CHAPTER ONE

INTRODUCTION

1.1 Background to the Study:

Finding out how capital structure affects the performance of oil and gas firms quoted on the Nigerian Exchange is the main goal of this study.

Nigeria began producing oil in 1908, when the Nigerian Bitumen Business (NBC), a German company, began oil prospecting in the region along the coast between Lagos and Okitipupa. As a result of the First World War in 1914, NBC folded up activities even after the company had drilled wells, and could not obtain oil from the well. After the world war, an Anglo-Dutch consortium called Shell d' Archy again started oil activities in 1938. As time passed on, the Anglo-Dutch consortium developed and became the company we all know today as Shell Petroleum Development Company of Nigeria (SPDC). It obtained exploration rights under the mineral oil ordinance 17 of 1914 and as a result of the 1925 and 1950 amendments the company was granted the singular right for exploration license over the entire Nigerian soil. Just as NBC's oil exploration was affected and eventually truncated by the first world war in 1914, the Second World War came in 1939 and intercepted the company's exploration adventure and it could not carry out any oil activities up until 1946 when oil exploration activities were restarted. After fifty years of exploration, oil was discovered in Nigeria in 1956, close to Oloibiri in the Niger Delta. Shell-BP, the only concessionaire at the time, made the discovery. Nigeria became an oil exporter when its first oil field began producing 5,100 barrels per day in 1958. National Petroleum Corporation of Nigeria (NNPC, 2021).

"The exact combination of leverage utilized to fund a company's assets and activities is referred to as its capital structure. Equity is a much costlier, long-term form of financing with greater financial flexibility from a company standpoint. Borrowing, on the other hand, is a less costly source of capital with a limited term, which legally obliges the company to commit to fixed, promised outflows of funds with the need for refinancing at a later date at unknown costs. These financial choices, that could be influenced by capital structure policies as well as goals

established by management and the board of directors, determine a company's capital structure. The size and longevity of the firm, which affect a company's financing alternatives, also have an impact on the capital structure. The capital structure can be greatly impacted by merger and acquisition (M&A) operations in addition to the issue of stock and bonds. M&A activities can be financed by cash, borrowing, share and/or debt assumptions, and revenues from sales and asset sales. Its activities, which may produce funds, as well as corporate preferences concerning dividends and share repurchases, all have an impact on the capital structure over time. The selling prices of debt and equity look to be the key concern of this discussion because we are looking at ways an organization might reduce its average capital cost. As a result, changes in the economic worth of a business or entity over time, particularly the stock price, have an impact on the capital structure as well. Chartered Financial Analyst" (CFA, 2021).

The parts, factors, and makeup of capital structure have been defined, described, and highlighted throughout history. These efforts have given rise to many points of view. The first work on the notion of "capital structure" was written and published in 1958 by Modigliani and Miller. Modigliani and Miller (1958) assumed that "capital structure is irrelevant in valuing a firm's performance, while this premise is based on a perfect market scenario which is far from what is obtainable in reality" (as cited in Salim & Yadav, 2012). However, after another research was carried out, Modigliani and Miller (1963), reviewed the aforementioned premise and concluded that "interest rates are tax deductible and therefore a firm with higher debt variable ratios would increase its value" (as cited in Vătavu, 2015). There has also been a contemplation about the perfect and optimal capital mix. According to Akeem et al. (2014), "despite the significant empirical attempts undertaken by many academics to identify what seems to be an optimal capital structure for organizations, there is almost no premise that has been broadly supported in the literature concerning why firms choose to hold debt over equity. But over the past few decades, a number of concepts have surfaced that have attempted to explain how the capital structures of enterprises affect their market prices. Such concepts comprise the agency costs theory, the trade-off theory, the Modigliani & Miller (1963) capital structure relevancy theory, the pecking order theory, and others (Bokpin & Isshaq, 2008)". Modigliani and Miller (1963), also pointed out that "the capital structure will include both debt and equity capital. Investment planning must recognize that over time, all of the firm's assets are financed by a merge of debts & equity financing, even if only one type of capital is raised in any given year."

The rationale of this investigation is to examine how capital structure influences listed gas and oil in Nigerian firms' performance. Investment decision made by the gas and oil sector after gaining license from the NNPC to import refined crude oil (gas, diesel, aviation fuel etc.) to Nigeria is tremendously capital-intensive, and gas and oil firms does not have enough capital. In a bid to finance the investment decision, they have to approach the bank to borrow money which is a form of debt to the company. The financing cost has been on the high side relative to the inflation, exchange rates and other macro-economic variables amidst the current poor economic circumstances of the country which is worsening the situation. Apart from the effect of the macro-economic variables on the cost of capital, other unsystematic risks like financial mismanagement could also attribute to the high cost of capital in Nigeria. A rise in the value of debt at a given level of earnings may increase the capital cost. The financial intermediaries' disposition towards lending to the oil and gas sector is abysmal. The debt was so huge that they were not able to achieve/ determine optimum capital structure because they were over-geared. They could not refund the money borrowed; the sector has been so porous to excessive borrowing from banks breeding many credit defaults that brought about the interference of the Asset Management Company of Nigeria (AMCON). The five phases of this academic project are as follows: The general introduction to the background in section one, a review of some related literature in section two. The third section comprises the research methods that will be used to achieve the aims of this research work. Section four shows the findings of the data analysis for presentation and interpretation. Finally, section five with the conclusions and recommendations.

