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Impact of Capital Structure on Financial Performance of Firms in the Nigerian Healthcare Sector

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Abstract: This study aims to explore how the capital structure affects the financial performance of healthcare companies listed on the Nigerian Stock Exchange (NSE) from 2012 to 2021. Capital structure which considers how a company combines its mix of equity and debt in financing its business is important to its overall operations and growth. To conduct this research, eight healthcare firms listed on the NSE were deliberately chosen. The study examined the financial data of various firms, through their annual reports. The data included short-term and long-term debts, equity (the value of a company's shares), return on equity, and size. The study used correlation and regression for its analysis. The results showed that short-term debt, long-term debt, and equity had a negative but significant relationship with return on equity. However, the size of the company had a positive and significant relationship with return on equity. Based on the findings, the study recommends that healthcare firms should consider using long-term debts to increase the time to repay the borrowed capital and generate more profit.

Keywords: capital structure, financial performance, firm, healthcare sector, return on equity

1. Introduction

Equity and debt are a high wellspring of finance engaged in firms in financing their operations. The capital structure and financial mechanism of the healthcare sector should blossom and not experience deficiency as long as funds and tangible assets are required and available for her longevity. Financing firms is being done in different ways; hence, firms in the healthcare sector in Nigeria need to understand the determinants being used in financing and making capital structure decisions.

Corporate finance theory and finance literature have yet to solve the puzzle of determining the best leverage mix for enhancing a firm's performance, as different firms have varying levels of leverage [1]. Choosing the right capital structure is crucial for firms to finance and execute profitable projects. Modigliani and Miller [2] claimed that a firm's value was determined solely by its potential for future earnings.

The capital structure refers to how a corporation finances its operations using equity and debt. But more elaborately, as defined by Mustapha and Agbi [3], is how an industry finances its assets through the mixture of equity, debt, or hybrid securities. It aims to maximize returns for stakeholders while minimizing risks. The challenge is the optimal mix of funding sources that produce the best return with minimal risk. The financing mix determined by the organizations is particularly important for defining the optimal capital structure [4]. Equity investments can be a burden for companies but minimize the risk component for investors. The financial performance measures how well a firm is using its assets to generate revenues. Assessing financial performance enables critical judgment, strategies, and decisions to be made on the firm's activities to achieve its monetary objectives. Financial performance considers profitability and liquidity, among others, providing great worth to investors to assess the previous financial level and extent of profitability as well as the present position of the organization. Productive firms are likely to obtain much more profit generated by capital structure, which now stands as a protection against portfolio risk. This gives the productive firms an advantage to replace equity for debt in their capital structure. A company's capital structure substantially influences its financial risk, capital expenditures, valuation, and overall financial performance. Various elements impact the capital structure, categorized as internal and external determinants. Internal factors encompass profitableness, liquidity, flexibility, business scope and character, regularity of earnings, and the inclination to sustain authority, among other aspects. In contrast, external factors lie beyond the purview of the company's

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management and encompass conditions in the capital market, investor sentiment, legal and tax regulations, funding expenses, and management conduct [5].

One critical challenge faced by managers is the financing decision mix between debt and equity. Financial researchers have looked into the study on capital structure, and from their findings, there have been mixed results. Finance in the health sector is highly required for its sustainability. Capital structure and financial performance relationships have been in other sectors, and only a few focused on the healthcare sector, thus the need for this research study. The difficulty facing the health sector in Nigeria has a lot to do with the funding capacity to raise debt or equity capital. Hence, listed healthcare firms in Nigeria need to build up and possess the capacity to fund their operations and grow over time to a high standard if they must be predominant in creating value-added and generating high financial performance. Numerous Scholars from all over the world are interested in the relationship between capital structure and company performance from the perspective of emerging countries [6].

