

Capital Structure and Financial Performance of Nigerian Listed Companies: An Empirical Review of Impact

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ABSTRACT

This paper examines the impact of capital structure on financial performance of firms quoted on the Nigerian Stock Exchange. The study covered a period of five (5) years between 2011 to 2015. The variables required to test the hypotheses are Return on Asset (ROA) and Return on Equity (ROE) as dependent variables and Financial Performance (FP) and Debt-Equity Ratio (DER) as independent variables. The data used for the purpose of the study were secondary data, which were collected majorly from Nigerian Stock Exchange Facts Book and Annual reports of the selected companies. Regression and Descriptive statistics were used to analyze the data. In the study, it was found that the debt-equity ratio was negatively correlated with both ROA and ROE. There was no significant relationship between debt-equity ratio and ROA. On the other side, there was a weak positive relationship between debt-equity ratio and ROE. On the basis of the findings, the mean value of debt-equity ratio is 14.9%. It obviously means the average of debt capital kept by the companies in five (5) years period. This is an indication that approximately 15% of total capital of the selected companies is represented by debt while 85% was fulfilled by other sources. Most of the companies considered depended on equity more than debt.

Keywords: Capital structure, Financial performance, Equity, Firm's size and Return on Asset.

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1. INTRODUCTION

For any business to survive and grow, capital (fund) and other resources are required in adequate quantity. It is presumed that an organization with a strong capital base may have better returns and added value. Some commonly believe that a better mixture of an organization's capital is the oil that lubricates its performance and growth. An appropriate capital structure is important not only because of the need for survival and growth or maximizing returns of business organizations, but also because of the impact of such decision on firm's ability to deal with its competitive environment. Over the years, most business activities in Nigeria have suffered setback as a result of inadequate capital, unplanned capital structure and illicit decisions taken by the business owners etc. Some of them, including banks that cannot meet up the capital base requirement from the regulatory bodies like Central Bank of Nigeria, have been compelled to close down. Managers of these organizations are facing an uphill task in choosing the best capital structure that will improve the overall performance of the firm (Nwachukwu & Akpeghughu, 2016).

Whether a business is new or existing, it requires fund to carry out its activities as no success is achievable in the absence of fund, which is widely regarded as the blood of the business. The needed fund may be for daily running or business expansions. This tells how important and essential fund is in the life of a business. This fund in reference here is capital. Capital therefore refers to the means of funding a business. Capital of firms when sourced, becomes a burden on enterprises simply because it is other persons' resources which they are to compensate as they derive maximum benefits from it. It is therefore a symbol of a company's financial liabilities.

It can also indicate the whole long-term capital requirement in a firm's business operations. The entire fund raised, including bonds, loans from financial institutions, preference share capital, debenture and ordinary share capital can be regarded as capital structure. Capital structure could also include capital surplus and earned revenue (Nwachukwu & Akpeghughu, 2016).

1.1 Aim and Objectives

The general objective of this study is to investigate the impact of capital structure on financial performance of business organizations with respect to listed firms on the Nigerian Stock Exchange.

The specific objectives include:

- a) To determine the nature of capital structure of Nigerian listed firms.
- b) To identify the possible determinants of capital structure in Nigerian listed firms.
- c) To assess the relationship between capital structure and financial performance of Nigerian Listed firms.

1.2 Research Questions

The study seeks to provide solutions to the following research questions.

- a) What is the nature of capital structure of Nigerian listed firms?
- b) What factors determine the nature of capital structure in Nigerian listed firms?
- c) What relationship exists between capital structure and financial performance of Nigerian Listed firms?
- d) What is the impact of capital structure on financial performance of Nigerian listed firms?

1.3 Research Hypotheses

The researchers seek test the validity of the following statements in relation to the topic of study.

- a) There is no nature of the capital structure of Nigerian listed companies.
- b) No factors determine the nature of capital structure in Nigerian listed companies.
- c) There is no relationship between capital structure and financial performance of Nigerian listed firms.
- d) Capital structure does not impact on the financial performance of Nigerian Listed companies.

1.4 Justification of the Study

The result of this study will provide financial guidance to managers, business consultants and investors with the necessary techniques of combining debt and equity and being able to maximize company performance. The study will assist decision makers especially finance managers and policy planners of both public and private companies to formulate better policy decisions in respect of the mix of debt and equity capital and therefore increase shareholders value and reduce bankruptcy costs.

