
INTERNATIONAL JOURNAL OF SCIENCE ARTS AND COMMERCE

CAPITAL STRUCTURE AND PERFORMANCE OF NON-BANK FINANCIAL INSTITUTIONS IN NIGERIA

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Abstract

This paper examined the effect of capital structure on performance of Non-Bank Financial Institutions in Nigeria. The study employs annual time series data covering the period 2010-2019 obtained from the financial statements of 10 Insurance companies listed on Nigerian stock exchange which is the proxy for non-bank financial institutions. In carrying out the study, debt to asset ratio, equity to asset ratio, company size and asset quality are the proxies for the independent variable (Capital structure) while Return on Equity (ROE) served as the dependent variable. The data collected were analyzed using Ordinary Least Square (OLS) Technique. Other test conducted was stationarity/unit root test. E-view 9.0 was used to analyze the data, test hypothesis and the results obtain indicated among others that Debt to Asset Ratio has a positive and significant influence on the return on investment of the shareholders of the ten (10) insurance companies. The paper concluded that decisions regarding capital structure are very important because they have consequences on the ability of the company to grow, fund operations and new projects at a lower cost, increase returns for shareholders and stay in business, as wrong capital structures may lead to bankruptcy. The study therefore recommended that Insurance companies should pay special attention to firm's leverages in determining their optimal capital structure. Insurance companies should also take into cognizance the amount of leverage incurred because it is a major determinant of firm's performance.

Key words: Capital structures, Equity, Debt –to-Asset Ratio, Non-Banking financial Institutions, Insurance.

1. Introduction

In many ways, institutions require funds to support their operations and other capital expenditures, take financial decisions to trade-off debt and equity (capital structure). (Mutegi, 2016). The capital structure describes the way the firm raises finances for its operations by use of debt capital or equity capital or an equal blend of both debt and equity capital (Myers, 2001). In one manner or another, business activities must be funded. Without funds to support working capital requirement and fixed assets, business might not exist. Almost in every aspects of fixed asset investment decision, capital structure decision is a very important one because it affects the profitability of the company. Therefore, proper attention and care should be given while making the decision on capital structure in order to enhance firms' performance and maximize shareholders wealth (Nguyen and Nguyen, 2019)

Capital structure theories and their relationship with firms profitability and firms value have been a puzzling issue since the seminar paper of Modigliani and Miller (1958), where he stated that, in absence of corporate taxes, information asymmetry, bankruptcy cost, transaction costs and in an efficient market, the value of the firm will be immaterial to the financing decision adopted (Jermias, 2008). Debt capital can decrease the tax paid, and so the optimal capital structure of company should totally made up of debt capital. Since then, numerous theories have put forward to explain capital of a firm, which includes the Pecking order theory, the Trade-off theory and the theory of agency cost. The decision about where source of capital comes from is vital and affects competitiveness with other peers in the same industry (Abor, 2007)

Combination of this mix of equity and Debt has been a problem in the financial sector since the beginning of the world. Raising fund through these two financial sources by managers of the organizations has been identified as a key factor affecting current and future financial operations of the firm.

Debt, tax deductible expenses, seems cheap when minimal as the after tax cost is lower than equity improving earnings per share and dividend per share (Ekwueme and Atu, 2018). Increasing level of debt in a firms capital structure increases its after tax cost, negatively affecting corporate financial performance. Bank consolidation increased banks equity capital against debt in the long run with increasing level of debt after Central Bank of Nigeria's bailout soon after the consolidated exercise. From this it become clear that, it is therefore important to understand how firm financing choice is affects their performance. It is clear that both internal factors and external factors could be very important in explaining the performance of firms in an economy.

Thus the central point of this research work is to examine the effect of capital structure on the performance of non-Banking financial institutions in Nigeria with emphasis on Insurance Company. Specifically, the study sought to examine the effect of Debt to Assets Ratio on Return

on Equity, ascertain the impact of Equity to Assets Ratio on Return on Equity, determine the influence of Company Size on Return on Equity and investigate the causal relationship between Assets Quality and Return on Equity of quoted insurance companies in Nigeria.