1.2 Statement of the problem

Companies in all sectors, whose aim is to maximize profit will need to finance the business in whatever ways it can either by using equity alone, or debt alone or both equity and debt which is common for most organizations. They do this in the most optimal way to harness the resources they have at hand or borrow to finance the company by debts. Several pieces of literature emphasized the manufacturing sector dealing with consumer goods. Therefore, by emphasizing on the impact of capital structure on Nigeria's quoted oil and gas firms' performance. This study would close the existing gaps, and find out to what extent the excessive borrowings from banks

have affected the performance of firms and the effect of the equity and the debt acquired on the performance of the companies.

1.3 Objectives of the study:

The general aim of this research is to ascertain how capital structure affects the efficiency of quoted Nigerian oil firms. Nevertheless, the specific goals of this study are to:

i. Determine if STD has a significant impact on listed Nigerian oil and gas firms' ROA (Return on Asset).

ii. Ascertain if the ROA of quoted oil businesses in Nigeria is significantly impacted by the ratio of long-term debt to overall debt LTD.

iii. Examine if the ROA of listed oil and gas businesses in Nigeria is significantly impacted by TDE (Total Debt to Equity).

iv. Establish if the ROA of Nigerian publicly traded oil and gas businesses is significantly impacted by the (Interest Coverage) INC.

1.4 Research Questions:

i. Does the STD significantly affect the ROA of Nigeria's publicly traded oil and gas companies?

ii. Does the LTD significantly affect the ROA of Nigerian quoted oil and gas companies?

iii.   Does the TDE significantly affect the ROA of Nigerian-listed oil and gas companies?

iv.   Does the ROA of listed oil and gas firms in Nigeria significantly depend on the INC?

1.5 Research Hypotheses:

In null, the following hypotheses were developed to oversee the investigation:

H_{01}: The STD does not significantly affect the ROA of Nigerian listed oil and gas businesses.

H_{02}: The LTD has no significant effect on the ROA of Nigerian listed oil and gas businesses.

H_{03}: The ROA of quoted oil and gas firms in Nigeria do not significantly depend on TDE.

H_{04}: ROA of listed oil and gas firms in Nigeria are not significantly impacted by the INC.

1.6 Significance of the Study:

The study will aid in determining how bankruptcy costs affect the capital structure of publicly traded oil businesses. Additionally, it will highlight how important leverage is to the profitability of quoted oil enterprises. Additionally, many people would benefit from this study by learning about and comprehending how Nigerian listed oil and gas firms' performance is impacted by their capital structure. It would help the management of oil and gas businesses plan and forecast how their capital structure choices would affect achieving the firm's goals of maximizing profit and lowering cost of capital.

1.7 Scope of the Study:

This research's major aim is to ascertain how capital structure affects listed Nigerian oil and gas firms' performance. For a period of thirteen years, the research will employ eight listed oil and gas marketing and production businesses in Nigeria (2019 till 2021). The data that will be used for this study will be secondary data (financial statements) which can be gotten from the annual reports of the companies.

1.8 Definition of Relevant Terms

Capital Structure: "A company's capital structure is the specific combination of debt and equity used to fund its overall operations and growth. Equity capital is derived from a company's ownership shares as well as claims on its future cash flows and profits. Debt is represented by bond issues or loans, whereas equity is represented by common stock (ordinary shares), preferred stock (preference shares), or retained earnings. Short-term debt is also included in the capital structure." (Investopedia, 2021)

Return on Asset: "The term ROA alludes to a monetary proportion that demonstrates how productive a company is in connection to its total assets. Corporate administration, examiners, and speculators can utilize ROA to decide how proficiently a company employs its assets to generate profit." (Investopedia, 2022)

Total debt/Debt to equity: "The debt-to-equity (D/E) ratio, which is calculated by dividing a company's total liabilities by its shareholders' equity, is used to assess financial leverage. The D/E ratio is a critical metric in corporate finance. It is a measure of how much of a company's operations are funded by debt as opposed to wholly owned funds (equity). In the case of a

corporate collapse, it reflects the capacity of stockholders' equities to pay off all existing obligations." (Investopedia, 2022)

Interest Coverage: "To determine how efficiently a business can refund the interest on its outstanding debt, the interest coverage ratio, a debt and profitability measure, is used. By dividing a company's earnings before interest and taxes (EBIT) by its interest expenditure for a certain time, the interest coverage ratio is determined." (Investopedia, 2021)

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter aims to review literature of various past scholars and authors in line with the subject matter being studied. It will explain the principles supporting the subject being studied, what past researchers has done, how the findings relate to the subject being studied, and also to fill the knowledge gaps found in previous researches carried out. This chapter will consist of conceptual review, theoretical review and empirical review on capital structure, the components and make up of capital structure, and factors that affects and determines the choice of capital structure.

2.1.1 Concept of Capital Structure

The concept of capital structure was first introduced by Modigliani and Miller in 1958 when they published a paper titled "The cost of capital, corporation finance and the theory of investment". Since then, various other authors and researchers also carried out research on capital structure and published their findings.

"Capital Structure is defined as the blend of different forms or sources of finance either by equity or by borrowing (debts) to keep a company up and running and financially alive. It entails the combination of sources of capital to finance its activities and operations. Capital structure refers to the money that a company uses to run its operations and finance its assets. It usually consists of two components: debt and equity. It's also known as debt equity ratio or debt capital ratio" (Mazeed et al., 2019).