From the capital market view, investors tend to buy more shares in other sectors than in the healthcare sector, and this is a major setback currently in the nation. Investment and improvement in the healthcare sector would lead to a tremendous change in the economy and the entire nation as a whole. Capital structure, that is, equity and debt, represents a value by which operations within firms are funded. It is quite challenging for healthcare companies to determine the right or exact merging of borrowed capital and owners' equity. A basic matter encountered by financial managers is the decision concerning the mixture between debt and equity. The decision is often based on a cost-benefit assessment to evaluate the return rate of the borrowed capital (leverage) and the price that the firm must pay in interest to secure the loan [7]. The risk level, benefits, and control associated with each investor differ as a result of their interest in company assets belonging to shareholders rather than creditors. Some healthcare systems are not for-profit-oriented in their operations, so how do healthcare firms proceed toward using debt and equity to enhance the worth and performance of the healthcare organization/systems? Some studies have been conducted on the impact of capital structure on healthcare in Nigeria, but conclusive results have yet to be found. This may be a result of investors and venture capitalists focusing more on other sectors. In addition to this, finance is so critical that it has been recognized promptly for failure in businesses. Nigeria has been a huge contributor to medical tourism in other countries, making the healthcare sector lose money on Medicare, patients, etc. Recently, a global pandemic known as COVID-19 spread across the country. The pandemic highlighted the extent of the inadequacy and weak state of the national healthcare systems of Nigeria and signaled the urgent need for reforms and funding. The impact of capital structure on the financial performance of healthcare firms listed on the Nigeria Stock Exchange is examined in this study. Further research studies can look at the impact of equity financing on the performance of healthcare firms listed on the Nigeria Stock Exchange.

2. Literature Review

The assessment and rating of the optimum mix of capital is crucial for the success and growth of non-financial firms. Capital valuation policies and established processes should be used by these firms to determine the best capital financing options. Good capital valuation will address the issue of performance and levels of various capital that should be maintained to maximize shareholders' wealth. Sustainable capital management necessitates that the enterprise's principal aim is to accomplish strategic and operational objectives in an efficient manner, wherein efficiency is understood as the endeavor to attain equilibrium. To put it simply, in the pursuit of their objectives, organizations should strive for maximum efficiency while remaining effective and striking a balance among their diverse capitals (including tangible, structural, financial, human, and market capital). Efficiency (in the balancing of capital) and effectiveness (in the accomplishment of objectives) are the fundamental principles that each manager ought to uphold. When implemented together, these principles lead to success and satisfaction and confirm the enterprise's development [8].

2.1. Capital structure theory (The M&M theorem)

Modigliani and Miller's [2] study in capital structure theory concluded that the value of a firm is not dependent on its capital structure, regardless of how it finances its operations. This was a ground-breaking advancement in capital structure theory, as there was no previous research on how firms decide on their equity/ debt mix. The classic arbitrage-based irrelevance proposition had significant limitations that dispute its application, as it failed to consider taxes, transaction costs, agency conflicts, adverse selection, bankruptcy costs, and the unification between financing and firm operations. The theory presumed balanced details among the different levels of investors in perfect capital markets.

Myers and Majluf [9] introduced the static trade-off theory of capital structure, which states that companies take advantage of the tax benefits of debt by various financing sources, as well as reducing agency costs and bankruptcy. The theory implies that when a firm equates a tax benefit of debt with the cost of leverage, the firm's capital structure is optimized. Therefore, an organization's capital structure affects the level of profit and the worth value of the organization. Myers' [10] investigation of capital structure, the moderation of debt ratios is justified by the trade-off theory. The essence of this theory is to show a plan of action that will fund investments by a firm configuration of equity or debt.