2. Review of Related Literature

Conceptual Review

Capital Structure: Capital structure refers to the amount of debt and /or equity employed by a firm to fund its operations and finance its assets. A firm's capital structure is typically expressed as a debt-to-equity or debt-to-capital ratio. Debt and equity capital are used to fund a business's operations, capital expenditures, acquisitions, and other investments (Carlson, 2020)

There are tradeoffs firms have to make when they decide whether to use debt or equity to finance operations, and managers will balance the two to find the optimal capital structure

Equity: Equity is typically referred to as shareholders' equity (or owners' equity for privately held companies), represents the amount of money that would be returned to a company's shareholders if all of the assets were liquidated and all of the company's debt was paid off in the case of liquidation. In the case of acquisition, it is the value of company sale minus any liabilities owed by the company not transferred with the sale (Khartit, 2021)

In addition, shareholder equity can represent the book value of a company. Equity can sometimes be offered as payment-in-kind. It also represents the pro-rata ownership of a company's shares.

Equity can be found on a company's balance sheet and is one of the most common pieces of data employed by analysts to assess the financial health of a company.

Return on Equity (ROE): This is a measure of financial performance calculated by dividing net income by shareholder's equity. Because shareholder's equity is equal to a company's assets minus its debt, return on equity could be thought of as the return on net assets. Return on equity is considered a measure of how effectively management is using a company's assets to create profits. (Carlson, 2020)

Debt-To-Equity Ratio (D/E)

It is given that the D/E ratio measures a company's debt relative to the value of its net assets, and most often used to gauge the extent to which a company is taking on debt as a means of leveraging its assets. A high D/E ratio is often associated with high risk; it means that a company has been aggressive in financing its growth with debt (Khartit, 2021)

If a lot of debt is used to finance growth, a company could potentially generate more earnings than it would have without that financing. If leverage increases earnings by a greater amount than the debt's cost (interest), then shareholders should expect to benefit. However, if the cost of debt financing outweighs the increased income generated, share values may decline. The cost of debt can vary with market conditions. Thus, unprofitable borrowing may not be apparent at first.

Changes in long-term debt and assets tend to have the greatest impact on the D/E ratio because they tend to be larger accounts compared to short-term debt and short-term assets. If an investor

wants to evaluate a company's short-term leverage and its ability to meet debt obligations, other ratios will be applied (Mathewos, 2016)

Debt -to -Assets Ratio

The debt-to-asset ratio shows the percentage of total assets that were paid for with borrowed money, represented by debt on the business firm's balance sheet. It is an indicator of financial leverage or a measure of solvency.

It also gives financial managers critical insight into a firm's financial health or distress.

If, for instance, your company has a debt-to-asset ratio of 0.55, it means some form of debt has supplied 55% of every Naira of your company's assets. If the debt has financed 55% of your firm's operations, then equity has financed the remaining 45% (Niway,2016)

A high debt-to-assets ratio could mean that your company will have trouble borrowing more money, or that it may borrow money only at a higher interest rate than if the ratio were lower. Highly leveraged companies may be putting themselves at risk of insolvency or bankruptcy depending upon the type of company and industry. Some industries can use more debt financing than others.

The debt-to-asset ratio represents the percentage of total debt financing the firm uses as compared to the percentage of the firm's total assets. It helps you to see how much of your company assets were financed using debt financing

<https://www.thebalancesmb.com/debt-to-asset-ratio-393193>, 2021

Equity -to -Assets Ratio:

Therein lies the key to the equity-to-asset ratio, which is to determine what percentage of a company's assets are owned by investors and not leveraged and therefore could come under the control of debt holders (such as banks) in the event of bankruptcy. The higher the equity-to-asset ratio, the less leveraged the company is, meaning that a larger percentage of its assets are owned by the company and its investors (Niway, 2016)

Asset Quality

Asset Quality is an evaluation of a particular asset and stating the amount of credit risk associated with it. Assets of a company/individual determine their condition and ability to repay their loans in future and conduct smooth functioning of their operations (Nguyen and Nguyen, 2019)

One's investments are the most fluctuating and vulnerable asset class which determines one's creditworthiness in the long term. Also once lent, loans become assets as the interest is expected to flow to the firm. The creation of loan assets exposes organizations to a risk of default of their investment. Asset quality refers to the manner in which the borrower meets his/her contractual obligations in the given time. Asset quality rating is critical in bringing a high credit rating to an organization, as it shows the management's capability to control and monitor credit risks associated with these assets (<https://www.kotak.com/en/stories-in-focus/decoding-asset-quality-or-credit-ratio>, 2021)

Low asset quality rating means that the investments have a low rate of return and higher chances of default as compared to the high rating assets. Similarly, high asset quality boasts of high return as well as low chance of default. Rating of one (1) means that the asset is of low risk asset, meaning good in quality. As you go towards 5, the risk associated with the asset increases thus depicting increasing asset quality problems.