2. LITERATURE REVIEW

Capital structure is one of the important decisions by finance managers because of their effect on the performance of firms. The capital structure plays a most important role in a firm's financial decision making process along with other resources. The term capital structure is used to represent the proportionate relationship between debt and equity. Equity includes paid-up share capital, share premium and reserve and surplus (retained earnings). Company financing decisions involve a wide range of policy issues. Such decisions affect capital structure, corporate governance and company development. Knowledge about capital structures has mostly been derived from data from developed economies that have many institutional similarities (Jude-Leon, 2013). It is a framework which depicts how equity and debt are employed for financing the firm operations. However, it could be argued to find the optimum capital structure of debt and equity; which maximizes firm values when targeted capital structures between the risk and returns of the firm.

Therefore, striking a balance between the risks and returns in firm's operation is the purpose of capital structure. Though, the firm raises equity by ways of issuing common and preferred stocks and debt in form loans, bonds, debentures, note payable, among others. The owners of the firm are the equity holders who have a long term commitment to the firm in consideration that it will grow in future: while the debt holder is the creditor of the firm with long term commitment to the firm in consideration with interest and principal amounts repayment at regular intervals. Capital structure is the most significant discipline of company's operations. Capital structure decision is a vital decision with great implication for the firm's sustainability. The ability of the organization to carry out its stakeholders need is closely related to the capital structure of such firm. The determination of a company's appropriate capital structure is a difficult task to achieve.

Under favorable economic conditions, the financial performance of a company increases with financial leverage. But leverage also increases the financial risk of shareholders. As a result, it cannot be stated definitely whether or not the firm's value will increase with leverage. The objective of a firm should be directed towards the maximization of the firm's value. The capital structure or financial leverage decision should be examined from the point of its impact on the value of the firm. If capital structure decision can affect a firm's value, then it would like to have a capital structure, which maximizes its market value. However, there exist conflicting theories on the relationship between capital structure and the value of a firm. The traditionalists believe that capital structure affects the firm's value while Modigliani and Miller (MM), under the assumptions of perfect capital markets and no taxes, argue that capital structure decision is irrelevant. MM reverses their position when they consider corporate taxes (Birru, 2016).

2.1 Conceptual framework

Capital structure is one of the important decisions by finance managers. Capital structure is defined as the means by which an organization is financed. It is also a company's proportion of short and long term debt. It is the mix of debt and equity maintained by a firm. Adesina, Nwidobie & Adesina (2015) defined capital structure as the various means of financing a firm that is, the proportionate relationship between debt and equity. Adesina, Nwidobie & Adesina (2015) further stated that capital structure is a significant managerial decision because it influences the shareholder's return and risk as the market value of the share may be affected by the capital structure decisions. In making capital structure decisions, corporate managers are expected to seek answers to the following questions: how should the investment project be financed; does the way in which the investment projects are financed matter; how does financing affect the shareholders' risk, return and value; does there exist an optimum financing mix in terms of the maximum value to the firm's shareholders; can the optimum financing mix be determined in practice for a company; and what factors in practice should a company consider in designing its financing policy?

Capital structure is the combination or mixture of company's equity and debt, which ensures financial stability, profit generation, growth, and expansion. Kakanda, Bello & Abba (2016) viewed the capital structure of a company as the precise mixture of debt and equity used in financing the firm's operations. Capital structure means the approach a firm use in financing its assets through the mixture of debt, equity or hybrid securities. Hybrid securities in this context mean a group of securities that combine the elements of both debt and equity, which have fixed or floating rate of return, and the holder has the option of converting it into the underlying company's share. Capital structure is a mixture of a company's debts (long-term and short-term), common equity and preferred equity (Kakanda, Bello & Abba, 2016). However, apart from investment decision, capital structure decision has become one of the important financial decisions of business organizations. This is because it has a long-term financial impact on its operations specifically on return maximization and value of the firm. A firm can issue a large amount of debt or a large amount of equity; hence, it is important for a firm to deploy the appropriate mix of debt and equity that can maximize its overall market value. One of the strategies used by corporate managers to improve their financial performance is through utilization of debt and equity levels (Kakanda, Bello & Abba, 2016). This, therefore, requires much attention by corporate entities on their capital structure contents to achieve a reasonable financial performance and firm's value.

