

# Effects of Capital Structure on Corporate Performance of Healthcare Sector in Nigeria

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**Abstract:** - This paper examined the effects of capital structure on performance of quoted firms in the Nigerian healthcare sector. The objective of the study is to establish the empirically effects of level of leverage in the capital structure of firms in Nigerian healthcare sector using return on assets and tobin's Q as proxies for performance. The study employed panel data, collected from the audited annual accounts of selected firms in the Healthcare sector for the period 2007-2016. Data collected was analyzed using the random effects model. Findings showed that leverage indicators has significant positive effect on ROA and Tobin's Q. This may not be farfetched from the imperfections in the nation's financial market. The study recommended that firms in Nigerian healthcare sector should be meticulous in the debt equity composition of their operation to enhance performance optimally.

**Key words:** - Capital Structure, Corporate performance, Leverage.

## I. INTRODUCTION

Capital structure represents the major claims to a corporation's assets. This includes the different types of equities and liabilities (Olokoyo 2013). The debt-equity mix can take any of the following forms: 100% equity: 0% debt, 0% equity: 100% debt and X% equity: Y% debt. From these three alternatives, option one is that of the unlevered firm, that is, the firm shuns the advantage of leverage (if any). Option two is that of a firm that has no equity capital. This option may not actually be realistic in the real life economic situation, because no provider of funds will invest his money in a firm without equity capital. This partially explains the term "trading on equity", that is, it is the equity element that is present in the firm's capital structure that encourages the debt providers to give their scarce resources to the business. Option three is the most realistic one in that, it combines both a certain percentage of debt and equity in the capital structure and thus, the advantages of leverage (if any) is exploited.

Research on the theory of capital structure was pioneered by David Durand in 1957. Significant empirical and theoretical extensions followed and the broad consensus paradigm, at least until recently, is that firms choose an appropriate (optimal) level of debt, based on a tradeoff between benefits and cost of debt (Olokoyo, 2013). It has also been argued that profitable firms are less likely to depend on debt in the capital structure than less profitable ones and those firms with high growth rates have high debt to equity ratio (Akeem et al 2014). There is no doubt that benefits abound in the use of debt in the capital structure of the firms. The main benefit of

debt financing is the tax-deductibility of interest charges, which results in lower cost of capital (Ebenezer & Elijah 2017)

Developing a sound system of financing in Nigerian health care sector is one of the key mechanisms that show the commitments of financial managers and their ability to translate these commitments into results. The desire to develop strong health financing systems is a common objective of most firms in the Nigerian health care sector but the increasing cost of health care accompanied by the poor economic performance of developing countries in African economies and Nigeria in particular makes it difficult to meet this objective. Lack of investment in Nigerian healthcare sector and inability to address the environmental and social determinants of health is a serious constraint to upgrading health outcomes in Nigeria. Constraints of financing health care in Nigeria arise principally from the mechanisms and strategies employed in financing health care. More than 40% of total health expenditure is characterized by household out-of-pocket payments which is a very regressive method of financing health care (The world health report 2013). This is principally because reliance on this form of payment creates financial barriers to access health services and the risk of impoverishment is increased (Seriea steering group for maternal health). These flaws in health care financing accounts for inefficiencies and disparity in the allocation of health care services in Nigeria. In Nigeria, a number of studies have been conducted to examine the determinants of capital structure and profitability. However, none has been specifically directed toward listed health care companies in Nigeria. In lieu of this, the paper seeks to examine the effects of capital structure on corporate performance of firms in the Nigerian health care sector.

### 1.0 Objectives of the Study

The main objective of this study is to determine the effect of capital structure on corporate performance of Nigerian quoted firms in healthcare sector. The specific objectives derived from the major objective are:

1. To ascertain the effects of capital structure of firms in healthcare sector on their accounting performance measured by their return on assets.
2. To ascertain the effect capital structures of firms in Nigerian healthcare sector on their Tobin Q as a market performance measure.

## II. CONCEPTUAL FRAMEWORK, THEORETICAL FRAMEWORK AND EMPIRICAL REVIEW

### CONCEPTUAL REVIEW

#### 2.1 Capital Structure

The capital structure decision is an important managerial decision; it influences the shareholder's return and risk. The firm will have to plan its capital structure initially at the time of its promotion and subsequently, whenever funds have to be raised to finance investments, a capital structure decision is involved. Capital structure is referred to as the way in which a firm finances assets through debts, equity and securities. It is the composition of debt and equity that is required for a firm to finance its assets (Saad, 2010). The capital structure of a firm is very important since it is related to the ability of the firm to meet the needs of its stakeholders.

