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Debt-Equity Financing and Institutional Quality of Boards of Public Listed Oil and Gas Firms in Nigeria

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ABSTRACT: *The study examined debt-equity financing and institutional quality of boards of public listed oil and gas firms in Nigeria from 2013 to 2022. The dependent variable being institutional quality measured by board institutional quality index and the independent variable is debt-equity financing measured by Short-term debt-to-equity ratio (SDER), Long-term debt-to-equity ratio (LDER) and Total debt-to-equity ratio (TDER). Secondary data were obtained from annual report of selected oil and gas companies from 2012-2023. The result from the random effect regression showed that, TDER has a negative coefficient and is statistically significant. This means that, the more the targeted oil and gas firms seek for debts, the more inefficient they become. Secondly, LDER has a negative coefficient and is statistically significant. This means that, the more the target oil and gas firms seek for more long term debts, the more inefficient they become. However, short term debts seems to be highly beneficial to the board provided that, the size of the firm is controlled for. We recommend that for oil and gas firms to avoid becoming cash-strapped and debt-ridden, managers of oil and gas companies should work toward having an optimal capital structure by raising their equity level and decreasing reliance on debt. Also, management of Nigerian oil and gas companies ought to place more of an emphasis on short-term debt, which accounted for the majority of their leverage, and internal scheme development in order to enhance their board institutional quality.*

Keywords: Debt-equity Financing, Institutional quality, Public Listed Oil and Gas Firms

1.0 INTRODUCTION

Financing mix is a major topic of discourse in finance. It is crucial decision entrusted on the finance manager of an organization. It relates to the ability of the firm to meet the needs of its various stakeholders. Also, financing mix determines the investing decision of a firm. The financing mix available to a firm includes equity and debt (Omaliko & Okpala, 2020). Debt-equity financing is an important financing choice that finance managers must make. According to Orji, Nwadialor and Agubata (2021), this decision has a long term effect on the operations of a business. A firm can issue a large amount of either debt or equity; hence, it is important for a firm to deploy the appropriate mix of debt and equity that can maximize its overall market value. Financial institutions, government agencies, investors and other users of financial information are concerned with the proportion of debt-to-equity financing in an organization to determine the repayment ability of the firm and the viability of the business. A firm is said to be effective and efficient if the shareholders interest can be maximized (Anifowose, Soyebo, & Tanimojo, 2020)

A critical question which finance managers in a business corporation should attend to is what proportion of debt and equity is needed in a business organization to be successful? Omaliko and Okpala (2020) defined debt-equity financing as the mixture of financial liabilities in financing a business operations. Debt-equity financing decision is of great significance to the sustainability of a firm. Finance is needed in an organization for the acquisition of assets, routine daily operations and other contingencies and ultimately ensuring the growth of the business entity. There are other financial options available to a business such as retained earnings.

Despite the various attempts made to have a balance between debt and equity financing, businesses are still being faced with the issue of debt-equity financing mix needed in their business in order to avoid over-reliance on debt or over-reliance on equity. Debt-equity financing has the ability of revitalizing and transforming a business performance. Notably, the oil and gas sector in Nigeria is characterized by intense competition and rivalry. To remain competitive, it is imperative that the finance managers utilize the funds in their care appropriately to avoid going bankrupt. In 2016, the amount of credit (DMBs loan and advances) to the oil and gas sector is reported by the CBN to be the highest credit advanced to any sector. Despite the amount of loan advanced to the oil and gas sector, they remain the highest indebted sector in Nigeria.

Various studies have been conducted regarding the issue of debt-equity financing mix in Nigeria and other emerging economies. The drive to conduct this research work is based on the conflicting results of previous works and also due to the fact that there is no generally agreed method of financing a business operation. The Modigliani and Miller theory opines that the performance of a firm is not dependent on the financing mix of the company, agency cost propose that increase debt reduces the principal-agent problem while pecking order theory states that internal funding is preferred to external funding.

Earlier studies on debt-equity financing also focused on the financial performance of the firms while this study has decided to investigate debt-equity financing on board institutional quality of the oil and gas firms in Nigeria. There is no agreement on the finding of the previous work as some has reported positive result between debt-equity financing and financial performance of firms (Mamaro & Legotlo, 2021; Ahmadu & Abdulkarim, 2019; Tonye, Andabai & Bina, 2018) while some reported a negative result between the dependent and independent variables (Odhiambo, Koske & Limo, 2022; Kenneth & Ibobo, 2022; Aloshaibat, 2021; Adusei & Sarpong-Danquah, 2021).

