Eit = Error term.

Results and Discussion of Findings

Pooled Ordinary Least Square was used to achieve the research objective with consideration of the result of Hausman test. Subsequent to this, the descriptive statistics, correlation analysis and unit root test were obtained.

Descriptive Results

Descriptive statistical analyses are used to present the collected data and also to carry out preliminary analysis of the data. The study however utilizes such measures as mean, median, standard deviation, skewness, kurtosis and also Jarque Berra statistics in relation to inferential statistics such as regression analysis. These descriptive results were presented in table 1 below. From the results, it was revealed that average value for return on assets, leverage, liquidity, risk, tangibility, growth and total debt stood at 53.02206, 98.79779, 57.86263, 44.51916, 20.36216, 58.6032 and 4.746177 respectively.

The result shows that LEV has the highest average, GROWTH and TD has the least average as the determination of capital structure and performance of the insurance companies is concerned. The minimum and maximum value stood at 7.021000 and 89.21000, 25.32000, -33.33000 and 68.11000, 10.15000 and 40.12000, 11.32000 and 252.000 as well 0.066696 and 7.894835 respectively for ROA, LEV, LIQ, RISK, TANG, GROWTH and LOGTD respectively.

The median value best described the centers for each data series in the model, such that the values 52.22500, 54.1150, 56.13500, 45.20500, 20.12000, 22.73000, and 4.948499, provide a more valid measure of the central location of the different cross sectional series. The standard deviation of the variables which shows the rate value for each variable of the expected of growth value for each variable of interest stood at; 15.66880, 614.6008, 14.16629, 13.78661, 8.00931, 288.4469 and 1.76269 respectively.

Leverage (LEV) and Growth (GROWTH) have the first two highest standard deviation values. This suggests that LEV and GROWTH are the most volatile variables. The skewness and kurtosis statistics provide useful information about the symmetry of the probability distribution of various data series as well as the thickness of the tails of these distributions respectively. These two statistics are particularly of great importance since they are used in the computation of Jarque – Bera statistics, which is used in listing for the normality or asymptotic property of a particular series. The statistics in the table clearly shows that ROA, LEV, LIQ, TANG and GROWTH are positively skewed as (0.110751, 13.67057, 0.4777017, 0.618050 and 7.827472). This means that the distribution have long right tail while RISK and LOGTD are negatively skewed as (-2.490841, - 0.510629) which implies that the data set have left – tails and hence the RISK and LOGTD level tend towards less than the median values.

The kurtosis on its own measures how fat the tails of the distribution are. The kurtosis statistics obtained for ROA (3.212941), LEV (187.9252), RISK(14.23906), and GROWTH (62.59492), showed that the distribution series for each of the variables was peaked relatively to the normal because the statistic were greater than (3.0).

Being peaked implies that very few observations within the region where the median resides exist. Whereas, ROA (3.212941) is the least peaked compared to LEV (187.9252). However, on the other hand, kurtosis statistics for LIQ (2.584184), TANG (2.289029) and LOGTD (2.770683) were less than 3.0, which show the extent of flatness (platy – kurtic) of the distribution of the data series relative to normal.

The Jarque – Bera statistics point to the fact that variables seem to be normally distributed and suggested that the null hypothesis of the normality in the distribution were rejected. While on the contrary, the ROA (0.747287) has its probability value greater than 0.05 and also the sums of the enables are 10074.19, 18771.85, 10993.90, 8458.640, 3868.810, 11183.46 and 901.7736 respectively for all the variables examined.

Table 1: Descriptive Statistics

	ROA	LEV	LIQ	RISK	TANG	GROWTH	LOGTD
Mean	53.02206	98.79779	57.86263	44.51916	20.36216	58.85032	4.746177
Median	52.22500	54.11500	56.13500	45.20500	20.12000	22.73000	4.648499
Maximum	89.21000	8525.000	91.02000	68.11000	40.12000	2523.000	7.894835
Minimum	7.021000	25.32000	29.12000	33.33000	10.15000	11.32000	0.066696
Std. Dev.	15.66880	614.6008	14.16629	13.78661	8.009931	288.4469	1.762679
Skewness	0.110751	13.67057	0.477017	-2.490841	0.618050	7.827472	-0.510629
Kurtosis	3.212941	187.9252	2.584184	14.32906	2.289029	62.59492	2.770683
Jarque-Ber	0.747387	276646.8	8.574399	1212.554	16.09793	30056.67	8.673153
Probability	0.688188	0.000000	0.013743	0.000000	0.000319	0.000000	0.013081
Sum	10074.19	18771.58	10993.90	8458.640	3868.810	11183.46	901.7736

Sum Sq De.	46401.64	71391762	37929.24	35923.35	12126.05	15725110	587.2301
Observations	190	190	190	190	190	190	190

Source: Authors' Compilation (2022)

Correlation Matrix

Correlation analysis helps in identifying the extent or degree of association among the explanatory variables. The correlation test shows that ROA does not establish serious correlation with other variables.