Mahmoud, (2017) stated that capital structure is all about the mix of debt and equity used by a firm in financing its assets and investments. This decision is one of the most important corporate financial which decisions made by financial management which includes: dividend policy, project financing, issue of long term securities, financing of mergers, buyouts and so on. One of the many objectives of a corporate financial manager is to ensure the lower cost of capital and thus maximize the wealth of shareholders. An optimal capital structure is reached at a point where the cost of the capital is minimal.

Abdul and Badmus (2017) defined capital structure as the ratio at which both equity and debt are combined in financing. Since capital does not belong to the firm, it indicates her mix of financial liabilities as shown on the liability side on the balance sheet. Decisions of structuring finance are very essential to the success of any business organization.

#### 2.2 Corporate Performance

Corporate performance can be explained from two interrelated perceptive: Accounting measures and market measures. Market performance measure is centered on variables that include productivity, returns, growth or even customer satisfaction, while accounting performance is centered on company's efficiency (reflected in profit maximization, maximizing return on assets and maximizing shareholder return) Measurement of performance depends upon the information introduced into the measurement system and the instruments employed. Thus, the choice of ascertaining performance may be influenced by the company's objective. However, Accounting performance measures used widely by most researchers include (return on assets and return on equity)

However, corporate performance can be summarised to mean a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to

compare similar firms across the same industry or to compare industries or sectors in aggregation.

#### 2.3 Theoretical Review

If there has been any area of finance theory that has attracted the greatest attention and caused the highest controversy, it is definitely the theory of capital structure and leverage and how they affect firm's performance. Modigliani and Miller (1958) were the first to raise the question of the relevance of capital structure for a firm. They argue that under certain conditions, the choice between debt and equity does not affect firm value, and, hence the capital structure decision is irrelevant. The conditions under which the irrelevance proposition holds includes, among other assumptions, a situation where there are no taxes, no transaction costs in the capital market, and no information asymmetries among various market players. Financial theorists have however since provided several possible explanations for the financing decisions of firms. The Modigliani and Miller (1958) study lays out the foundation of modern theory of capital structure. Popular models include the tradeoff models, the pecking order models, and the agency models, among others some of which will be reviewed below.

#### 2.4 The Pecking Order Theory (Asymmetric Information Model)

This model considers the possibility of asymmetric information whereby firm managers are assumed to know more about the characteristics of the firm's return stream or investment opportunities (Harris & Raviv, 1991). The choice of capital structure by management therefore signals to outside investors some insider information. This asymmetry of information influences the choice between internal and external financing and between new issues of debt and equity securities. This choice is based on the "pecking order" hypothesis (Baskin, 1989).

The pecking order theory of capital structure was first presented by Myers and Majluf (1984), and relies heavily on information cost to explain corporate behaviour. They show in their pioneering work that, if investors are less well-informed than current firm insiders about the value of the firm's assets, then equity may be mispriced by the market. If firms are required to finance new projects by issuing equity, under pricing may be so severe that new investors capture more than the NPV of the new project, resulting in a net loss to existing shareholders.

According to this theory, internally generated cash is at the top of the order, followed by external debt financing while external equity financing is used only as a last resort.

#### The Static Trade-off Theory

This theory postulates that the tax-deductibility of interest payment induces a company to borrow up to the margin where the present value of interest tax shield is just offset by the value loss due to agency cost from issuing risky debt as well as the cost of possible liquidation or re-organization. This

hypothesis by Miller (1977) is based on the proposition that the optimal leverage ratio of the firm is determined by the tradeoff between current tax shield benefits of debt and higher bankruptcy costs implied by the higher degree of corporate indebtedness. It assumes that firms balance the marginal present values of interest tax shields against the costs of financial distress.

According to the static trade off models, the optimal capital structure does exist. A firm is regarded as setting a target debt level and gradually moving towards it. The firm's optimal capital structure will involve the tradeoff among the effect of corporate and personal taxes, bankruptcy costs and agency costs. Both tax-based and agency-based theories belong to the static tradeoff theory (Jensen & Meckling, 1976; Chang, 1999; Harris & Raviv, 1991).