The inconsistency in previous studies warranted this research work to bridge the gap by examining debt-equity financing mix and board institutional quality of public listed oil and gas companies in Nigeria from 2013 to 2023. Other specific objectives are to:

i. Ascertain the effect of total debt-to-equity financing mix on board institutional quality of public listed Oil and Gas companies in Nigeria.
ii. Determine the effect of long term debt-equity financing mix on board institutional quality of public listed Oil and Gas companies in Nigeria.
iii. Investigate the effect short term debt-to-equity financing mix on board institutional quality of public listed Oil and Gas companies in Nigeria.

2.0 LITERATURE REVIEW

2.1. Conceptual Framework

Debt-equity financing measures long-term solvency of an organization. It shows the percentage of funds that comes from creditors and investors into an organization (Orji, Nwadialor & Agubata, 2021). Debt is a financing options available to an organization that involves taking a loan that is payable at a future date. This involves borrowing of money from external sources to finance business operations of an organization. This form of borrowing attracts payment of interest (cost of borrowing). Specifically, 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 residual interest in the assets of an entity that remains after deducting its liabilities" (Tonye, Andabai & Bina, 2018). Equity is the residual owner's interest (the amount left for the owners of the business after settlement of debt) in a business corporation. In a business corporation, equity holders bears the risk associated with the business.

Overall, debt-equity financing mix is the proportion of debt to the proportion of equity used in financing business operations. It determines the number of times equity of a company was able to cover debt financing in a given period. The proxies for debt-equity financing for this study are:

1. Total debt-equity financing mix: It relates the amount of debt financing to amount of equity financing in a given period. It is a quantitative measure of the total debt to the shareholders interest in the organization (Orlu, Amini & Amadi, 2022). It is used to determine whether a company is over-reliant on debt financing or relies on shareholders' equity in financing its business operations. Total debt-equity financing mix is calculated thus
   Total debt-equity financing mix = $\frac{Total\ debt}{\text{Shareholders equity}}$
2. Long-term debt-equity financing mix: It compares a firm's long-term debt to the shareholders equity. Long-term debt are debt having maturity period of 3 years and above. In calculating long-term debt-to-equity mix, short-term debt are excluded from the total debt of the company. It is computed using the formula below
   Long-term debt-equity financing mix= $\frac{Long\ term\ debt}{\text{Shareholders equity}}$
3. Short-term debt-equity financing mix: short-term debt are debt financing options that have maturity period of one year. They are used to financing working capital need of the business. Short term debt-equity financing is used by finance managers to compare the amount of short term debt acquired by the firm to finance its working capital needs to the shareholders fund in the business. It is calculated thus
   Short term debt-equity financing mix= $\frac{Short\ term\ debt}{\text{Shareholders equity}}$

Furthermore, a better board institutional framework should boost confidence of capital providers and thus provide more capital to business organizations to finance their business projects. According to Awartani, Belkhir, Boubakar and Maghyreh (2016) the environment where a business is situated is a major factor that determines access to funds and the associated cost of such funds. A business sited in an environment where the conditions of borrowing are less stringent will have more access to funds that that which

is sited in an environment with stringent conditions of borrowing. Institutional quality is a contributory factor to the level of credit supplied by financial institutions to the productive economic unit in a country.

Institutional quality measures the quality of governance and institutions in a country. It places a crucial role in determining the amount of external finance a firm could get from financial institutions (Adusei & Sarpong-Danquah, 2021). Institutional board quality concerns itself with level of corruption inherent in an economy, the regulation of the various sector in the economy, political stability and government effectiveness.

2.2. Theoretical Framework

The foundation on which this research work is being laid is the pecking order theory. The pecking order theory was first postulated by Donaldson in 1961 and later modified by Stewart Myers and Nicolas Majluf (1984). The theory argued that firms prefer to finance new projects through internal sources (retained earnings) of finance firsts before embarking on borrowing (debts) and the last options is issue of new shares. This is because of the cost involved in external sources of funding. Such cost includes; cost of flotation of new shares, interest payments and disclosure of firm's information.

The pecking order theory supports using retained earnings and ploughed back profits first as it tends to increase the profit of the organization. In the hierarchy of financing, internal sources of finance comes first then followed by external sources of financing. Mwende, Muturi and Njeru (2019) stated that the internal sources of finance are easier to get and cheaper (cost efficient). The pecking order theory advances for less borrowing by firms that as time goes on the firm will be able to generate sufficient funds it need for its business operations internally (Olufemi, Adebola, Oluyinka & Adeleke, 2021).