From table 2, it was observed that weak correlation exists among LEV, ROA, RISK, LIQ, TANG, GROWTH and LOGTD with values such as (-0.035760, 0.059030, 0.156481, 0.026493, - 0.009477, - 0.058288). Furtherance to this, a negative correlation exists between LEV, ROA, GROWTH and LOGTA with none showing evidence of strong negative correlation. However, the result also revealed that a negative correlation exists among ROA, TANG and GROWTH with all showing weak correlation while the rest variables show weak but positive correlation. Again, RISK, LIQ and LOGTA also have negative correlation while RISK, TANG and GROWTH have positive and very weak correlation. LIQ, GROWTH and LOGTD all are negatively correlated while TANG, GROWTH and LOGTD all are negatively correlated. Finally, GROWTH and LOGTA are positively correlated with evidence of weak correlation.

Table 2: Correlation Analysis

	LEV	ROA	RISK	LIQ	TANG	GROWTH	LOGTD
LEV	1.000000						
ROA	-0.035760	1.000000					
RISK	0.059030	0.315459	1.000000				
LIQ	0.156481	0.266372	-0.283026	1.000000			
TANG	0.026493	-0.231440	0.073026	0.170401	1.000000		
GROWTH	-0.009477	-0.029536	0.104603	-0.128902	-0.151064	1.000000	
LOGTA	-0.058288	0.169317	-0.082188	-0.174234	-0.038957	0.095087	1.000000

Source: Authors' Compilation (2022)

Panel Unit Root Test

Panel unit root was conducted using Levin, Lin Chu t* and Im, Pesaran and Shin Wstat as reported in table 3. Levin, Lin and Chu t* test the null of unit root by assuming common unit root process for all, while Im, Pesaran and Shin W-stat test the null of unit root by assuming individual unit root process.

The essence of unit root test is to ascertain the degree of integration of the variables. The guideline is that if the p-value is less than 5% the null hypothesis will be rejected and the alternative hypothesis will be accepted. The result of Levin, Lin & Chu t* reject the null of common unit root process, therefore showed that there is common stationary process across all firms.

In the same vein, Im, Pesaran and Shin W-stat rejects the null of individual unit root process concluded that the variables report individual stationary at level. It shows that the variables were of the same order of integration. The results of table 3 revealed that the test of null hypothesis for the presence of a unit root was rejected for the variables under consideration which mean that they are stationary at level.

Table 3: Panel Unit Root Test

Variable	Levin, Lin & Chu t*		Im, Pesaran and Shin W-stat		Remark
	Statistics	p-value	Statistics	p-value	
ROA	-12.8743	0.000	-3.9976	0.000	I(0)
LEV	-27.9730	0.000	-2.9055	0.000	I(0)
LIQ	-21.5409	0.000	-7.5411	0.000	I(0)
RISK	-20.8608	0.000	-2.0084	0.000	I(0)
TANG	-6.9821	0.000	-3.9908	0.000	I(0)
GROWTH	-4.9063	0.000	-8.0943	0.000	I(0)
LOGTD	-3.0933	0.000	-4.6541	0.000	I(0)