This study is, however, anchored on the static tradeoff and pecking order framework given the increased support for these theories in literature.

### 2.5 Review of Empirical Studies

This study will not be complete without taking a critical look at some past empirical studies in terms of the purpose of the studies, the methodology that was adopted and the findings of the studies as are related to this current study. This is necessary in order to enable the researcher to see the gaps that might have been left or to get a glimpse of some recommendations for further studies that might have been reported in these previous studies.

Amah and Ken (2016) studied capital structure composition and financial performance of firms in the brewery industry, evidence from Nigeria. The study used four financial performance measures; Retain Earning (RE); Net asset value per Share (NAVPS); Market price per Share (MPS) and Tobin's Q; as dependent variables and Four Capital Composition: Current Liability to Total Asset, Total Liability to Total Assets, Debt to Equity and Debt to Asset as Independent variable. Using regression method the study found out that the Capital Structure Composition is negatively related to Financial Performance

In addition Taiwo (2012) examined the impact of capital structure on firm's financial performance in Nigeria using cross sectional and time series fixed effect model to analyze available data. The results from Panel Least Square (PLS) confirm that asset turnover, size, firm's age and firm's asset tangibility are positively related to firm's performance. Findings provide evidence of a negative and significant relationship between asset tangibility and ROA as a measure of performance in the model.

Also Dare and Sola (2010) empirically analyzed the relationship existing between leverage and corporate performance in Nigerian Petroleum Industry. The study employed panel data analysis by using Fixed-effect estimation, Random-effect estimation and Maximum likelihood estimation. It was found out that there was a

positive relationship between earnings per share (eps) and leverage ratio and a positive relationship between dividend per share (dps) and leverage.

Mahmud and Musa (2016) explored the impact of capital structure on financial performance of listed firms in Nigerian Oil and Gas industry. The study adopted an ex-post facto research design using panel data regression technique to assess the extent of the effect of the independent variables on the dependent variables. It was found that capital structure proxied by STD, LTD and TD has negative and significant relationship with financial performance (ROA and EPS) of listed petroleum marketing companies in Nigeria.

Considering the empirical reviews, it can be seen that no work has been done on the effects of capital structure on corporate performance of firms in Nigerian health care sector. This is the gap that this work sought to fill.

### III. RESEARCH METHODOLOGY

In this section, the methods adopted in analysing the relationship between capital structure of firms in healthcare sector and their performance vis-à-vis the population, sample size and research design is presented. The empirical model for the study is also formulated. This empirically linked the performance of quoted Nigerian firms (both their accounting and market performance) to their capital structure. This section further shows the data description; discusses the techniques of estimation adopted for the model as well as the sources of data.

The population for the study consists of all the quoted Healthcare companies on the Nigeria Stock Exchange (NSE) as at the end of 2016. Therefore, the population for this study is 10 firms.

Specifically, it used all companies operating in healthcare sector of the economy. However, due to none availability of complete data set of some firms as at the period of this study, it was difficult to make use of the entire population in the course of this study. Hence, the study used 8 firms in the Nigerian healthcare sector for a period of 10 years from 2007 - 2016. The study employed secondary data from Nigerian Stock Exchange fact book and annual report of individual quoted firms in the Nigeria healthcare sector. The study employed the Random Effects Model vide the STATA version 14 to estimate its parameters.

#### *Model Specification*

In this study, two measures of corporate performances were used – ROA and Tobin's Q. The researcher used the proxy (ROA) as accounting performance measures and the (Tobin's Q) as a market performance measure.

Where:

ROA = Return on asset and is measured by earnings before interest and tax (EBIT) divided by total assets

Tobin's Q = Market value of equity plus total debt to total asset [(E+TD)/TA]

Lev1 = the ratio of total debt to total asset (TD/TA)

Lev2 = the ratio of long term debt to total asset (LD/TA)

Lev3 = the ratio of short term debt to total asset (STD/TA)

This model is specified in line with the studied hypothesis.

$$ROA_{it} = \beta_1 + \beta_2 TD/TA_{it} + \beta_3 LTD/TA_{it} + \beta_4 STD/TA_{it} + \beta_5 TD/EQ_{it} + \mu_{it} \dots 1$$

$$TOBQ_{it} = \beta_1 + \beta_2 TD/TA_{it} + \beta_3 LTD/TA_{it} + \beta_4 STD/TA_{it} + \beta_5 TD/EQ_{it} + \mu_{it} \dots 1$$

uit = Error terms

*A priori expectation:* Theoretically, there is an expectation of a significant positive relationship between the performance indicators and all measures of leverage that is:  $\beta_1, \beta_2, \beta_3 \geq 0$ .