Myers and Mailuf [9] modified the theory of pecking order. They postulated less preference for equity as a means of raising funds. The reason is that managers will issue new equity, and stakeholders believe that managers have the thought of over-valuing firms which they take advantage of. This theory further explains the increases of cost capitalizing with unbalanced information, making firms desire the use of internal sources of capital; it has led to a positive effect on shareholder wealth. Besides it stipulates that financing could be obtained from three types of funds which are internal funds, issue of new equity, and debt. In terms of funding, firms typically prefer to use internal funds first, followed by borrowing capital (debt), and only as a last resort issuing equity by way of shares. A firm's form of borrowing capital can display its need for external funding. However, constraints of pecking order theory are – first, the failure to consider tax, the agony of finance, the costs of agency, or the way investment(s) opportunities may determine the process of funding. The other point is that the theory itself is a description of the kind of business practice rather than what they are.

2.2. Agency cost theory

Jensen and Meckling [11] developed this, and it postulates that a firm stimulates optimum performance with an optimal capital structure. Optimal capital structure comes from the amount of

debt (agency cost) generated between owners of the firm and managers as a result of conflict between them can be minimized through the presence of debt in the capital structure. This action automatically reduces the agency's costs, improves the financial performance in terms of profit, and lowers any form of conflicts. The use of debt as posited by Jensen and Meckling [11] if deployed can observe and control managers as well as attain the objectives and benefits of the firm.

2.3. Empirical review

In their paper, Abdullah and Tursoy [12] aimed to investigate the connection between a company's performance and capital structure. Their research focused on non-financial firms listed in Germany between 1993 and 2016. They also took into account the shift toward IFRS in 2005, which could have affected the relationship between the two factors.

The authors found that over 60% of German non-financial firms' total assets were financed through debt, making them highly leveraged compared to similar countries. The results of the study confirmed a positive association between capital structure and firm performance.

Olajide and Adewale [13] conducted a study that examined the relationship between capital structure, exchange rate, and the performance of the agricultural and health sectors in Nigeria. Returns on assets (ROA) measured the performance of firms, returns on equity (ROE), and Tobin Q, while other indicators included total debt ratio, size, growth, asset turnover, and exchange rate. The results of their empirical analysis indicated that there is a significant relationship between capital structure and firm performance, and a positive relationship exists between exchange rate and firm performance.

Ahmed and Bhuyan [14] conducted a study that examined the relationship between capital structure and firm performance of the service sector from the Australian stock market. They used cross-sectional panel data over eleven years (2009–2019) or 1001 firm-year observations. In this study, directional causalities of all performance measures were used to identify the cause of firm performance. The study finds that long-term debt (LTD) dominates the debt choices of Australian service sector companies. Although the finding is to some extent similar to trends in debt-financed operations observed in companies in developed and developing countries, the finding is unexpected because the sectoral and institutional borrowing rules and regulations in Australia are different from those in other parts of the world.

Ganiyu et al.'s [15] study was conducted to analyze the impact of capital structure on the performance of 115 listed non-financial firms. The study utilized a dynamic panel model and the generalized method of moments (GMM) estimation method. The variables considered in the study were ROE, long-term leverage ratio, short-term leverage ratio, total leverage ratio, asset tangibility, age, growth opportunities, ownership, and firm size. The study's results indicated that the concept of agency cost is applicable in the Nigerian context. Furthermore, it was found that companies in Nigeria predominantly utilized short-term debt (STD) financing over LTD financing, contrary to theoretical assumptions regarding agency cost.

Oluchi and Nkechi [16] conducted a study to examine the impact of capital structure on the performance of healthcare companies in Nigeria. The research aimed to determine how leverage levels affect the performance of these firms using ROA and Tobin's Q as performance indicators. The study used panel data gathered from audited annual accounts of selected healthcare firms from 2007 to 2016. The findings revealed that leverage indicators have a significant and positive effect on both ROA and Tobin's Q. This could be due to imperfections in Nigeria's financial market. The study recommends that healthcare firms in Nigeria should be careful in selecting their debt-equity ratio to optimize their performance.

Oyedokun et al. [17] studied the effect of capital structure on the financial performance of firms in Nigeria's manufacturing sector. They used a sample of ten listed manufacturing companies for the period ranging from 2007 to 2016. The dependent variables used were ROA, EPS, DPS, and MPS, while the independent variables were the log of equity and the log of total debt (TD). The study found a negative effect of capital structure variables on ROA, with the effect being insignificant for the log of equity and significant for the log of debt.