Suardi and Noor (2015) stated that "when a company uses its capital structure to support its operations and achieve its strategic goals, it uses a variety of financial sources." "The capital structure of a company describes the quantity of debt and/or equity used to finance its operations and assets. Corporate Financial Institute" (CFI, 2022).

Myers (2001) defined capital structure as the combination of financial instruments and funding sources utilized by corporates to finance real investment. Furthermore, Pandey's research in

1999 cited in Akeem et al. (2014) argued that a firm's capital structure and its financial structure differs, concluding that the financial structure represents the means in generating funds, whereas the capital structure represents the correlation between long-term debt and equity. Zeitun and Tian (2007) argued that firm whose managers are able to discover the optimal capital structure get their reward by minimizing of firm's cost of finance (capital) thereby maximizing firm's revenue. If a firm's performance is influenced by its capital structure, then it is likely that the firm's financial health would also be affected by its capital structure. Mazeed et al. (2019) also argued that to optimize the capital structure, a company must determine its priorities and determine which expenses are debt-based and which are equity-based, and which one is required. Ahmadimousaabad et al. (2013) stated that the financial decision of capital structure is concerned not only with finding the right kind of finance, but also with selecting the best overall combination of these funding options for business start-up and operations. As a result, financial decisions are thought to play an important role in financial management in forming a firm's capital structure, which affects its overall operations, growth, and value. Capital structure refers to the term used to represent a combination of long-term debt and equity. Long-term debt is defined as debt that is not due to be repaid within the next twelve months. This debt is mostly made up of bonds or similar obligations, such as notes, capital lease obligations, and mortgage issues. In general, debt is money borrowed from another party that must be repaid at an agreed-upon date. Interest is the cost of using this money, which must also be paid. In addition to the requirement to pay interest, debt may include restrictive agreement that the borrower must fulfill in order to avoid default (As cited in Antwi et al., 2012)

"However, the capital structure of a company is made up of essentially the equity and debt components of the company's capital (the amount used to finance the business). A firm has three main sources of financing, also known as capital components (at its disposal to fund new investment opportunities. It includes the use of retained earnings (internal equity), the issuance of new shares (external equity), and the borrowing of funds through debt instruments (debt capital). These sources of financing constitute a firm's capital structure and also reflect the firm's ownership structure" (As cited in Modugu., 2013).

Aljamaan (2018) gave the following as the components of capital structure;

Equity Capital

Aljamaan (2018) defined that "equity share capital is a component of the capital structure that represents the company's ownership capital. It is the company's permanent capital, which cannot be withdrawn throughout its lifetime. Owners take the majority of the risk, but they also reap the benefits. Their responsibility is restricted to the amount of money they put in". Antwi et al., (2012) stated that "unlike long-term debt, equity consists of paid-up share capital, premium, reserves, and surplus or retained earnings".

Antwi et al., (2012) also argued that "the discounted value of a company's earnings, known as net income, is the value of its equity. This is calculated by dividing net income by the equity capitalization rate, or estimated rate of return on equity. Interest on debt is subtracted from net operating income to arrive at net income".

"The investing market prefers equity shares. You can reduce or raise your ownership percentage in your firm with equity financing via common stock by selling or buying common stock from one or more individuals or entities in exchange for a specific amount of money. The amount invested in a corporation by all common shareholders is known as common equity. This includes, most notably, the value of the common shares themselves. Retained earnings and additional paid-in capital are also included. An ungeared company or an unlevered corporation is one that simply employs equity to fund its operations, and thus creates a risk. If a company does not employ debt, its return on invested capital is calculated using return on equity. This basically means that the standard deviation of a leverage-free firm's ROE will be used to assess its business risk" (Aljamaan 2018).

Debt Capital

Debt capital in a company's capital structure refers to money that has been borrowed and put to use in the business. Debenture capital is a type of borrowed capital, and the debenture holders are the company's creditors. For the convenience of investors, various types of debentures are issued. Banks and financial institutions can also provide long- and medium-term loans to businesses.

Public deposits can be used to fund debt; a public deposit is any money received by a non-banking company as a deposit or loan from the general public, including employees, customers, and shareholders, other than in the form of shares or debentures (Aljamaan 2018).

When a firm decides to use debt as a means of financing, it is regarded as a geared or levered company and it has a lower financial risk compared to an ungeared company.

Optimal Capital Structure

Optimal capital structure is achieved when a company's cost of capital is at the minimum level. An ideal capital structure according to Gitman and Zutter (2012), is one that maximizes the firm's value while reducing the weighted average cost of capital. Aljamaan (2018) argued that the appropriate capital structure is an important decision for financial management because it is linked to the firm's value.