### 3.1 Population and Sample of Study

The population for the study consists of all the quoted Healthcare companies on the Nigeria Stock Exchange (NSE) as at the end of 2016. Therefore, the population for this study is 10 firms.

- i. Ekocorp Plc.
- ii. Evans Medical Plc.
- iii. Fidson Healthcare Plc.
- iv. GlaxoSmithkline Consumer Nigeria Plc.
- v. May and Baker Nigeria Plc.
- vi. Morison Industries Plc.
- vii. Neimeth International pharmaceutical Plc.
- viii. Nigerian German Chemical Plc.
- ix. PharmaDeko Plc.
- x. Union Diagnostic and chemical service Plc.

However, due to none availability of complete data set of some firms as at the period of this study, it was difficult to make use of the entire population in the course of this study. Hence, the study used 8 firms in the Nigerian healthcare sector for a period of 10 years from 2007 - 2016. which gave a total of 80 observations

### 3.2 Sources of Data Collection ND Estimation Technique

The study employed secondary data collected from Nigerian Stock Exchange fact book and annual report of individual quoted firms in the Nigeria healthcare sector. The data were specifically collected on shareholders fund, total asset earnings before interest and tax, market price per share, long term debt short term debt, total debt and performance indicators of the firms used in the research work. STATA 14 statistical package was used to analyze the data.

The data used in this study was presented in ratios. Descriptive statistics was conducted to show the mean, median, maximum and minimum value, as well as the standard deviation and variance to evaluate the degree of variability of these estimates. The study used the Random Effects Model to estimate the variables; after testing for the most appropriate model between Pooled, Random and Fixed Effects Models.

## IV. DATA ANALYSIS AND RESULTS

This section discusses the method of data analysis; analyzed data collected and interprets the results. The study employed the Random Effects Model vide the STATA version 14 to examine the effects of capital structure on the performance of Healthcare sector in Nigeria.

### Descriptive Statistics

This statistics describe the properties of the data used in the study. The result of the descriptive statistics is shown in *table 4.1*.

Table 4.1: Results of Descriptive Statistics on the Variables Used for the Study: Total Asset, Total Debt, Short term Debt, Long term Debt, Shareholders' Fund, Return on assets, Tobins' Q, Total Debt to Total Assets, Long Term Debt to Total assets, Short Term Debt to Total Assets, Total Debtto Equity for the Period 2007 – 2016

Variables	Mean (Overall)	Std Dev.	Min	Max	Observation
Ta	6940.06	7389.24	21	31129	80
Td	3955.38	4033.89	106	18127	80
Std	2870.94	3331.26	76	16119	80
Ltd	1349.76	2457.22	20	20082	80
Shf	6146.34	18789.69	57	166670	80
Roa	0.2016	0.9096	0.002	8.1905	80
Tq	2.6166	10.1251	0.3787	90.9524	80
Tdta	0.8925	1.7125	0.0275	13.6191	80
Ltdta	0.3059	0.7151	0.001	4.5714	80
Stdta	0.5862	1.0669	0.0195	9.0476	80
Tde	3.5115	11.6413	0.0283	84.2807	80

*Note:* ta = total asset, td = total debt, std = short term debt, ltd = long term debt, shf = shareholders' funds, roa = return on assets, tq = tobins' q, tdta = ratio of total debt to total assets, ltdta = ratio of long term debt to total assets, stdta = ratio of short term debt to total assets, tde = ratio of total debt to equity.

**Source:** Field Study, 2018 using STATA 14.

The results of the descriptive statistics in table 4.1 showed that the mean value of total asset of the 8 healthcare firms for the period under consideration is ₦6,940.06Billion. The minimum total asset was ₦21 Billion was recorded in year 2007; while the maximum value of ₦31,129 Billion was recorded in year 2015. Similarly, the average total debt for the period under review was ₦3,955.38 Billion. The minimum total debt of ₦106 Billion was recorded in year 2007; while the maximum of ₦18,127 Billion was recorded in year 2015.