Ajibola et al. [18] conducted a study on the capital structure of the financial performance of manufacturing firms listed in Nigeria. They considered the years between 2005 and 2014, and the analysis used was panel methodology. They found out that LTD TD and ROE had a positive significant relationship, while STD had a positive insignificant relationship with ROE. Also, all proxies of capital structure were negative and insignificant to ROA. A similar study by Olajide et al. [19] also examined the capital structure-firm performance relationships based on empirical evidence from African countries. They used the GMM to analyze their data. They found out that capital structure relationship with firm's performance beyond Nigeria (African countries) was both positive and negative as well as Agency cost among the firms.

A study on the impact of capital structure on the financial performance of firms in Borsa Istanbul by Nassar [20] measured the effect of the debt ratio on three indicators of financial performance: earnings per share, ROE, and ROA. The listed firms on the Istanbul Stock Exchange between 2005 and 2012 were used for the study. The research concluded that there is a negative and significant association between capital structure and a firm's financial performance. A high level of debt negatively affects a firm's ROE, EPS, and ROA.

From the reviewed research, it is evident that capital structure plays a crucial role in enhancing financial performance. To enable firms to realize good financial performance, their capital structure should be designed in the most efficient way possible.

3. Research Methodology

The data utilized for this work have already been collected and made available (secondary data) for eight healthcare firms, namely Ekocorp PLC, Fidson PLC, Galaxosmith, May & Baker, Morison Ind PLC, Neimeth Int. Pharm PLC, Pharma Deko, Union Diagnostic & Clinical Ser, PLC for ten years from 2012 to 2021.

After reviewing both the conceptual and observed literature, it has been confirmed that there is a relationship between a company's capital structure and its financial performance. To determine the nature of this relationship in healthcare firms in Nigeria, the researcher utilized ROE as a measure of financial performance, which was considered the dependent variable. The independent variables were STD, LTD, and equity, which represents the capital structure. There are various ways to measure a firm's performance, but the researcher chose ROE because it is widely accepted and is an accounting-based measure. It is worth noting that previous researchers have used ROE and ROA as substitutes for performance measures [20, 21].

The Research Hypotheses for this study are as follows:

1) H_0: No significant relationship between debt finance and financial performance in the firms listed in Nigeria's Healthcare Sector.
2) H_0: Equity finance has no significant impact on the financial performance of the firms listed in Nigeria's Healthcare Sector.

The general model for this research work is:

$$T_{it} = \alpha_0 + \alpha_1 K_{1it} + \alpha_2 D_{2it} + E_{it} \quad (1)$$

where T represents performance which is the dependent variable

K_1 represents the independent variable

D_1 represents the control variable

α_1,α_2 are the coefficients of independent and control variables

E_{it} is the error term.

The model below was formulated by Vuong et al. [21] and was adopted with a little modification suitable for the objective and intention of the study. The model's procedure is as follows:

$$ROA_{it} = \alpha_i + \beta_1 STL_{it} + \beta_2 LTL_{it} + \beta_3 SIZE_{it} + \beta_4 Growth_{it} + \in_{it} \quad (2)$$

$$ROE_{it} = \alpha_i + \beta_1 STL_{it} + \beta_2 LTL_{it} + \beta_3 SIZE_{it} + \beta_4 Growth_{it} + \in_{it} \quad (3)$$

$$Tobin'sQ_{it} = \alpha_i + \beta_1 STL_{it} + \beta_2 LTL_{it} + \beta_3 SIZE_{it} + \beta_4 Growth_{it} + \in_{it} \quad (4)$$

$$EPS_{it} = \alpha_i + \beta_1 STL_{it} + \beta_2 LTL_{it} + \beta_3 SIZE_{it} + \beta_4 Growth_{it} + \in_{it} \quad (5)$$

where ROA = Return on assets, ROE = Return on equity and EPS = Earnings per Share

(STL_{it}) = short-term liability to total asset

(LTL_{it}) = the ratio of long-term debt to total asset

$Size_{it}$ = the log transformation of total asset

$Growth_{it}$ = change in total assets for the firm

The model below has been formulated to be able to test the hypotheses and adopted from Vuong et al. [21], with a little moderation suitable for the objective and intension of the study.