In finance, capital structure refers to the way in which an organization is financed: a combination of long term capital (ordinary shares and reserves, preference shares, debentures, bank loans, convertible loan stock and so on) and short term liabilities such as a bank overdraft and trade creditors. A firm's capital structure is then the composition or structure of its liabilities. The financing or capital structure decision is significant managerial decision, as it influences the shareholders return and risk. The market of the share also is affected by the capital structure decision (Birru, 2016). The company has to plan its capital structure initially at the time of its promotion. Subsequently, whether the funds have to be raised, a capital structure decision is involved. A demand for raising funds generates a new capital structure which needs a critical analysis.

2.2 Possible Determinants of Capital Structure

Several empirical studies have been conducted on the determinants of capital structure on firms. Many of these studies have identified some specific firm level characteristics that affect the capital structure of firms. Of these characteristics are age of the firm, size of the firm, asset structure, profitability, growth, firm risk, tax and ownership structure (Ishaya & Abduljeleel, 2014).

2.3 Components of Capital Structure

i. Equity Financing

Equity is ordinary share capital or shareholders' fund that is regard as capital (ordinary) plus other reserves. Equity instrument as defined by International Accounting Standard (IAS) 32 is "a contract that evidences a residual interest in the assets of an entity that remains after deducting its liabilities" (Kakanda, Bello & Abba, 2016). Equity financing is "selling stock to raise capital: it is the sales of share capital of a company in order to raise money for use in the business" (Oghenekohwo, Eze & Unah, 2015). Another definition of Equity financing by Oghenekohwo, Eze & Unah (2015) is that, it is "the process of raising capital through the sale of shares in an enterprise". This definition also emphasized that equity financing essentially refers to the sale of ownership interest to raise funds for business purpose.

ii. Debt financing

Debt is the capital that a firm raises through taking a loan that paid at a future period. Debt holders are not owners of the business, rather creditors that receive a fixed percentage as return on their loan to the company. Interest on debt capital is paid in full before payment of any dividend to equity holders because the cost of debt (Interest) forms part of the operational cost of a business. Debt financing means borrowing money from third parties and not giving up

ownership. That is the financing of business operations through external sources which attracts additional cost known as 'coupon rate' (cost of borrowing). Default to meet this coupon rate may lead to negative consequences to the borrowing firm. The holders of debt capital have an initial claim on firm's assets who bear less risk than shareholders (Kakanda, Bello & Abba, 2016).

2.4 Measures of Financial Performance

Return on Equity and Return on Asset

Return on Equity (ROE) shows the extent to which companies effectively manage their own capital (net worth), measure the profitability of the investment that has been made owners of their own capital or shareholders of the company (Heikal, Khaddafi & Ummah, 2014). They further stated that the higher the ROE ratio, the higher the profit growth.

ROE measures a company's profitability which reveals how much profit a company generates with the money shareholders have invested. It measures how much a shareholder earns from his investment. Ratio indicates how profitable a company is by comparing its net income to average shareholders' equity. The higher the percentage, the more efficient equity holders fund is being utilized.

Return on Assets (ROA) on the other hand, is used to measure the effectiveness of the company in generating profits by exploiting its assets. This ratio may give an indication of good or bad labour management in implementing cost control or management of his property.

The conceptual model formulated by the researcher showing the relationship between the dependent and independent variables of the study.

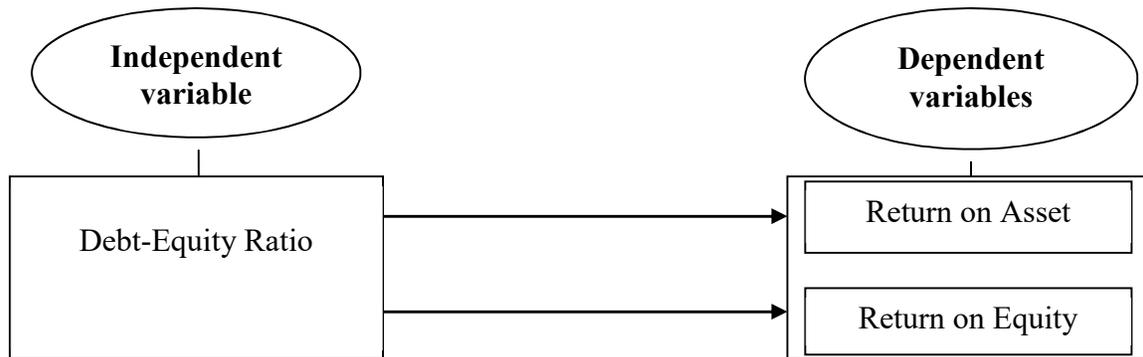


Figure 2.1: Conceptual Model of the Relationship between Capital Structure and Financial Performance