Company Size:

The size of the company is one of the decisive factors in the achievement of efficiency in its operations. In these days, large-scale production is considered to bring most economic results by the way of lower costs and higher returns. Therefore, there has been a tendency towards increase in the size of the industrial units in order to organize mass production and bulk sales in diversified markets (Lucy, Muathe and Gregory, 2014)

We see, therefore, firms of different sizes, each attempting to expand depending on its resources and business potential. All the firms, however, may not be able to operate with equal efficiency. Economists view the problem of size from the point of costs in relation with the expected returns from a given unit of investment.

The generally accepted norm in modern economic analysis is that as the firm's business goes on expanding, the cost per unit would be declining. Therefore, all firms tend to expand their scale of operations in order to spread over their costs over larger output.

But there is a limit up to which they can grow without adverse effect on its profitability. Growth beyond that limit may give decreasing return per unit of investment due to managerial and financial strains. Economists call that limit the model limit.

Thus, the problem of size is intimately connected with the laws of increasing and decreasing returns and the principles of division of labour. Naturally, therefore, economists have been concerned with this problem and they have developed various concepts of the size of business unit (<https://www.businessmanagementideas.com/enterprises/the-size-of-a-firm-d>, 2021)

Nonbank Financial Institutions

James (2020) describes nonbank financial companies (NBFCs), also known as nonbank financial institutions (NBFIs) are financial institutions that offer various banking services but do not have a banking license. Generally, these institutions are not allowed to take traditional demand deposits—readily available funds, such as those in checking or savings accounts—from the public. This limitation keeps them outside the scope of conventional oversight from federal and state financial regulators (Mathewos, 2016)

Theoretical Framework:

The theory adopted in this study is the static trade off theory based on the work of economists Modigliani and Miller (1954) which is a financial theory that identifies a mix of debt and equity where the decreasing nature offsets the increasing financial risk to a company. It also shares the opinion about the existence of optimal capital structure and its relationship with the value of a firm. Static trade-off theory argues that for each company there is an optimal capital structure,

with an optimal level of gearing. There is a trade-off between the benefits of taking on more debt and the costs of higher indebtedness. The benefits of taking on debt (rather than equity) are mainly in the tax relief that is obtained on debt interest. Modigliani and Miller have argued that although the cost of equity rises as gearing increases, the tax relief on debt means that the company's weighted average cost of capital falls as gearing rises (Myers, 2001) It is therefore beneficial to take in more debt and increase gearing up to the point where the marginal costs of extra debt start to exceed the marginal benefits of extra debt. The optimal gearing level for a company is reached at a point where: the marginal benefits of taking on additional debt capital equals the marginal costs of taking on the extra debt. The optimal gearing level varies between companies, depending on their profitability. A very profitable company can take on higher gearing because the marginal costs of financial distress will not become significant until the gearing level is very high (Mutegi, 2016)

Empirical Review

Lucy, Muathe & George (2014), in their study on the Relationship between Capital Structure and Performance of Non-Financial Companies in Kenya using a sample of 42 non-financial companies for the period of 2006-2012 using Feasible Generalized Least Square (FGLS) regression revealed that financial leverage had a significant negative association with performance as measured by return on assets (ROA) and return on equity (ROE).

Niway (2016), in his study Investigated the impact of capital structure choice on Firm's Financial Performance in Ethiopia using seven (7) years data from year 2006-20012 for a sample of 15 Manufacturing firms. Panel data has been selected based on result of model specification tests. The result revealed a significantly negative relationship between capital structure ratios (short term debt, long term debt, and total debt ratios) and financial performance by (ROA) and (ROE).