2.3. Empirical Review

Araoye and Oyesanmi (2023) in a study examined governance in manufacturing firms and debt financing of twenty-eight (28) listed manufacturing firms in Nigeria. Secondary data were gleaned from the Nigerian exchange group fact books from 2012 to 2021. Using the fixed effect model (FEM), they discovered that corporate governance measures (board composition, board size and CEO duality) were major indicators of debt financing proxy (debt-equity ratio) of manufacturing firms in Nigeria.

In another study, Soesetio, Adiningsih and Rudiningtyas (2022) considered the implementation of corporate governance and debt financing of 190 manufacturing companies performance in Indonesia from 2009 to 2019. Independent commissioner and board size were used as surrogate for corporate governance while long-term debt, short-term debt and total debt were used as measures of debt financing. Return on equity (ROE) and return on asset (ROA) were used as performance measures. Having controlled for firm growth and asset tangibility, they discovered that implementation of corporate governance in the sampled firms has a positive influence on performance of manufacturing firms in Indonesia. On the contrary, debt financing had a negative influence on the performance of manufacturing firms in Indonesia.

Kenneth and Ibobo (2022) examined the factors that determine financial leverage of sampled public companies in Nigeria from 2015 to 2020. Using data derived from the financial reports of the selected firms, the multiple regression result evidenced negative effect between determinants (profitability and size) and financial leverage. In the case of age, growth and asset tangibility, a positive relationship was revealed. The researchers recommended that financial managers of quoted companies in Nigeria should adopt proper financing mix to minimize the cost of servicing.

Odhiambo, Koske and Limo (2022) in a study debt-equity ratio, CEO power and performance of 38 quoted companies at the Nairobi stock exchange, Kenya, discovered from the result obtained from the linear regression model that debt-equity ratio had a negative significant association with financial performance which is line with the dynamic trade-off model and pecking order theory. On the other hand CEO power had a positive significant association with financial performance.

Ali and Shaik (2022) determined debt financing impact on performance of firms in the energy sector of Saudi Arabia from 2012-2019. Secondary data gotten from Saudi Arabian oil company's annual reports were used for the regression analysis. The findings indicated that debt financing had detrimental effect on performance of firms in the energy sector of Saudi Arabia.

Using data derived from 532 microfinance institutions, Adusei and Sarpong-Danquah (2021) studied institutional quality and capital structure of microfinance institutions considering the moderating role of board gender diversity. It was observed that in the six (6) regions considered, institutional quality revealed a negative significant association on capital structure on the long-run and short-run. This implies that MFIs in nations with a friendly business environment and policies use more of equity rather than debt in the

financing mix. Also, the moderating variable showed the tendency of using less debt and more equity is high with more of female in the boardroom of MFIs.

A study by Aloshaibat (2021) demonstrated the effect financial leverage (measured by debt-to-equity ratio) has on financial performance (ROA and ROE) of quoted companies in Jordan from 2015-2019. The simple regression analysis was used to analyse data extracted from the financial statements of selected quoted companies on the Amman stock exchange. The result demonstrated financial leverage (debt-to-equity ratio) negatively influenced performance of the sampled companies in Jordan though the influence was insignificant during the years reviewed.

Duy, Nguyen and Vu (2021) looked at the linkage between capital structure and SMEs performance in Vietnam from 2008-2016 (a period period after crisis). The result from the empirical analysis confirm that the relationship between debt financing and profitability is non-linear (an inverted U-shape relationship) signifying that high debt ratio leads to decrease in profitability of SMEs.

Using annual data gathered from small industries development organization (SIDO) database and business registrations and licensing agency (BRELA) data bank from 2016-2019 of 296 small business firms in 6 regions of East Africa countries (EAC), the impact of equity financing on small businesses were analysed by Chindengwike (2021). The result evidenced equity financing had a high negative influence on performance indicator (ROCE) of small businesses in the 6 regions in EAC. On the other hand, equity financing had positive significance on the ROA (performance indicator) of small business firms.

Orji, Nwadialor and Agubata (2021) studied how debt-equity financing affect firms performance in Nigeria. The researchers used ex-post facto research design and data culled from NSE fact books, annual reports and account of the 26 firms selected in Nigeria from 2013-2020. They discovered that debt-equity financing (DEF) had a positive significant relationship with firms' performance. Debt-equity financing enhances the performance of firms in Nigeria.