Source: Researcher, 2019

3. METHODOLOGY

The researchers make use of secondary data. The procedure or mechanism used for data collection was majorly from Nigerian Stock Exchange Fact Book and Annual reports of company. For the purpose of the study, correlation research design was adopted to determine whether the two variables examined are related. The design is adopted because it can describe the statistical relationship between independent variable of the study (Debt-Equity Ratio) and the dependent variables (Return on Equity and Return on Asset) respectively.

3.1 Research Model and Specification

This study attempts to investigate the impact of capital structure on financial performance of quoted firms on Nigerian Stock Exchange, covering a period of five (5) years, that is, 2011 to 2015.

The variables required to test the hypothesis are; Return on Asset (ROA) and Return on Equity (ROE) as dependent variables, and proxies for Financial Performance (FP); and Debt-Equity Ratio (DER) as independent variable as proxy for Capital Structure (CS).

The general model for this study as mostly found in the literature is represented by,

$$y_{i,t} = \alpha + \beta x_{i,t} + \mu_{i,t} \quad (1)$$

With subscript i denoting the cross-section and t representing the time-series dimension. The left-hand variable $y_{i,t}$ is the dependent variable, α is the intercept term, β is a $k \times 1$ vector of parameters to be estimated on the explanatory variables, and $x_{i,t}$ is a $1 \times k$ vector of observations on the explanatory variables, $t = 1, \dots, T$; $i = 1, \dots, N$, and μ_{it} represents the error vector.

Financial performance of Nigerian listed firms is dependent upon the capital structure. It is represented as follows:

$$FP = f(CS) \quad (2)$$

Here, financial performance is measured with the help of two variables (ROE and ROA). Capital structure is measured through Debt-Equity Ratio (DER). Therefore, the regression models used in testing the hypotheses of this study are presented below:

$$y_1 = \alpha + \beta_1 DER$$
$$y_2 = \alpha + \beta_2 DER$$

In these models:

- y_1 – Return on Assets (ROA)
- y_2 – Return on Equity (ROE)
- α – Constant
- β_1 & β_2 – Coefficient of the independent variable
- DER – Debt-Equity Ratio as an independent variable

3.2 Panel Data Analysis

This approach involves the estimation of a static Panel Least Square regression which captures any long-run relationship between DER, ROA and ROE. The Panel Least Square regression model is specified as follows:

Model:

$$ROA = \alpha + \beta_1 DER$$

$$ROE = \alpha + \beta_2 DER$$

Table 1: Panel Data Analysis Result (ROA)

Independent variable	Coefficient	Std. Error	t-statistic	Prob.
Constant	0.126578	0.038219	3.3119031	0.0030
DER	-0.000119	0.024173	-0.004941	0.9961

$$R^2 = 0.000001$$

$$\text{Adjusted } R^2 = -0.043477$$

$$F\text{-statistic} = 2.44E-05$$

$$\text{Durbin Watson} = 0.222078$$

Table 2: Panel Data Analysis Result (ROE)

Independent variable	Coefficient	Std. Error	t-statistic	Prob.
Constant	0.300362	0.212825	1.411308	0.1715
DER	0.217627	0.134608	1.616750	0.1196

$$R^2 = 0.102049$$

$$\text{Adjusted } R^2 = 0.063008$$

$$F\text{-statistic} = 2.613879$$

$$\text{Durbin Watson} = 0.164616$$

MODEL ESTIMATION

Model 1: $ROA = \alpha + \beta_1 DER$

$$ROA = 0.126578 - 0.000119$$

$$S.D. = (3.311903) (-0.004941)$$

Model 2: $ROE = \alpha + \beta_2 DER$

$$ROE = 0.300362 + 0.217627$$

$$S.D. = (1.411308) (1.616750)$$

4. INTERPRETATION OF RESULTS

Regression Coefficient

The results of the regression of the two measures of financial performance are presented in Table 3 and 4. The result of the analysis showed in Table 3 that, Debt-Equity ratio maintains a negative relationship with Return on Assets. In Table 4, the result of the analysis showed that Debt-Equity ratio maintains a positive relationship with Return on Equity.