Varien (2015) in their study of the relationship between capital structure and corporate performance of public listed oil and gas companies in Malaysia for a period of 2003-2013 revealed that capital structure (as proxy by short-term to total debt (STD/TA), long-term to total debt (LTD/TA) and total debt to total asset (TTD/TA)) is negatively related to firm's return on equity, but has no effect on ROA (return on asset) and GM (Gross profit Margin)

Mathewos (2016) in its investigation on the impact of capital structure on financial performance of selected commercial banks in Ethiopia for a period of five (5) year ranging from 2011 to 2015 indicated that financial performance, which is measured by both ROA and ROE, is significantly and negatively associated with capital structure proxies such as debt to equity ratio (DER), bank's size (SIZE) and asset tangibility (TANG) whereas debt ratio (DR) have a positive and significant relationship on firm performance

Ekwueme, and Atu (2018) examined the capital structure and firms performance in Nigeria Quoted Insurance companies using a sample of (22) insurance firms Quoted in the insurance sub sector of the financial sector of the economy during (14) years period (2002-2016) are used as observation in this study. From the analysis it was discovered that ;there is a weak relationship between return on equity and the insurance firms capital structure whether in relation to assets or

in relation to equity, also the firm's capital structure components are significant in determining variation are significant in the firms variation in the firms return on equity value. It is recommended that Quoted insurance companies should try to improve their return on equity, because any change in their gearing ratio may cause change in their return on equity either positively or negatively.

Bala and Abatcha (2020) investigated the determinants of capital structure in listed insurance companies in Nigeria for the period of thirteen years, from 2006-2018. Ex-post facto research design was adopted for this study. The population of the study is made up of the 28 insurance companies listed on the floor of the Nigerian Stock Exchange (NSE) as at 2018. The study used panel regression with respect to the use of Hausman specification test to determine the use of fixed or random effect model. The random effect regression result revealed that that firm size has insignificant positive effect on capital structure (CST) of listed insurance companies in Nigeria.

Nguyen and Nguyen (2019) examined the relationship between capital structure and profitability of non-financial companies listed on Vietnam's stock market. The panel data is extracted from financial statements of 488 listed companies between 2013 and 2018. Capital structure discussed is represented by the ratios of short-term liabilities, long-term liabilities and total liabilities to total assets, and profitability is measured by Return on Equity (ROE), Return on Assets (ROA) and Earnings per share (EPS). Firm size, growth rate, liquidity, ratio of fixed assets to total assets are control variables in the study. The Generalized Least Square (GLS) is applied to different models, including ROE, ROA and EPS Model, and tests of autocorrelation, multicollinearity and heteroskedasticity are run to confirm the relationship between capital structure and business performance. The results show that the capital structure of Vietnamese listed non-financial companies is negatively related to their performance

Musah and Gakpetor (2017) examined the relationship between capital structure and profitability of NBFIs in Ghana. A total of 42 NBFIs were sampled and data extracted from the financial reports from 2006 to 2015. Return on assets (ROA) and return on equity (ROE) were used as the dependents variables whiles capital structure measured as total debt to capital ratio (DR) is the main independent variable with firm size (SIZE), assets composition (ACOMP), credit risk (CRISK) and age of the firm as control variables. The descriptive analysis revealed that NBFIs are highly leveraged with 70% of their capital being liabilities and customers deposit the main source of finance. The Pearson correlation as well as the regression results revealed that capital structure (DR) is positively associated with profitability of NBFIs in Ghana but statistically significant with only return on assets.

3. METHODOLOGY

3.1 Research Design

This study adopted the *ex-post facto* research design. The choice of the *ex-post facto* design is because the research relied on already recorded events, and researchers do not have control over the relevant dependent and independent variables they are studying with a view to manipulating them (Onwumere, 2009). The secondary data employed was sourced from the financial

statements of 10 Insurance companies listed on Nigerian stock exchange market which is the proxy for non-bank financial institutions. They are Unity Kapital Assurance plc, Cornerstone Insurance plc, Equity Assurance plc, AIICO Insurance plc, Prestige Assurance plc, Sovereign Trust Insurance plc, Standard Alliance Insurance plc, African Alliance Insurance plc, and Consolidated Hallmark Insurance plc, Mutual Benefit Assurance plc

3.2 Model Specification

This study adopted the work of Eze and Okoye (2013), which was modified to suit this study. To examine the effects of Capital Structure on performance of non-bank financial institutions in Nigeria, we proxies Capital Structure, Debt to Asset Ratio, Equity to Asset Ratio, Company Size the Return on Equity proxies and Asset Quality as the independent variables. The proxy for Performance of Non- Bank Financial Institution is Return on Equity ROE and serves as dependent variable. Given the above considerations, we specify a four predictor model as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_n X_n + U_t \quad \text{-----} \quad 3.1$$

Where;