Gitman and Zutter (2012), gave this equation in order to estimate the value of the firm as **V**

$$V = \frac{EBIT * (1 - T)}{ra} = \frac{(NOPAT)}{ra}$$

Source: Gitman and Zutter (2012 p.535)

Where;

V = Value of firm

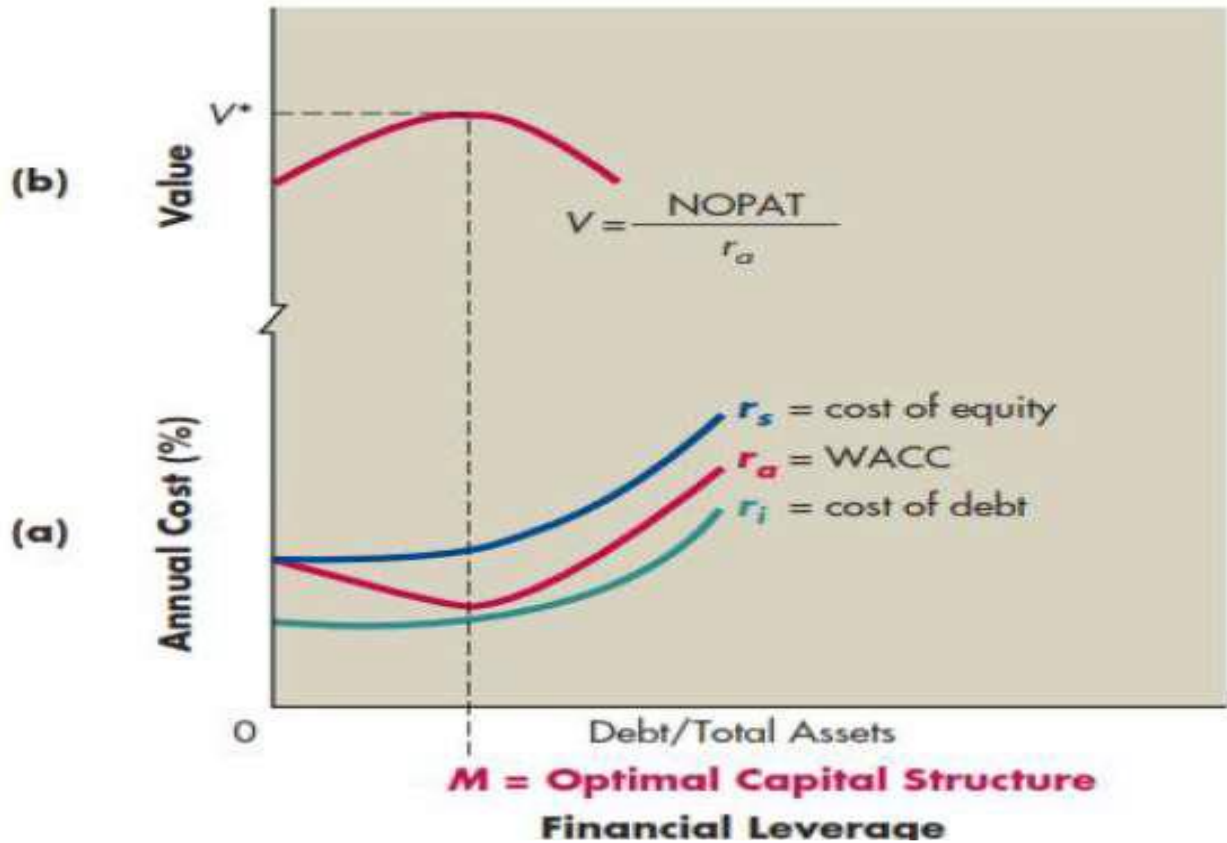$EBIT$ = earnings before interest and taxes

T = tax rate

$NOPAT$ = net operating profits after taxes, which is the after-tax operating earnings available to the debt and equity holders, $EBIT * (1 - T)$

ra = weighted average cost of capital

"The weighted average cost of capital, ra, is obviously minimized in order to optimize the value of the firm, V, if we assume that NOPAT (and hence EBIT) stays constant. Figure (a) on the following page displays the cost of debt, the cost of equity, and the WACC as a function of financial leverage as determined by the debt ratio (debt to total assets). Because of the tax break, the cost of debt, ri , remains low, but it gradually rises as leverage rises to compensate lenders for increased risk. Because investors demand a higher return to compensate for the increased degree of financial risk, the cost of equity, rs, is higher than the cost of debt. A weighted average of the firm's debt and equity capital costs yields the ra. The company is 100% equity financed with a debt ratio of zero. The WACC decreases when debt replaces equity and the debt ratio rises because the after-tax debt cost is less than the equity cost (ri)" (Gitman and Zutter 2012).

Graphical View of Optimal Structure

"Because the optimal capital structure is one in which the overall cost of capital, ra is minimized, the optimal capital structure is one in which the ra is minimized. Point M in Figure (a) represents the minimal WACC, which is the best financial leverage point as a result of the firm's optimal capital structure. The value of the business as a result of rain substitution is represented in Figure (b). Figure (a) depicting various Equation incorporates various amounts of financial leverage into the zero-growth valuation model. As demonstrated in Figure (b), the firm's value is maximized at V at the optimal capital structure, point M. Simply said, lowering the WACC allows management to take on a greater number of profitable projects, hence boosting the firm's worth" (Gitman and Zutter 2012).

(b)

Value

V^*

$$V = \frac{NOPAT}{r_a}$$

(a)

Annual Cost (%)

r_s = cost of equity
r_a = WACC
r_i = cost of debt

0

Debt/Total Assets

M = Optimal Capital Structure
Financial Leverage

Source: Gitman and Zutter (2012 p.536)

Determinants of Capital Structure

The determinants of capital structure vary from firms to firms but this research will give a general view of some capital structure determinants.

Size of Firm

The bigger the firm, the bigger the capital structure and choice of financing. Smaller firms will be restricted to limited sources of financing, have lower external financing and will be less geared compared to bigger firms. Owolabi and Inyang (2012) argued that lenders to larger companies are more likely to be repaid than lenders to smaller companies, lowering debt agency

13

fees. As a result, larger companies will have more debt. The evidence for a favorable association between size and capital structure is overwhelming.