Mamaro and Legotlo (2021) investigated the link between financial performance and financial leverage of listed retail firms in South Africa from 2010-2020. Using panel data to analyse the data culled from the financial reports of the retail firms during the period reviewed, the result showed a positive significant relationship between financial performance and leverage.

Abiodun and Usman (2020) examined the impact financial leverage has on performance of 14 DMBs in Nigeria from 2009 to 2018. Using data from the financial statements of the 14 DMBs selected in Nigeria. They discovered that ROA of the selected DMBs had positive significant effect on leverage (short-term debt ratio and long-term debt ratio).

Keinde and Wepukhulu (2020) empirically reviewed the effect of equity financing on financial performance of 13 sampled deposit-taking microfinance institutions-DTMIs in Kenya from 2014 to 2018. The result of inferential statistics indicated that equity finance had a positive significant relation on financial performance of DTMIs in Kenya for the period considered. The researchers encourage more of equity financing (sale of shares to investors and shareholders) by management of DTMIs.

Aniefor and Onatuyeh (2019) using secondary data gleaned from audited financial statement of fifteen (15) consumer goods firms in Nigeria from 2006 to 2017 examined debt financing and performance of firms in Nigeria. Debt financing measures were short-term debt, long-term debt and total debt-to-asset ratio while corporate performance was measured by ROA. Having controlled for firm size, they discovered that debt financing has positive significant effect on consumer goods firms' performance in Nigeria.

Ahmadu and Abdulkarim (2019) examined financial leverage impact on the financial performance of seven (7) services firms quoted on the Nigerian exchange group from 2005-2016. The multiple regression analysis result using the GRETL statistical tool revealed STDR, LTDR and TDER had negative significant effect on ROE (financial performance indicator) while TDR had positive significant effect on ROE. Therefore, the researchers concluded that over-reliance on STD (short-term debt) affects the performance of service companies.

In a paper by Mugun, Odhiambo and Momanyi (2019) the link between debt-to-equity ratio and financial performance of 12 selected microfinance institutions in Kenya from 2009 to 2013 was demonstrated. REM result revealed that debt-to-equity ratio negatively influences ROA (a surrogate for financial performance) though the influence was minimal while portfolio-to-asset ratio had a positive a positive association.

Mutie, Muturi and Njeru (2019) sought to determine the best financing option that enhances the performance of SMEs in six (6) counties in Kenya (Nairobi, Mombasa, Machakos, Makueni, Kajiado and Kitui). Using the 384 responses gotten from the

questionnaire, it was revealed that a significant association between trade credit, loan and informal financing and equity financing and financial performance of SMEs in Kenya.

Tonye, Andabai and Bina (2018) in a study spanning from 1999 to 2016 captured the effect of financial leverage on performance of firms in Nigeria. Using data from annual reports of selected firms the OLS technique was used to analyze data. The result revealed that long-term debt used as an indicator of financial leverage had a positive significant influence on both ROA and ROE used as proxies for performance of firms in Nigeria during the period considered.

Uchehara, Achugbu and Nduka (2016) studied the influence of financing mix on corporate performance in Nigeria using a disaggregated approach. Data were collected from 1996-2013 for a sample of 27 firms listed on the Nigerian exchange group. The findings from the OLS indicated that debt ratio had a negative significant effect on corporate performance.

3. 0 METHODOLOGY

3.1. Research Design, Study Population, Data Source and Analytical Technique

The ex-post facto research design was adopted in this study. Justifiably, ex-post facto was used because the variables considered were sourced from the yearly financial statements of the targeted oil and gas firms. Thus, no alteration can be made by the researcher because an alteration in the data would be easily detected by the public. The population of the study consists of public quoted companies in Nigeria. The nine (9) quoted oil and gas quoted companies in Nigeria was used as sample for the study over 12 years periods, from 2012 to 2023. Random Effect regression was employed since the Hausman test proved in favour of the REM.