Y = Dependent variable

X₁, X₂, X₃, X₄, ----- X_n = the explanatory or independent variables

B₁, β₂, β₃, β₄ ----- β_n = the coefficient of the parameter estimate or the slope

U = Error or disturbance term

t = Time

In relating this to the study;

$$ROE = f(DAR, EQA, COSIZE, ASQ) \quad \text{-----} \quad U_t \quad \text{-----} \quad 3.2$$

Relating to econometric form and the variables log linearised, it will appear thus;

$$\ln ROE = \beta_0 + \beta_1 \ln DAR + \beta_2 \ln EQA + \beta_3 \ln COSIZE + \beta_4 \ln ASQ \quad \text{-----} \quad U_t \quad \text{-----} \quad 3.3$$

Where;

LnROE = Return on Equity

LnDAR = Dept to Assets Ratio

LnEQA = Equity Over Assets

LnCOSIZE = Company Size

LnASQ = Asset Quality

B₀ = intercept (Constant term)

U_t = Error term

A priori expectation: It is expected that β₁ – β₃ > 0

Description of Model Variables

Return on Equity (ROE):

This is a measure of financial performance calculated by dividing net income by shareholder’s equity

Asset Quality

Asset Quality is an evaluation of a particular asset, stating the amount of credit risk associated with it. Assets of a company/individual determine their condition and ability to repay their loans in future and conduct smooth functioning of their operations.

Company Size:

The size of the company is one of the decisive factors in the achievement of efficiency in its operations. In these days, large-scale production is considered to bring most economic results by the way of lower costs and higher returns

Debt to Assets Ratio

The debt-to-asset ratio shows the percentage of total assets that were paid for with borrowed money, represented by debt on the business firm's balance sheet. It is an indicator of financial leverage or a measure of solvency. It also gives financial managers critical insight into a firm's financial health or distress.

Equity –to Asset Ration

Therein lies the key to the equity-to-asset ratio, which is to determine what percentage of a company's assets are owned by investors and not leveraged and therefore could come under the control of debt holders (such as banks) in the event of bankruptcy. The higher the equity-to-asset ratio, the less leveraged the company is, meaning that a larger percentage of its assets are owned by the company and its investors

4. Analyses of Results

4.1 Unit Root Test

Table 4.1 ADF Unit Root Test for the Series in Differences

Variable	ADF-stat.	5% critical Value	Order of integr.
LnROE	-4.1128	-2.9571	Stationary at I(1)
Ln DAR	-8.9709	-2.9571	Stationary at I(1)
LnEAR	-5.3326	-2.9571	Stationary at I(1)
LnCOSIZE	-4.8605	-2.9571	Stationary at I(1)
Ln ASQ	-5.5161	-2.9571	Stationary at I(1)

Source: Author's computation aided by E 9 views, 2021

Results of the stationarity test in Table 4.1 reveals that our variables are stationary at same orders of integration. Each of the variables has no unit root and attained stationarity after first differencing 1(1). It is evident that the calculated values (ADF Statistic) are more negative than the critical values for each of the variables tested, which is a proof of their stationarity.

4.1.1 Descriptive Statistics

Table 4.2

Ln ROE LnDAR LnEAR LnCOSIZE LnASQ

Mean	24542.24	14.52210	2288.846	112.2221	18.46112
Median	11332.28	16.84222	1166.000	118.5700	17.95000
Maximum	122432.42	23.82441	11058.20	306.0800	31.65000
Minimum	2024344	12.63246	28.44000	2.020000	9.960000
Std. Dev.	34842.99	11.65442	3180.436	89.33120	3.894925
Observations	33	33	33	33	33

Source: Author's computation aided by E-views, 9 2021

Table 4.2 describes individual characteristics of the proxied variables. Return on Equity (ROE) averaged 24, 542.24 between 2010 and 2019. The highest return on Equity was in 2017 at 122, 432.42, while it recorded lowest in 2013 at 2, 024.21. Debt to Assets Ratio (DAR) averaged 16.8422, Equity to Assets Ratio, (EAR) averaged, 2288.846, Company size (COSIZE) averaged 112.22, while Assest Quality (ASQ) averaged 18.46112 percent respectively over the 9 years study period.

4.2 Test of Hypotheses

This section tested the hypotheses stated in chapter one and modeled in chapter three. Three steps were utilized in interpreting the Ordinary Least Square (OLS) regression results. The steps involved are:

1. Restating the hypotheses in null and alternate forms
2. Interpreting the regression results
3. Using the decision criteria to accept or reject the null/ alternate hypotheses.