Growth

Titman and Wessels (1988) stated that "to expropriate capital from the firm's bondholders, equity-controlled corporations have a tendency to invest inefficiently. For enterprises in expanding industries with more flexibility in their future investment choices, the cost of this agency relationship is likely to be higher".

Age of the firm

This is a vital part of a company; how long an organization has been in business in most cases can become a leverage over time, therefore fulfilling the going concern accounting concept. Owolabi and Inyang (2012) asserted that "age and debt are positively correlated because as a company operates for a longer period of time, it establishes itself as an ongoing enterprise and may therefore take on more debt". Since entrepreneurs are typically thought to have high hopes for extremely hazardous ventures promising high profits, banks frequently assess their creditworthiness before extending loans to them.

Cost of Capital

Another crucial element that needs to be considered when creating a firm's capital structure is the cost of capital. The firm's overall cost of capital should be kept as low as possible by designing the capital structure accordingly. The very minimum return that its suppliers demand is the cost of capital. Equity capital is the most expensive of all kinds of funding because equity shareholders take on the most risk. On the other hand, borrowed capital is the least expensive source because the company must pay interest on it whether or not it generates profits. So, the overall cost of capital depends on the proportion in which the capital is mobilized from different sources of finance. Hence, capital structure should be designed carefully so that the overall cost of capital is minimized.

Legal requirements

When determining the capital structure of a firm, it is important to keep in mind the various guidelines periodically issued by the Government regarding the issuance of shares and debentures. These legal restrictions are essential because they provide a framework for choosing a capital structure.

2.2 Theoretical Review

2.2.1 Pecking Order Theory

This theory was first suggested by Donaldson in 1961 and then modified by Stewart Myers and Nicolas Majluf (1984), and it states that corporations prioritize their financing sources (from internal to external) and reserve equity financing as a last resort. Internal funds are used first, then debt is issued once they are spent. When issuing more debt isn't a good idea, equity is issued instead.

Myers and Majluf (1984) considered equity or debt to be a market information signal and created the "pecking order theory." According to this theory, because there is asymmetric knowledge about various financial funding mechanisms, such as internal versus external funding and debt versus equity funding, businesses frequently finance their investments in the following order: retained earnings, debt, and then equity. (Ahmadimousaabad et al., 2013). According to Sheikh et al. (2012), the pecking order theory states that firms always favor internal funding over external funding and debt over equity, and that how they handle their financing deficits is independent of the quantity of debt they are now carrying. Pecking order theory suggests, among other things, that profitable businesses always favor internal finance over taking on additional debt or equity. Even so, in certain ratios, debt is regarded as being more affordable than equity. According to Benito (2003), there is a clear hierarchy or ordering of the sources of funding. When a company has a better understanding of its value than the funders, adverse selection problems ensue. When retained earnings are employed as the marginal source of funds and are higher for equity than debt financing, these adverse selection difficulties do not exist. Because of

this, lenders want a risk premium that is higher for equity financing than debt financing. As a result, businesses will favor internal funding sources over debt before turning to equity financing when all other options have been exhausted.

Companies favor internal sources of capital, according to Salawu (2009). In other words, businesses that are more profitable typically have smaller debt loads and larger retained earnings. As a result, a hierarchy is developed, with high-profit enterprises having a tendency to finance investments through retained earnings rather than by issuing debt. As a result, the pecking-order model forecasts a conflict between profitability and book leverage.

2.2.2 Trade-off Theory

It was first initiated by Modigliani and Miller (1958). According to this, a firm decides how much debt financing and how much equity financing to utilize by weighing the advantages and disadvantages. The trade-off theory states that it is possible for a firm to attain a point where its capital structure is said to be at an optimal level.

The trade-off theory's suggested dimension, the financial determinant, was created in light of Modigliani and Miller's irrelevance thesis. The trade-off theory takes into account some aspects of an imperfect market and explains how firms choose their ideal capital structure by striking a balance between the advantages and disadvantages of debt. The idea of trade-off primarily considers how corporate tax, personal tax, non-debt tax shielding, and bankruptcy costs affect capital structure. (Ahmadimousaabad et al., 2013)

According to the capital structure trade-off theory, taxes, bankruptcy costs, and agency conflicts are three competing forces that influence a firm's target leverage. The firm's debt level strikes a balance between the tax benefit and potential financial distress and agency conflicts. As a result, a company sets the ideal leverage ratio and gradually moves toward it. (Babu, 2014)

2.2.3 Signaling Theory

Ross in 1977 proposed the signaling theory, which states that if managers have inside information, their capital structure choice will notify the market with that information. Signaling theory asserts that the firm's financial choices are signals to investors delivered by the management of the firm to disrupt these discrepancies.

These models are predicated on the notion that the company's top executives, who have access to internal information, have an incentive to share this information with outside investors in order to drive up the stock price. However, managers cannot just inform investors of the good news because they will view it suspiciously. By implementing a financial policy, one way to address this issue (for the undervalued enterprises) is to send a signal to investors that contains this information. This approach is prohibited from a cost perspective for a less valuable company. The expense of the signal is what gives it credibility to outside consumers (Markopoulou and Papadopoulos, 2009).