Results in table 4.1 further shows an average value of short term debt during the period under review was ₦2,870.94 Billion. The minimum value of ₦76 Billion was recorded in year 2007; while the maximum value of ₦16,119 Billion was recorded in year 2015. Similarly, on the average the value of long term debt for the period under review was ₦1,349.76 Billion. The minimum long term debt of ₦20 Billion was recorded in year 2011; while the maximum value of ₦20,082 Billion was recorded in year 2015. Comparatively, on the average firms in this sector are more financed with short term debt than long term debt.

In the same vein, results in table 4.1 showed an average value of shareholders' fund for the period was ₦6,146.34 Billion. The minimum value of ₦57 Billion was recorded in year 2010; while the maximum value of ₦166,670 Billion was recorded in year 2015. Moreover, the average value of return on assets for the period under review was 20.16%. The minimum return on assets for the period under review of 0.16% was recorded in year 2013; while the maximum value of 819.05% was recorded in year 2017. This statistics indicates the profitability of the sector in Nigeria. Similarly, the average value of tobins' q for the period under review was 261.66%. The minimum value of tobin's q for the period under review of 37.87% was recorded in year 2008; while the maximum value of 9095.24% was recorded in year 2007. This statistics also indicates the profitability of the sector in Nigeria.

Furthermore, the average value of tdtta for the period under review was 89.25%. Results showed that for every ₦1 of total assets 89 kobo is finance with debt. The minimum tdtta for the period under review of 2.75% was recorded in year 2010; while the maximum value of 1361.91% was recorded in year 2007. This statistics indicates the degree of leverage of firms in the healthcare sector in Nigeria. The average value of ltdta for the period under review was 30.59%. This indicates that on the average total asset is financed by long term debt to the tune of 30.59%. Results showed that for every ₦1 of total assets 31 kobo is finance with long term debt. The minimum ltdta for the period under review of 0.11% was recorded in year 2016; while the maximum value of 457.14% was recorded in year 2007. This statistics indicates the level of long term debt usage among firms in the healthcare sector in Nigeria.

Similarly, the average value of stdta for the period under review was 58.62%. This indicates that on the average

total asset is financed by short term debt to the tune of 58.62%. Results showed that for every ₦1 of total assets 59 kobo is finance with short term debt. The minimum stdta for the period under review of 1.95% was recorded in year 2010; while the maximum value of 904.76% was recorded in year 2007. This statistics indicates that more of short term debt is used to finance total assets among firms in the healthcare sector in Nigeria. Furthermore, the average value of total debt to equity for the period under review was 351.15%. This indicates that on the average for every ₦1 of equity, the firm owes ₦3.51 as debt. The minimum tde for the period under review of 2.83% was recorded in year 2010; while the maximum value of 8428.07% was recorded in year 2010. This statistics indicates that firms in the healthcare sector in Nigeria are highly leveraged.

The study examined the effects of capital structure on the performance of firms in the Nigerian Healthcare sector. The variables were estimated using the Random Effects Model. This decision was arrived at after testing between the Pooled Regression, Random Effects and Fixed Effects models to arrive at the most adequate among them. This process involved testing the Random Effect model against the Pooled Regression to ascertain the presence of panel effect in the series. The Breusch and Pagan Lagrangian Multiplier test was used to test the Random Effects model against the Pooled Regression. The Random Effects model was selected. The Random Effects model was then tested against the Fixed Effects model to ascertain whether the panel effects in the series was fixed or random using the Hausman's test. The Random Effects model eventually emerged as the most appropriate.

*Test for Unit root*

This test is conducted to ensure that panel data used is stationary. This is because regression results conducted, where the series is not stationary may be spurious because the estimated parameters would be inconsistent. The researcher therefore, conducted the Unit Root test using Levin-Lin-Chu test.

Table 4.2: Results of the Unit Root Test on Return on Asset, Tobins'Q, Total Debt to Total Assets, Long Term Debt to Total Assets, Short Term Debt to Total Asset and Total Debt to Equity

Variable	t –Statistics	P-Value
Roa	-2.6e+02*	0.000
Tq	-49.2376*	0.000
Tdtta	-11.1560*	0.000
Ltdta	-6.2680*	0.000
Stdta	-7.4741*	0.000
Tde	-7.6404*	0.000

Source: Field Study, 2018 using STATA14.