3.2. Model Specification and Measurement of Variables

The modified model of Anozie, Muritala, Ininm and Yisau (2023) was adopted to analyse debt-equity financing and board institutional quality of quoted oil and gas firms in Nigeria. The functional form of the Anozie, Muritala, Ininm and Yisau (2023) model is stated below:

ROA = f (SDTA, LDTA, TDTE) ---------- (1)

The econometric model is stated as:

$ROA_{it} = \beta_0 + \beta_1 SDTA_{it} + \beta_2 LDTA_{it} + \beta_3 TDTE_{it} + \mu_0$ ---------- (2)

The functional form of the model used in capturing the role of debt-equity financing on board institutional quality of oil and gas companies in Nigeria is stated as:

BINQ = f (SDE, LDE, TDE, FSZ) ---------- (3)

The econometric form of the model used for the study is stated as:

$BINQ = \beta_0 + \beta_1 SDER + \beta_2 LDER + \beta_3 TDER + \beta_4 FSZ + \mu_0$ ---------- (4)

Where:

$\beta 0$ = intercept

β_1- β_4 = coefficient of parameters

BINQ = Board Institutional quality index

SDER = Short-term debt-to-equity ratio

LDER = Long-term debt-to-equity ratio

TDER = Total debt-to-equity ratio

FSZ = Firm Size

μ = error term

Table 1: Variable Measurements

Variables	Description		Type of variable	Apriori expectation
BINQ	Board Institutional Quality	Board Due Diligence (frequency of board meeting)	Dependent	Nil
SDER	Short-term debt-to-equity ratio	Short-term debt divided by total equity	Independent	Positive
LDER	Long-term debt-to-equity ratio	Long-term debt divided by total equity	Independent	Negative
TDER	Total debt-to-equity ratio		Independent	Positive
FSZ	Natural log of the total assets	Natural log of the total assets	Control	Positive

Source: Researcher's Compilation (2024)

4.0 RESULTS AND SICUSSSION

4.1. Preliminary Analysis

Herein are the preliminary analysis considered prior to presenting the main regression analysis. The essence is to test the basis upon which the regression estimates are made:

Table 2: Descriptive Statistics

Variables	Mean	Maximum	Minimum	Std. Dev.	Observations
BINQ	5.060	12.0000	2.0000	1.9749	108
TDER	1.2478	3.8934	0.0031	1.0284	108
LDER	1.2599	4.5970	0.0015	0.9991	108
SDER	0.9966	3.6821	0.0025	1.0500	108
FSZ	7.0231	9.9850	4.6557	1.4386	108

Source: Authors' Compilation (2024)

BINQ reported average value of 5.060 while the maximum and minimum values were 12.000 and 2.0000 with a standard deviation of 1.9749. By implication, the number of times the board of the targeted oil and gas firms met on the minimum was 2 times while the highest is 12 times. This suggests that, number of times the board of the targeted oil and gas firms met just once on yearly basis. This further revalidate that, the concept of due diligence was applied in the targeted oil and gas companies.

Also, the maximum value of TDER, LDER, and SDER were 3.8934, 4.5970, and 3.6821 respectively while the minimum values were 0.0031, 0.0015 and 0.0025 respectively. This further revalidates that, the target oil and gas companies are highly geared.

Lastly, firm size (natural log of aggregate asset) records the highest (maximum) mean value of 9.9850 and the least (minimum) value of 4.6557. Additionally, average firm size (natural log of aggregate asset) was 7.0231but deviated by 1.4386. This is a clear indication that firm size falls within its mean value. This assertion was further subjected to normality check as presented in table 3.

Table 2: Correlation Analysis

	BINQ	TDER	LDER	SDER	FSZ
BINQ	1.0000				
TDER	-0.7321	1.0000			
LDER	-0.5142	0.0857	1.0000		
SDER	0.3098	0.0277	0.0321	1.0000	
FSZ	0.8669	-0.0388	0.0355	0.0702	1.0000

Source: Authors' Compilation (2024)

The Correlation analysis as presented in table 2 accounts for the relationship between the independent (regressor) and the dependent variables (regressed). Also, it accounts for the degree of linearity among the independent (regressor). First, the correlation analysis clearly evidenced that, FSZ and SDER both are positively related with board institutional quality denoted by BINQ. Similarly, their correlation coefficients estimated at 0.8669 and 0.3098 respectively evidenced that, their relationship with BINQ is strong and moderate respectively. Meanwhile, TDER and LDER are negatively related with BINQ. Similarly, their correlation coefficients estimated at -0.7321 and -0.5142 respectively evidenced that, their relationship with BINQ is strong and moderate respectively. By implication, the lower the total debt-to-equity ratio & the lower long-term debt-to-equity, the higher the board institutional quality.

Secondly, when examined, the correlation among the regressors, the model clearly reported that, none of the regressors reported high correlation coefficient. By implication, the model did not exhibit traces of multicollinearity issues. Should this assertion hold true when tested further using the tolerance value and the Variance Inflation Factors (VIF) would suggests that, the regressors are not highly correlated and that the statistical significance of the independent variables are not undermined. This further reaffirm that, the model is reliable.