Babu (2014) stated that an increase in debt capital is a reliable indicator of strong future cash flows and management confidence. Smaller signaling companies must refrain from following the larger signaling companies' lead and issuing more debt because they incur higher bankruptcy costs regardless of debt level. Conclusion was made that profitability and leverage are positively correlated, and that higher levels of debt are perceived as indicating higher quality by investors.

2.2.4 Agency Theory

Jensen and Meckling developed agency theory (1976). They proposed a theory of corporate governance based on conflicts of interest between the company's owners (shareholders), managers, and major debt financiers.

Jensen and Meckling (1976) investigate agency costs in the search for optimal capital structure, in addition to tax and bankruptcy costs. They use the cost of agency to argue that the probability distribution of cash flow provided by the firm is not independent of its ownership structure. Their

ownership of corporate theory is predicated on the assumption that firm size and external financing are stable. As a result, the firm's actual value is determined by the agency cost incurred (Babu, 2014). For established businesses, debt of free cash flows lowers the amount of cash available for managers to spend at their discretion. The agency cost theories suggest that corporate leverage is therefore chosen, in a more complicated way, to limit shareholders' ability to act against the welfare of bondholders and managers' ability to act against the interests of the shareholders. The firm's responsibility is to balance the costs of bankruptcy and agency issues with the benefits of increased leverage tax (Babu, 2014).

2.3   Empirical Review

Several empirical studies have been made by different researchers on the impact of capital structure on firms' performance using a variety of research tools. In this section, we shall review some of these studies carried out by researchers, the method used by the researchers, and the outcome of the study.

Research on the impact of capital structure on organisational performance was conducted by Akeem et al. (2014) using a case study of Nigerian manufacturing enterprises. The descriptive and regression research technique were used to determine the effect of some important variables such as Returns on asset (ROA), Returns on equity (ROE), Total debt to total asset (TD), Total debt to equity ratio (DE) on the performance of firms. The investigation utilized secondary data from the annual reports of ten (10) Nigerian manufacturing enterprises during a ten-year period (2003 to 2012). The result of the study concluded that capital structure measures (total debt and debt-to-equity ratio) are related to firm performance in a negative way. Insofar as the value of a business can be increased using debt capital, it is recommended that firms use more equity than debt in financing their business activities. As a result, companies should determine the minimum weighted average cost of capital and maintain that gearing ratio to ensure that the company's value is not lost, as the capital structure is optimal at this time.

Basit and Irwan (2017) looked at how capital structure affected the performance of quoted industrial product enterprises in Malaysia. Explanatory research design was used; the convenience sampling technique was also used in this research to select 50 industrial product companies out of 268 industrial product companies quoted on the Bursa Malaysia main exchange market over a period 5 years (2011 to 2015). The research made use of independent variables which are debt to equity ratio, total debt ratio and total equity ratio. ROA, return on equity and earning per share were used as dependent element to evaluate firm performance. The research employed descriptive statistics and multiple regression for data analysis. This empirical study shows that industrial goods organizations' capital structures heavily rely on equity financing. Moreover, the regression results revealed that debt to equity has a negative impact on ROA, total debt ratio and total equity ratio have insignificant impacts on ROA, debt to equity has a negative impact on ROE, total debt has a positive impact on ROE, and total equity has an insignificant impact on ROE. Furthermore, debt to equity has a negative influence on ROE, while overall debt has a positive impact on ROE and total equity has no impact. Finally, debt to equity has a negative significant impact on earnings per share, the total debt ratio has a positive significant impact on earnings per share, and total debt has an insignificant influence on earnings per share.

Zeitun and Tian (2007) conducted research using a panel data sample of 167 Jordanian enterprises from 1989 to 2003 and examined the impact of capital structure on corporate performance. The result showed that a company's capital structure has a considerable negative influence on its performance indicators, both accounting and market-based, and that the market performance gauge (Tobin's Q) is positively impacted by short-term debt to total assets.

Amin and Jamil (2015) studied how capital structure affects firm performance in Bangladesh. The study analyzed panel data spanning 15 years, from 2001 to 2015 data from seven publicly traded cement companies in the country. As indicators for capital structure, short-term debt to total assets and long-term debt to total assets were utilized, and the return on equity and ROA were employed as measures of company performance. The association between firm debt and firm performance was estimated using a random effect model. The study found that a significant

positive relationship existed between short-term debt to total assets ratio and company performance as evaluated by ROA and ROE.

Salim and Yadav (2012), examined the connection between capital structure and business efficiency. A panel data technique was used to examine 237 Malaysian listed companies on the Bursa Malaysia Stock Exchange during the course of 17 years, from 1995 to 2011. As a dependent variable, the study used four performance measures: return on equity, ROA, Tobin's Q, and earnings per share. The five capital structure metrics (long term debt, short term debt, overall debt ratios, and growth) were employed as an independent variable. The six sectors into which the data is divided are: construction, consumer products, industrial products, plantations, real estate, trading, and services. The result depicted that short term debt (STD), long term debt (LTD), and total debt (TD) as independent variables have a negative association with company performance as assessed by ROA, return on equity, and earning per share. Furthermore, all industries have a positive association between growth and performance. Short-term debt (STD) and long-term debt (LTD) have a considerable positive association with the Tobin's Q. It also showed that total debt (TD) has a substantial negative link with the firm's performance