The results of the Unit Root test presented in table 4.2, showed the Levin-Lin & Chu (LLC) statistics with their corresponding P-values. The test was conducted using the

Akaike information criteria at lag 1. Result showed that the probability value in reference to each variable is smaller than the alpha value at 1%. Thus, the null hypothesis that the panel contains a unit root is rejected at 1% level of significance. Thus, all the specified variables (that is, roa, tq, tda, ltda, stda, and tde) are I (1) variables. Based on the Unit Root test, these variables would yield plausible regression output.

*Hypothesis 1*

H0: Capital structure of firms in healthcare sector does not have significant influence on their return on assets.

H1: Capital structure of firms in healthcare sector has significant influence on their return on assets.

$$ROA_{it} = \beta_1 + \beta_2TD/TA_{it} + \beta_3LTD/TA_{it} + \beta_4STD/TA_{it} + \beta_5EQ/TD_{it} + \mu_{it} \dots 1$$

Table 4.3: Results of Random Effects Model on the Relationship between Leverage Indicators and Return on Asset

Variables	Coefficient	Std Error	Z Stat	P-value (z)
Tdta	-0.4378	0.3659	-1.20	0.231
ltdta	0.1087	0.3612	0.30	0.764
stdta	1.4097*	0.3856	3.66	0.000
Tde	-0.0037*	0.0037	-1.01	0.315
Constant	-0.3191*	0.0577	-5.53	0.000
R <sup>2</sup> = 0.8345				
rho = 0.0925				
Wald X <sup>2</sup> (lag 4) =	397.62*			0.000

Note: The dependent variable is roa (return on assets) \* = means significant at 1%, \*\* = means significant at 5%, \*\*\* = means significant at 10%, the independent variables are tda = ratio of total debt to total assets, ltda = ratio of long term debt to total assets, stda = short term debt to total debt, eqtd = ratio of equity to total debt, rho = correlation coefficient between the cross-sectional units, R<sup>2</sup> = Coefficient of determination.

Source: Field Study, 2018 using STATA Window 14.

From the result reported in table 4.3, the coefficient of tda and tde are -0.4378 and -0.0037 with P values of 0.231 and 0.315 respectively. The result indicates insignificant inverse relationship with roa at 5%. The coefficient of ltda and stda are 0.1087 and 1.4097 with P values of 0.764 and 0.000 respectively. Results showed that stda has significant positive effects on roa at 5%. This result showed that a 1% increase in stda will cause an increase in roa to the tune of 140%. However, ltda has insignificant positive effects on roa. Furthermore, rho which measured the correlation across units is positive at 0.095; thus, indicates that all the variables across units are positively correlated. Overall, the leverage indicators jointly contributed 83.45% to the variations in roa; thus, showed a strong relationship.

Decision: The values of Wald X<sup>2</sup>(lag 4) at 397.62 with a corresponding P value of 0.000 indicates the significance of our estimates at 5%. Since the P value (0.000) is less than the critical alpha value at 5%, the null hypothesis is rejected and the alternative which states that capital

structure of firms in healthcare sector have significant influence on their return on assets is accepted.

*Hypothesis 2*

H0: Capital structure of firms in healthcare sector does not have significant influence on their tobins'q.

H1: Capital structure of firms in healthcare sector has significant influence on their tobins'q

$$TQ_{it} = \beta_1 + \beta_2TD/TA_{it} + \beta_3LTD/TA_{it} + \beta_4STD/TA_{it} + \beta_5TD/EQ_{it} + \mu_{it} \dots 2$$

Table 4.4: Results of Random Effects Model on the Relationship between Leverage Indicators and Tobins'q

Variables	Coefficient	Std Error	Z Stat	P-value (z)
Tdta	-2.5221	3.4637	-0.73	0.467
ltdta	0.6319	3.3737	0.19	0.851
stdta	12.7023*	3.6721	3.46	0.001
Tde	-0.0433	0.0348	-1.24	0.214
Constant	-2.6197*	0.6409	-5.15	0.000
R <sup>2</sup> = 0.8745				
rho = 0.2461				
Wald X <sup>2</sup> (lag 4) =	606.74*			0.000

Note: The dependent variable is tq (Tobins'q) \* = means significant at 1%, the independent variables are tda = ratio of total debt to total assets, ltda = ratio of long term debt to total assets, stda = short term debt to total debt, tde = ratio of equity to total debt, rho = correlation coefficient between the cross-sectional units, R<sup>2</sup> = Coefficient of determination.