4.2.1 Test of Hypothesis One

Restating Hypothesis One in Null and Alternate Forms

Ho₁: Debt to Assets Ratio (DAR) did not have a positive and significant effect on return on Equity in Nigeria for the period between 2010 and 2019.

Ha₁: Debt to Asset Ratio (DAR) has a positive and significant effect on Return on Equity (ROE) in Nigeria for the period between 2010 and 2019.

Table 4.3 Ordinary Least Square Regression Results

Dependent Variable: LnROE

Method: Least Squares

Date: 11/5/21 Time: 12:52

Sample: 2010 2019

Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG DAR	0.022020	0.085819	1.203120	0.0252

	LOGEAR	0.033456	0.081234	0.302100	0.0123
C		0.107821	0.116951	0.921937	0.0374
R-squared		0.056202	Mean dependent var		0.211071
Adjusted R-squared		0.064364	S.D. dependent var		0.302358
S.E. of regression		0.297284	Akaike info criterion		0.543307
Sum squared resid		1.060534	Schwarz criterion		0.634601
Log likelihood		-1.803147	Hannan-Quinn criter.		0.534856
F-statistic		1.043625	Durbin-Watson stat		1.542622
Prob(F-statistic)		0.025213			

Source: Author's computation aided by E- views, 9 2021

Results

Table 4.3 was used to test hypothesis one and evaluate the effect of Debt to Asset Ratio (DAR) on Return on Asset of Insurance companies in Nigeria. The result of the OLS coefficient for Debt to Asset Ratio (DAR) on Return on Equity is positive and significant with (coeff.= .022020, $p > 0.05$). At prob (F-statistics) of 0.025213 is less than 5 percent as shown in table 4.3, the OLS model is very significant and fitted the data reasonably well.

4.2.2 Test of Hypothesis Two

Restating Hypothesis two in Null and Alternate Forms

H₀₃: Equity to Asset Ratio (EAR) did not have a positive and significant effect on Return on Equity (ROE) of Insurance companies Nigeria over the period 2010 – 2019.

H_{a3}: Equity to Asset Ratio (EAR) did have a positive and significant effect on Return on Equity (ROE) of Insurance companies Nigeria over the period 2010 – 2019.

Table 4.4: Regression Results of Hypothesis Two

Dependent Variable: LOG(ROE)

Method: Least Squares

Date: 11/5/21 Time: 15:34

Sample: 2010 2019

Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGEAR	0.032024	0.079584	3.897743	0.0002
LOG ASQ	0.032225	0.056789	3.991238	0.00001
C	-3.425424	0.615211	-5.234322	0.0000
R-squared	0.082221	Mean dependent var		3.023552

Adjusted R-squared	0.075124	S.D. dependent var	1.314466
S.E. of regression	0.286452	Akaike info criterion	0.561142
Sum squared resid	2.644612	Schwarz criterion	0.723154
Log likelihood	-5.542116	Hannan-Quinn criter.	0.631674
F-statistic	0.063542	Durbin-Watson stat	1.486464
Prob(F-statistic)	0.036220		

Source: Author's computation aided by E-views ,9 2021

At prob<F value of 0.036220 less than 0.05 percent as shown in Table 4.4, hence, the OLS model is very significant and fitted the data reasonably well.

Results

The hypothesis two was used to test the effect of Equity to Assets Ratio of the Insurance Companies in Nigeria for the period between 2010 and 2019. The coefficient of exchange rate as shown in table 4.4 was positive and significant (coeff.= 0.032024, $p < 0.05$).

4.2.3 Hypothesis Three

Restating Hypothesis three in Null and Alternate Forms

H₀₂: Company Size (COSIZE) did not have a positive and significant influence on Return on Equity (ROE) of Insurance companies Nigeria over the period 2010 – 2019.

H_{a2}: Company Size (COSIZE) have a positive and significant influence on Return on Equity (ROE) of Insurance companies Nigeria over the period 2010 – 2019.