Antwi et al. (2012) studied how capital structure impacts a company's value. The study took into consideration all 34 businesses listed on the Ghana Stock Exchange (GSE) as at the 31st of December 2010. The study adopted the ordinary least squares regression approach for data analysis. It demonstrated that long-term debt is the most significant indication of a firm's worth in a developing nation like Ghana, and equity capital as an element of a firm's capital structure is vital. In the light of this study, corporate financial decision makers were advised to use long-term debt rather than equity capital to finance their operations because it does have a larger influence. Vătavu (2015) performed research on 196 Romanian industrial businesses registered on the Bucharest Stock Exchange to determine the association between capital structure and financial performance over an eight-year period (2003-2010). Cross-sectional regressions were used in the analysis. Long-term debt, short-term debt, total debt, and total equity are the capital structure indicators, whereas ROA and return on equity are the performance indicators. The empirical result showed that when Romanian companies avoid debt and run-on equity, they perform better. Manufacturing companies, on the other hand, appear to lack sufficient internal capital to make

lucrative investments and to make good use of their assets. Profitable corporations sell a portion of their assets to lower their costs as taxes and inflation rise. Across the manufacturing industry, there is evidence of risk-taking behavior. This demonstrates a preference for debt when they are in financial trouble and face high business risks, or when they are unable to repay their loans owing to a cash shortage. The regression results are not statistically significant due to missing data on long-term debt ratios.

Nathan and El Hadidi (2020) investigated the impact of capital structure on non-financial enterprises' financial performance in Egypt. They used a panel econometric technique known as the fixed effects model, which is based on the results of the Hausman test, the impact of capital structure indicators such as long-term debt and short-term debt on firm performance variables such as returns on asset, returns on equity, and Tobin-Q was estimated. Firm size, firm age, asset tangibility, and sales growth were the key control factors in this study. All of the tests in this paper were based on data extracted from the yearly financial reports of the 50 most active businesses on the Egyptian stock exchange over a 13-year period (2003 to 2015). The statistical findings revealed that long-term debt and short-term debt have a considerable negative impact on the ROA. The effect of short-term debt on the Tobin-Q ratio, on the other hand, is positive and considerable, whereas the effect of long-term debt on the Tobin-Q ratio is small. Long-term debt and short-term debt on the other hand, have a negligible impact on the ROE.

Singh and Bagga (2019) carried out a study to assess the impact of capital structure on the profitability of the fifty companies registered on the National Stock Exchange of India over a ten-year period (2008 to 2017). Descriptive statistics, correlation, and multiple panel data regression models were used to examine the data. Four distinct regression models were used to examine the connection between capital structure and profitability. The study looked at the individual influence of total debt and total equity on earnings. In addition, the pooled OLS, fixed effects, and random effects were used to evaluate all four models. The empirical result showed that capital structure has a strong favorable impact on a firm's profitability.

Having done a critical review of literatures relating to the subject matter, the effort and work of previous researchers has been revealed but with no emphasis on the performance of listed oil and

gas companies in Nigeria. As a result of this, this study seeks to fill in the void in the volume of literature by critically investigating the influence of capital structure on the efficiency of Nigeria's publicly traded oil firms.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter is all about the research methodology which includes the research design, research population, sampling technique, nature of data to be used for the study, sample size, data collection method, measurement of data and analysis. In a bid to achieve the aim of this chapter, this section describes how the study will be carried out by showing the procedures and methods for the research and collection of data for the study. Incudes research design, population of the study, nature and sources of data.

3.1 Research Design

The research design to be used in this study is the explanatory research design. This study employs a panel data policy from both time series and cross-sectional data obtained from eight listed oil and gas companies' annual reports spanning over a period of 13 years (2009-2021).

The study also uses descriptive statistics to evaluate the behaviour of the data by use of (mean, mode, median, max, min, standard deviation, variance, kurtosis, and skewness).

The association between changes in these variables will be examined using multiple regression models because they are simple, provide results that are more accurate and precise, and can also take lag into account.

3.2 Population Size

The population size of this research will be eight listed oil and gas companies in Nigeria. They include; Total Nigeria Plc, Oando Nigeria Plc, MRS Oil Nigeria Plc, Conoil Nigeria Plc, Ardova Nigeria Plc (formerly AP), Eterna Oil Nigeria Plc, Seplat Nigeria Plc, and Japaul Gold and Venture. Therefore, the census sampling technique will be used for the purpose of this study.

3.3 Sample size

The sample size is drawn from eight listed oil and gas marketing and producing companies in Nigeria. The companies are Total Nigeria Plc, Oando Nigeria Plc, MRS Nigeria Plc, Conoil Nigeria Plc, Ardova Nigeria Plc (formerly AP), Eterna Oil Nigeria Plc, Seplat Nigeria Plc, and Japaul Gold and Venture. The study will not include companies like Shell, Agip, ExxonMobil etc. because they are mainly oil explorers (upstream) but this study is focusing on oil marketers (downstream).

3.4 Method of Data Analysis

The ordinary least square method (OLS) of multiple regressions will be utilized in this study because it is well known as the best linear unbiased estimator (BLUE) because it gives coefficients that are unbiased estimators. The data would then be analyzed using econometric tools like multiple regressions to ascertain the impact of capital structure on performance of listed oil and gas companies in Nigeria. The ordinary least square is the most commonly used technique for econometric data analysis reason being that it is easy to compute, gives unbiased estimators in relation to other econometrics techniques. The statistical package to be used for data analysis is STATA.