Source: Field Study, 2018 using STATA Window 14.

From the result reported in table 4.4, the coefficient of tda and tde are -2.5221 and -0.0433 with P values of 0.467 and 0.214 respectively. This indicates that tda and tde have insignificant inverse relationship with tq at 5%. The coefficient of ltda and stda are 0.6319 and 12.7023 with P values of 0.851 and 0.001 respectively. Results showed that stda has significant positive effects on tq at 5%. This result showed that a 1% increase in stda will cause an increase in tq to the tune of 1270.23%. However, ltda has insignificant positive effects on tq. Furthermore, rho which measured the correlation across units is positive at 0.2461; thus, indicates that all the variables across units are positively correlated. Overall, the leverage indicators jointly contributed 87.45% to the variations in tq; thus, showed a strong relationship.

Decision: The values of Wald X<sup>2</sup>(lag 4) at 606.74 with a corresponding P value of 0.000 indicates the significance of our estimates at 5%. Since the P value (0.000) is less than the critical alpha value at 5%, the null hypothesis is rejected and the alternative which states that capital structure of firms in healthcare sector has significant influence on their tobins' q is accepted.

*Discussion of Findings*

*Hypothesis 1*

Findings from model 1 showed that capital structure of firms in healthcare sector have significant influence on their return on assets. The result indicates that leverage increases returns on assets of healthcare firms in Nigeria. This result supports the findings of Ubesie (2016) and Bassey, Ukpe and Solomon (2017) which states that capital structure positively affects returns on assets in Nigeria. The results disagree with findings of Amah and Ken (2016) and Mahmud and Musa (2016). The implication of this finding is that the moderate level of debt in the capital structure of sampled healthcare firms positively influences their returns on assets.

#### Hypothesis 2

Similarly, findings from model 2 showed that capital structure of firms in healthcare sector have significant influence on their tobins' q. The result indicates that leverage increases the market performance of healthcare firms in Nigeria. This result supports the findings of Mahmud (2017) which asserted that capital structure positively affects the market performance of healthcare firms in Nigeria. The results disagree with the findings of Amah and Ken (2016). The implication of this finding is that the moderate level of debt in the capital structure of sampled healthcare firms positively influences their market performance measured by tobins' Q.

#### V. CONCLUSION

The study examines the effects capital structure on the performance of healthcare firms in Nigeria. Eight firms in the healthcare sector were used as sample size. Data on roa, and tobins' q were used as proxy for firm performance and were collected from the financial statement of the sampled firms for the period of 10 years from 2007 - 2016. Panel data collected were analyzed using the Random Effects Model vide STATA window 14.

Specific findings from the study indicate that capital structure of firms in healthcare sector in Nigeria have significant influence on their return on assets. Secondly, finding shows that capital structure of firms in healthcare sector has significant positive influence on their tobins' q. The implication of this finding is that returns on assets (accounting measure of performance) and tobins' q (market measure of performance) of firms in the healthcare sector in Nigeria can be steadily improved if debt is moderate used.

This study examined the effects of capital structure on firms in healthcare sector. The remarkable difference between the capital structure of Nigerian firms and firms in developed economies is that Nigerian firms in healthcare sector depend more on short term finance than long term debt. The reason being that Banks in Nigeria are not willing to grant long term loan to firms because they are interested in quick turnover. Overall, the empirical results from this study offer some support for the Pecking Order Theory and Static Tradeoff Theory of capital structure

#### VI. RECOMMENDATIONS

In line with the findings of this study, the following recommendations are made:

1. Findings from the study showed that the moderate level of debt in the capital structure of sampled healthcare firms positively influences their returns on assets. The study recommends that firms in Nigeria healthcare sector should be meticulous in the debt equity composition of their operation to enhance performance optimally.
2. Finding shows that capital structure of firms in healthcare sector has significant positive influence on their tobins' q. The study therefore recommends that for a continual improvement on their market performance (tobins' q), The firms should use more of equity than debt

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