4.2. Model Estimation and Regression Estimate

Prior to presenting the main results, the model was subjected to Hausman cross-sectional test and the Breusch-Pagan LM test with a view to determine the most appropriate panel regression variant (Pooled OLS, Random Effect Model, and Fixed Effect Model). This is expressly presented in table 3:

Table 3: Panel Diagnostic Test

S/N	Test Summary	Chi-Sq. Statistic	Prob.	Conclusion
1	Hausman Test	2.0313	0.1541	Random Effect Model (REM)
2	Breusch-Pagan LM Test	9.0641	0.0000	Random Effect Model (REM)
3	Mean VIF	1.4167	0.1569	Free from Multicolinearity Problems
4	Ramsey Reset Test	1.5688	0.1204	Model well-specified

Source: Researchers' Compilation (2024)

The Hausman test reported a prob-value of 0.1541 which suggests that, REM. Also, the Breusch-Pagan LM Test reported a prob-value of 0.0000 which suggests that REM. This confirmed that, the REM is the most appropriate model for the study. Again, the Mean VIF of 0.1569 suggests that, the model is free from Multicolinearity Problems. Meanwhile, the Ramsey Reset Test evidenced that, the model is correctly specified. The further implication of these diagnostic tests is that, the findings are fit for policy formulations.

Consequent upon the above presentation, the main regression estimate is presented in table 4:

Table 4: Random Effect Model (REM)

Dependent Variable: BINQ

Method: Random Effect Model

Included observations: 108 (9 cross sectional Units over 2012 to 2023)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.828695	0.854100	4.482726	0.0000
TDER	-0.141949	0.062487	-2.271648	0.0234
LDER	-0.160725	0.065419	-2.456864	0.0142
SDER	0.330360	0.105764	3.123554	0.0018
FSZ	0.136636	0.048356	2.825594	0.0048

R-squared	0.617833	Mean dependent var	5.06041
Adjusted R-squared	0.607404	Durbin-Watson stat	2.157993
F-statistic	20.88745	Prob(F-statistic)	0.000000

Source: Researchers' Compilation (2024)

The R-squared value of 61.78% suggests that total variation in debt-equity financing caused 61.78% total variations in board institutional quality while the remaining 38.22% could be explained by the error term. More so, when adjusted, the adjusted R-Squared value of 60.74% also evidenced that, the model has a high predictive value. As such, it evidenced that, the model relied upon to make reliable inference. Similarly, the prob. F. statistic of 0.000 connotes that, debt equity financing is highly statistically different from zero. By implication, debt equity financing on the overall has a high significant effect on the institutional quality of boards of public listed oil and gas firms in Nigeria within the reviewed periods. Meanwhile, the estimated Durbin Watson Statistics value of 2.157993 indicates that the model is not serially correlated. Hence, the study make bold to discuss each of the debt-equity proxies.

First, the regression estimate evidenced that, TDER has a negative coefficient and is statistically significant. This means that, the more the target oil and gas firms seek for more debts, the more inefficient they become. Secondly, LDER has a negative coefficient and is statistically significant. This means that, the more the target oil and gas firms seek for more long term debts, the more inefficient they become. However, SDER seems to be highly beneficial to the board provided that, the size of the firm is controlled for.

5.0 CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

The activities of businesses are unquestionably financed by either external or internal capital. The management of the company must always choose the course of action that best serves the company at any given time. A number of considerations need to be made when deciding whether to finance the company's assets through debt, equity, or a prudent combination of the two. Inadequate allocation of a company's capital can lead to issues with liquidity and solvency. Managers must exercise extreme caution when making this crucial policy choice and make sure that the proper debt-to-equity ratio is employed to maximize the advantages that result from it. Using either debt or equity to finance a business might not be the best financial move. This investigation has proven that debt-equity financing have varying effects on the effectiveness of the board of public quoted oil and gas firms in the reviewed periods. Consequently, the paper made the following recommendations:

1. To avoid becoming cash-strapped and debt-ridden, managers of oil and gas companies should work toward having an optimal capital structure by raising their equity level and decreasing reliance on debt.
2. Long-term loans should not be given as much weight by Nigerian oil and gas company management, since this might lead to a high default rate if left unchecked.
3. The management of Nigerian oil and gas companies ought to place more of an emphasis on short-term debt, which accounted for the majority of their leverage, and internal scheme development in order to enhance their board institutional quality.

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