Coefficient of Multiple Determination (R^2)

From Table 3, the R^2 value is computed to identify the impact of debt-equity ratio on return on assets. The R^2 value is 0.000001. This means debt-equity ratio is contributed to determine Return on Assets by 0.0001%. The remaining 99.999% is influenced by other factors which are not considered in this study. Debt-Equity ratio has no significant impact on Return on Assets. From Table 4, the R^2 value is computed to identify the impact of debt-equity ratio on return on equity. The R^2 value is 0.102049. This means debt-equity ratio is contributed to determine Return on Equity by 10.2%. The remaining 89.8% is influenced by other factors which are not considered in this study. Debt-Equity ratio has significance impact on Return on Equity. This agrees with the finding made by El-Maude, Abdul & Ahmad (2016) that, there is statistically significant impact between debt-equity ratio and Return on Equity (ROE).

Durbin Watson Statistics

The Durbin Watson statistics of 0.22 and 0.16 for both ROA and ROE respectively; as it is significantly within the benchmark, we can conclude that there is a positive autocorrelation or serial correlation in the model specification.

F-Statistics (F-ratio)

The f-ratio calculated for ROA and ROE in Tables 3 and 4 are 2.44E-05 and 2.613879 respectively, which is greater than the p-value and this suggests that the model is fit. It implies that the model has goodness of fit at the level of significance, that is, capital structure has a significant impact on financial performance.

5. FINDINGS AND CONCLUSION

The study revealed the following findings:

There is no significant relationship between Debt-Equity ratio and Return on Assets while there is a weak positive relationship between Debt-Equity ratio and Return on Equity because Debt-Equity ratio maintained a negative relationship with Return on Assets while Debt-Equity ratio maintained a positive relationship with Return on Equity. Return on Assets and Return on Equity have a positive autocorrelation or serial autocorrelation.

Debt-Equity ratio has no significant impact on ROA but has a significant impact on ROE.

On the basis of findings, the mean value of debt-equity ratio is 14.9%, indicating the average of debt capital kept by these companies in five (5) years period. This is an indication that approximately 15% of total capital of the selected companies is represented by debt, while the remaining 85% is fulfilled by other sources. Most of the companies considered depended on equity more than debt.

In the study, the correlation analysis revealed that the debt-equity ratio is negatively correlated with both ROA and ROE. There is no significant relationship between debt-equity ratio and ROA. On the other side, there is a weak positive relationship between debt-equity ratio and ROE.

The R^2 value between debt-equity ratio and ROE is 0.102049. This means debt-equity ratio is contributed to determine return on equity by 10.2%. The remaining 89.8% is influenced by other factors. Regression analysis is carried out to identify the impact of independent variable on dependent variable. In this study, debt-equity ratio has no significant impact on ROA and there is significant impact on ROE.

It can therefore be concluded that over the period of this study (2011 – 2015), the most profitable companies were those maintaining a high proportion of equity in their capital mix, and thereby avoiding borrowed funds.

6. RECOMMENDATIONS

The following recommendations are being made to increase the firm's financial performance based on capital structure. Performance standards should be established and communicated to the investors. This will help investors to take better investment decisions. Identifying weaknesses in investment may be an appropriate factor to improve the firm's financial performance, because it indicates the area, in which problems may have occurred.

Firms should motivate investors through various specific programs (conferences) to help to achieve the high level of firm's financial performance.

Equity capital should be increased, because it has been concluded that it exerts a positive relationship with the financial performance of Nigerian listed companies.

Firms should keep control over their debt capital, because huge level of debt capital leads to the poor performance. By controlling the debt capital, firms can achieve the desired level of financial performance. Capital structure should be optimized in order to increase the returns on assets and equity.

7. SUGGESTION FOR FURTHER RESEARCH

Researchers in the area of accounting and finance can carry out further studies on "Impact of Capital structure on financial performance of firms" using other financial performance measures aside ROA and ROE as their dependent variables to assist in providing a clear guidance to finance managers in Nigeria on the appropriate financing mix to be adopted that could optimize the value of a firm.

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