Using the multiple regression analysis, the model was modified as follows:

$$ROE_{it} = \alpha_i + \beta_1 STD_{it} + \beta_2 LTD_{it} + \beta_3 Equity_{it} + \beta_4 Size_{it} + u_{it} \quad (6)$$

where

α_i is the unknown intercept for each entity.

ROE_{it} is the dependent variable which measures financial performance

i = entity

t = time.

STD_{it} = Short-term debt to total asset for firm i in year t

LTD_{it} = Long term debt to total asset for firm i in year t

$Equity_{it}$ = Log of shareholders' equity for firm i in year t

$Size_{it}$ = Log of total asset for firm i in year t

β_1, β_2, β_3 and β_4, = The coefficients of independent variables

u_{it} = The error terms

3.1. A priori expectation

From economic theory, the expected signs of parameters in the a priori expectation in the specified model above are such that α_1,β_1, β_2, β_3, and β_4, $\rangle 0$. The suggestion of this is that a positive relationship is expected between the explanatory and dependent variables.

3.2. Measurement of variable

In this segment, the variables that were employed in this study are the response variable (dependent) and the explanatory variable which is called the independent variable as well.

3.3. Dependent variable

In this study, the measure of variable used in financial performance is ROE and is represented by:

$$ROE = \frac{Net\ income}{Shareholders\ Equity}$$

3.4. Independent variable

The measures of variables used for capital structure are also represented by:

The ratio of STD to total assets and the measures of variables used for capital structure are also represented by:

1) The ratio of STD to total assets; $STD = \frac{Short\ term\ debt}{Total\ Assets}$
2) The ratio of LTD to total assets; $LTD = \frac{Long\ term\ debt}{Total\ Assets}$

3.5. Control variable

In this study, the control variable that was used is the firm size (size), which was measured as the logarithm of the total assets.

3.6. Model estimation technique

From our research objectives of this study, panel data analysis model (random and fixed effects) was used to investigate the relationship between capital structure and financial Performance. However, Hausman test was carried out on the model that was utilized in this study to select whether it is fixed effect or random effect estimation options that should be engaged in the panel regression.

4. Result and Discussion

This is a combination of descriptive and inferential analysis.

4.1. Descriptive analysis of data

Table 1 presents descriptive statistics of the data employed for empirical analysis in this study. Crucial information about the distribution of the samples is shown. The value of the estimated results of the mean for ROE is 22%. Averagely, this indicates that 22 was earned on every 100 equity issued.

The mean of STD is 0.33, implying that firms in the healthcare sector are using about 33% of STD. LTD with a mean value of 0.11 implies that firms in the healthcare sector are using about 11% of LTD. For equity with the mean value of 6.33, this implies that firms in the healthcare sector are using about 633% of equity. For size with a mean value of 6.63, this signifies that the firms selected are large based on their total asset.

Table 1
Descriptive statistics of variables

	ROE	STD	LTD	Equity	Size
Mean	0.224938	0.335534	0.119196	6.335467	6.632739
Median	0.102311	0.361521	0.084609	6.432281	6.595843
Maximum	4.805528	0.954348	0.393645	7.234823	7.495956
Minimum	0.003753	0.025383	0.000000	4.576364	5.615841
Std. Dev.	0.555322	0.176211	0.095005	0.504687	0.484764
Skewness	7.452405	0.367226	0.554015	−0.702502	−0.344968
Kurtosis	61.74766	3.702593	2.274179	3.839088	2.679534
Jarque-Bera	11785.62	3.314393	5.629169	8.592247	1.856694
Probability	0.000000	0.190673	0.059930	0.013621	0.395207
Sum	17.32021	25.83608	9.178069	487.8309	510.7209
Sum Sq. Dev.	23.43709	2.359836	0.685976	19.35785	17.85967
Observations	77	77	77	77	77

From Table 1, the variables are almost identical, and one can say from the distribution of the data series, it is near symmetry. Regarding the standard deviation, which measures variation levels of variables from their mean value, the least unstable is LTD with a standard deviation of 0.095005.