Table 4.4: Regression Results of

Dependent Variable: LOG(ROE)				
Method: Least Squares				
Date: 11/5/21 Time: 17:32				
Sample: 2010 2019				
Included observations: 32				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGCOSIZE	0.210244	0.079584	3.897743	0.0006
LOGDAR	0.331211	0.084569	3.994562	0.00345
C	-4.636829	0.728300	-6.366651	0.0000
R-squared	0.923233	Mean dependent var	4.022774	
Adjusted R-squared	0.950352	S.D. dependent var	1.426683	
S.E. of regression	0.314891	Akaike info criterion	0.662250	
Sum squared resid	2.829526	Schwarz criterion	0.845467	
Log likelihood	-6.596007	Hannan-Quinn criter.	0.722982	
F-statistic	188.4452	Durbin-Watson stat	2.014253	
Prob(F-statistic)	0.000002			

Source: Author's computation aided by E -views, 9 outputs, 2021

Table 4.5 revealed that COSIZE has a positive and significant influence on Return on Equity of Insurance companies in Nigeria over the period 2010-2019. This is explained by the positive coefficient value (0.210244) of our explanatory variable COSIZE and the corresponding probability value $0.0006 < 0.05$. The coefficient of the independent variable is 0.31, which means that when COSIZE increased by 1 percent, ROE increased by 31 units during the sample period, 2010-2019.

4.2.4 Test of Hypothesis four

Restating Hypothesis One in Null and Alternate Forms

H₀₁: There is no causal relationship between Asset Quality (ASQ) and Return on Equity (ROE) of Insurance companies in Nigeria over the period 2010-2019.

H_{a1} : There is a causal relationship between Asset Quality (ASQ) and Return on Equity (ROE) of Insurance companies in Nigeria over the period 2010-2019.

4.5 Causality Tests

Table 4.6

Pairwise Granger Causality Tests

Date: 11/5/21 Time: 22:06

Sample: 2010 2019

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LNDAR does not Granger Cause LNROE	25	14.3902	0.0001
LNROE does not Granger Cause LNEAR		0.61969	0.5481
LNEAR does not Granger Cause LNROE	24	14.7773	0.0001
LNROE does not Granger Cause LNEAR		1.80857	0.1910
LNTCOSIZE does not Granger Cause LNROE	25	15.4775	9.E-05
LNROE does not Granger Cause LNCOSIZE		1.73067	0.2027
LNASQ does not Granger Cause LNROE	24	2.68843	0.0937
LNROE does not Granger Cause LNASQ		6.57564	0.0068*
LNEAR does not Granger Cause LNCOSIZE	25	1.25967	0.3053
LNCOSIZE does not Granger Cause LNEAR		1.93885	0.1700
LNASQ does not Granger Cause LNEAR	24	8.62373	0.0022
LNEAR does not Granger Cause LNASQ		1.28311	0.3001

Source: E-view 9 output, 2021

From the Granger Causality test result in 4.5 done with a lag of 2, LNROE is tested against all the explanatory variables. The choice of lag of 2 is aimed at not sacrificing greater degree of freedom which may affect the outcome of the test. In determining the existence and direction of causality, the p-value of the F-statistics is used with 5% level of significance to either accept or reject the null hypotheses as stated. Therefore, the findings indicate a unidirectional causality running from LNASQ to LNROE of insurance companies in Nigeria.

5.0 SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Findings

The following are the findings from the specific objectives of the study:

1. Debt to Asset Ratio (DAR) has a positive and significant effect on Return on Equity of Insurance Companies in Nigeria over the period 2010-2019.
2. Equity to Assets Ratio (EAR) has a positive and significant impact on Return on Equity of Insurance Companies in Nigeria over the study period.
3. Company Size (COSIZE) has positive and significant influence on the Return on Equity of Insurance Companies in Nigeria over the period 2010-2019.
4. There is a unidirectional causality running from LNASQ to Return on Equity (LNROE) of Insurance Companies in Nigeria within the year under review.

Conclusion

Capital structure choice is influenced by many external and internal factors that affect the cost of financing of firms. Decisions regarding capital structure are very important because they have consequences on the ability of the company to grow, fund operations and new projects at a lower cost, increase returns for shareholders and stay in business, as wrong capital structures may lead to bankruptcy.

Recommendations

- Insurance companies should pay special attention to firm's debts in determining their optimal capital structure.
- Firms should also take into cognizance the amount of leverage incurred because it is a major determinant of firm's performance.
- The tendency towards increase in the size of the industrial units in order to organize mass production and bulk sales in diversified markets should be sustained
- Asset quality rating is critical in bringing a high credit rating to an organization, as it shows the management's capability to control and monitor credit risks associated with these assets.

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