Source: Author's Compilation, 2022

Analysis of Regression

This study adopted panel regression after considering the fixed and random effects. The Hausman test was conducted to determine the best model between random and fixed effect model. The result of the test indicates that fixed effect model is more appropriate than the random effect. The result obtained from fixed effect at common coefficient estimation, revealed the coefficient of each variable alongside with the intercept term (Heterogeneity effect) corresponding to each cross sectional. Also, the outcome of the regression as capture by the fixed effect model indicates that variables such as LIQ which stood at 2.327154, RISK which stood at 0.1460505 and total debt ratio which stood at 0.085081 have positive relationship with the dependent variable. This implies that the extent of liquidity status of a company due to proper capital structure will have a great impact on its performance. A company that can meet its financial obligations as at when due will enjoy a deal of trust by its stakeholders especially its financiers which will boost the public image of the firm and make the firm an attraction to all and sundry and invariably enhance the performance. Also, a firm that is highly liquid will have the ability to diversify and grab viable investment opportunities thereby increasing the profitability, the value of the company and the wealth of the shareholders. In the same vein, an investment with high risk is expected to yield more returns and moderately improve the performance of the firm. That is, a firm that could manage its capital structure efficiently will have finance at a cheaper rate to finance risky investments which will yield more returns. More so, a firm that could properly manage its total debt ratio will be able to get finance for expansion at a low cost of capital and thereby enhancing its profitability.

On the other hand, TANG and GROWTH have negative but weak relationship with firm performance with ($t = -0.24080$, $p < 0.05$) and ($t = -0.00529$, $p < 0.05$) respectively. This is an indication that inability of a firm to efficiently utilise its tangible assets will lead to low performance. This is will be as a result of tying down capital in tangible assets rather than investing such in viable investments. Similarly, a firm who has been in existence for a very long time without going with the new trends in its line of business with stifled competition may perform poorly. That is, a firm with only age to its credit without proper capital structure

will end in performing below expectation. More so, this negative relationship could be attributed to the economic crisis being experienced in Nigeria as well as low patronage of insurance policies in the country.

Generally, the table reports an adjusted R-Square value of 64%, F-statistics of 19.95185 and probability value of 0.000000. This implies that 64% of systematic variation in performance of insurance companies can be explained by variations in variables such as liquidity, risk, tangibility, growth and size. Therefore, all the explanatory variables are jointly and significantly determined the level of performance and the model is a good fit.

Hence, the implication of this result is that the level of performance of insurance companies in Nigeria is based on their capital structure. The discovery of this positive relationship between capital structure and performance is in agreement with the findings of ³². However, the result is contrary to the findings of ².

Table 4: Summary Result of Regression Analysis

Variable	Fixed effect			Random effect		
	Co-efficient	t- statistics	p-value	Coefficient	t- statistics	p-value
CONSTANT	-552.3834	-1.14521	0.2537	-553.9082	-1.575332	0.0169
LIQ	11.31529	2.327514	0.0211	8.416463	2.354009	0.0196
RISK	0.798392	0.146505	0.0387	4.729285	1.301587	0.1947
TANG	-2.628795	-0.24080	0.8106	-1.129077	-0.183475	0.8546
GROWTH	9.717551	-0.00529	0.0000	0.006085	-0.000529	0.5700
LOGTA	3.03909	0.085081	0.0323	-4.678349	-0.172979	0.8629
R- Squared	0.674,69			0.58246		
Adjusted R-Sq	0.6403380			0.548462		
F-Statistic	19.95185			31.322623		
Prob(F-Stat)	0.000000			0.000000		
Hausman test	2.6439(p=0.6507)					
Panel cross section	34.3765(p=0.2115)					
Serial C/T	-1.3002(p=0.7197)					

Note: significance at 5%

Source: Author’s computation, 2022

Conclusion and Recommendations

Conclusion

This study considered the prevailing issues regarding the influence of capital structure on performance. Numerous works have been done in both developed and developing economies as regards the major determinant factor of financial performance. However, after systematic scrutiny of the extant literatures, it was discovered that there is need for clarification in certain areas. For instance, different related literatures reviewed showed conflicting results and concentrated more on other industries with little emphasis on the insurance industry in Nigeria despite the indispensability of such industry in modern economy. Therefore,

this study was carried out to fill this missing gap. The result of the fixed effects regression made known that liquidity, business risk and total debt ratio have positive effect on the performance of quoted insurance companies in Nigeria. This implies that capital structure has the tendency to boost the financial performance of insurance firms.

Recommendations

The findings and conclusion reached in this study have economic implications on the association between capital structure and performance of quoted insurance companies in Nigeria. Hence, the below recommendations are made:

1. The regulatory authorities should come up with more favourable financial structure to enhance the sustainability of the insurance companies.
2. Insurance companies should be vast in liquidity management so as to be able to meet their financial obligations as at when due to avoid disappointing their clients.
3. More attention should be given to sensitization and awareness of the populace as regards what to be benefited by embarking on different insurance policies.

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