The correlation coefficient analysis was carried out to show the degree of relationship that exists between financial performance and capital structure.

Table 2 above simply means that STD is positive and significant at a 5% level of significance to ROE; LTD is insignificant and negative to ROE at a 5% level of significance, while equity is significant to ROE but negative at 5% level of significance. ROE has a positive relationship with STD but negative for LTD, equity, and size.

4.2. Regression analysis

The data analysis was carried out with panel regression involving fixed effect and random effect as shown in Table 3. To ascertain the most suitable result, the Hausman test was carried out. The Hausman tests the null hypothesis that the idiosyncratic error terms are systemic. Hence, the significance of the test suggests the use of fixed effect regression which accounts for the heterogeneous factors among the group of observations. Following the result of the Hausman test from the study found to be statistically significant at 5 percent, the fixed effect result was explained.

From Table 4, STD, LTD, and equity do not conform to the a priori expectation, only size conforms to the a priori expectation. However, STD, LTD, and equity have a negative but significant impact on ROE; a unit change in STD will lead to about a 3.099 decrease in the ROE of the healthcare firms; a unit increase in LTD will lead to about a 4.017 decrease in ROE of the healthcare firms; a unit increase in equity will lead to a decrement of over 6.125in ROE of the healthcare firms.

The result of the estimated coefficient shows STD (−3.099; *P*-value<0.01), LTD (−4.017; *P*-value<0.01), and equity (−6.125; *P*-value<0.01) revealed a negative significant relationship with firms' performance. Particularly, a percentage rise in STD, LTD,

Table 2
Correlation analysis

Covariance analysis: Ordinary Balanced sample (listwise missing value deletion) Correlation t-Statistic Probability	ROE	STD	LTD	Equity	Size
ROE	1.000000				
	———				
	———				
STD	0.519158	1.000000			
	5.260501	———			
	0.0000	———			
LTD	−0.021095	0.028879	1.000000		
	−0.182730	0.250203	———		
	0.8555	0.8031	———		
Equity	−0.452494	−0.190102	−0.010794	1.000000	
	−4.394316	−1.676912	−0.093482	———	
	0.0000	0.0977	0.9258	———	
Size	−0.238954	0.120895	0.130403	0.937244	1.000000
	−2.131136	1.054718	1.139047	23.27896	———
	0.0364	0.2949	0.2583	0.0000	———

Table 3
Hausman test for ROE

Correlated random effects – Hausman test				
Test cross-section random effects				
Test summary		Chi-sq. statistic	Chi-sq. d.f.	Prob.
Cross-section random		20.307003	4	0.0004
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
STD	−3.099251	−3.294667	0.115378	0.5651
LTD	−4.017925	−4.152850	0.170900	0.7441
EQUITY	−6.125525	−5.947509	0.061681	0.4735
SIZE	5.148905	5.738369	0.095361	0.0563
Correlated random effects – Hausman test				
Equation: EQ02				
Test cross-section random effects				
Test summary		Chi-sq. Statistic	Chi-sq. d.f.	Prob.
Cross-section random		20.963683	4	0.0003

and equity of the firms significantly decreases firms' performance, respectively.

Conversely, the estimated coefficient shows that size (5.148; *P*-value<0.01) has a positive effect on the performance of firms in the health sector. A percentage increase in equity revealed a corresponding adverse effect of 6.15 and a percentage increase in size revealed a corresponding increase effect of 5.14 percent on firms' performance.

In addition, the variation of the independent variables (*STD, LTD, equity,* and *size*) explains 80.1% of the variation of the dependent variable *ROE*. These variables show model is significant at 5%.

4.3. Discussion of findings

The discussion of the results of the findings from the study is focused on the impact of capital structure on the performance of healthcare firms listed on the Nigerian Stock Exchange.

Our first hypothesis (null) states "There is no significant relationship between debt financing and financial performance in the firms listed in Nigeria's Healthcare Sector". It is observed from Table 3 that the result of the estimated coefficient for *ROE* shows that *STD*, *LTD*, and equity have a negative slope and are statistically significant at a 5% level of significance. However, size has a positive slope and is statistically significant. Therefore, a unit increment in *STD* results in a 3.099 decrease in the *ROE* of the healthcare firms, and a unit increase in *LTD* will lead to a decrement of 4.017 in the *ROE* of the healthcare firms. A unit increase in equity will result in a 6.125 decrease in *ROE*. Furthermore, a unit increase in size will lead to an increase of 5.148 in the *ROE* of the Healthcare firms.

Moreover, the correlation analysis gave another view of the variables employed in this work-study. It was depicted that *STD* was positive and statistically significant to *ROE*, and *LTD* was negative and statistically insignificant to *ROE*; also, equity was negative and statistically significant to *ROE* while size was negative and significant to *ROE*. This means more of the STD is been used as a source to finance the healthcare firms.

From previous studies, Myers [10] reported that a firm's profitability has a negative relationship with capital structure and evidence of Agency cost theory was consistent in the empirical analysis.

Table 4
Panel least square analysis for fixed effect result

Dependent variable: ROE				
Method: Panel least squares				
Total panel (unbalanced) observations: 77				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
STD	−3.099251	0.670557	−4.621909	0.0000
LTD	−4.017925	0.713783	−5.629054	0.0000
Equity	−6.125525	0.645289	−9.492677	0.0000
Size	5.148905	0.692638	7.433763	0.0000
C	6.400471	1.917002	3.338791	0.0014
Effects specification				
Cross-section fixed (dummy variables)				
R-squared	0.801613			
Adjusted R-squared	0.768040			
F-statistic	23.87664		Durbin-Watson stat	1.707437
Prob(F-statistic)	0.000000			

5. Conclusion and Recommendation

The *ROE* was deployed to capture the financial performance level of the healthcare firms selected for this research. The discoveries from this work revealed the findings on *ROE* that the relationship that exists between *LTD*, *STD* equity, and *ROE* is negative but statistically significant. Interestingly, size was positive and statistically significant as well. All the proxies of the independent variables played a role in determining the *ROE* of the healthcare firms.

The correlation analysis explicitly reveals that *STD* was positive and statistically significant to *ROE*; *LTD* is negative and statistically insignificant to ROE; equity is negative and statistically significant to *ROE*, while size was negative and statistically significant to *ROE*. This means more of the STD has been used to finance the healthcare firms.

5.1. Recommendations

From the discussions that had emerged from this study, it is paramount that the following vital policy implications are factored and driven.

Capital structure variables have both positive and negative impacts on the financial performance of healthcare firms listed in Nigeria over time. Nevertheless, companies should

1) Engage more in LTDs; this will give the firms more time to refund the capital borrowed.
2) Healthcare firms should depend less on STD to improve financial performance.
3) The investors' interest must be protected alongside robust dividends; this will stimulate more investors in the healthcare sector.
4) Sustainable finance must be provided for the healthcare sector to tackle insufficient and inadequate financing within the healthcare firm.

5.2. Policy implication for practice

Therefore, healthcare firms in Nigeria are to be enlightened on the combination of debt and equity that will bring about greater performance by the end of every analysis carried out on the business operations.

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Ethical Statement

This study does not contain any studies with human or animal subjects performed by any of the authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

Data Availability Statement

The data that support this work are available upon reasonable request to the corresponding author.

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