3.5 Method of Data Collection

Secondary data will be employed for the purpose of this research which will be extracted from annual reports of the eight listed oil and gas marketing and producing companies in Nigeria for a period of thirteen years (2009 till 2021) which is downloadable from websites of the companies and the Nigerian Exchange (NGX).

3.6 Model Specification

In line with the objectives of the research and the hypothesis formulated for the study, the research will define the following models to reflect the relationship among the hypothesis.

Functional Model

ROA = $f(LTD, STD, TDE, INC)$

Regression Model

ROA = $\alpha_1 + \beta_1 LTD + \beta_2 STD + \beta_3 TDE + \beta_4 INC + \varepsilon_t$

Where;

ROA = Return on asset

LTD = Long term debt to total debt ratio

STD = Short term debt to total debt ratio

TDE = Total debt to equity ratio

INC = Interest coverage ratio

εt = Error term

α_1 = Constant

β_1, ----------, β_4 = Coefficient of debt ratios

3.7 Data Analysis Technique

The data analysis technique to be used for this study will be multiple regression.

3.8 Measurement of Variables

S/N	VARIABLES	DEFINITION	TYPE	MEASUREMENT
1.	**ROA**	Return on Asset	Dependent	$\dfrac{Profit\ after\ Tax}{Total\ Assets}$
2.	*LTD*	Long term debt to total debt ratio	Independent	$\dfrac{Long\ term\ debt}{Total\ debt}$
3.	*STD*	Short term debt to total debt ratio	Independent	$\dfrac{Long\ term\ debt}{Total\ debt}$
4.	*TDE*	Total debt to equity ratio	Independent	$\dfrac{Total\ debt}{Equity}$
5.	*INC*	Interest Coverage ratio	Independent	$\dfrac{EBIT}{Interest\ expense}$

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATIONS

4.0 Preamble

Chapter four covers the analysis of the data collected and interpretation of the results. The chapter covers descriptive analysis, answers to the research questions and test of the hypotheses of the study.

4.1 Descriptive Statistics

The descriptive statistics involved computation of means and standard deviations for the all the variables of the study. The descriptive statistics are presented in Table 4.1 below. The mean score obtained for return on asset is very low (Mean = 0.0128, Min = -0.56, Max = 1.51, SD = 0.18755). In other words, a mean of 1.28% was obtained for return on asset. This value suggests that the profitability of an average company in the sector sampled for this study is very low. The mean score obtained for short-term debt to total debt is very high (Mean = 0.7866, Min = 0.17, Max = 1.00, SD = 0.23815). This outcome implies that most of the companies sampled for this study make use of more short-term debt in their capital structure. The mean score obtained for long-term debt is very low (Mean = 0.2134, Min = 0.00, Max = 0.83, SD = 0.23815). This finding signifies that the majority of the companies sampled for this study make use of less long-term debt in their capital structure. The mean score obtained for interest coverage ratio is about 10 times (Mean = 9.83, Min = -13.03, Max = 662, SD = 66.11131). This value signifies that an average company in the sector sampled can pay their interest 10 times from their profit. This result suggests that an average company sampled in that sector is credit worthy.

Table 4.1: Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	104	-.56	1.51	.0128	.18755
STD	104	.17	1.00	.7866	.23815
LTD	104	.00	.83	.2134	.23815
TDE	104	-21.35	15.91	2.4876	3.68816
INC	104	-13.03	662.00	9.8326	66.11131

Valid N (list wise)	104				

Source: Researcher's Computation (2022)

4.2 Research Questions

Four research questions were asked in this study. The questions link corporate profitability with the four proxies of capital structure investigated in this study. Therefore, correlation analysis was used to answer the research questions. The outcomes of this statistical analysis are presented in the following sub-sections.

4.2.1 Research Question One

The first research question focuses on how ROA of listed oil and gas firms in Nigeria is affected by the ratio of STD. The correlation between short-term debt and total debt on ROA for listed oil and gas businesses in Nigeria is shown in Table 4.2. The correlation results show a relationship between short-term debt to total debt and ROA, which is positive but not statistically significant ($r = 0.064$, Sig. $= 0.520$). According to this finding, the ratio of short-term to long-term debt may not significantly affect the ROA of Nigerian listed oil and gas firms.

Table 4.2: Correlations		ROA	STD
ROA	Pearson Correlation	1	.064
	Sig. (2-tailed)		.520
	N	104	104
STD	Pearson Correlation	.064	1
	Sig. (2-tailed)	.520	
	N	104	104

Source: Researcher's Computation (2022)

4.2.2 Research Question Two

The second research question looks at the effect of long-term debt to total debt ratio on ROA of listed oil and gas businesses in Nigeria. The correlation between long-term debt to total debt and ROA of quoted oil and gas firms in Nigeria is shown in Table 4.3. The correlation results show that a negative but non-significant relationship exists between LTD and ROA ($r = -0.064$, Sig. = 0.520). This result signifies that long-term debt to total debt may not have a significant impact on ROA of listed oil and gas companies in Nigeria.

Table 4.3: Correlations		ROA	LTD
ROA	Pearson Correlation	1	-.064
	Sig. (2-tailed)		.520
	N	104	104
LTD	Pearson Correlation	-.064	1
	Sig. (2-tailed)	.520	
	N	104	104

Source: Researcher's Computation (2022)

4.2.3 Research Question Three

The third research question considers the influence of the TDE ratio on the ROA of Nigeria's publicly traded oil and gas firms. The correlation between the TDE and ROA of quoted oil and gas businesses in Nigeria is shown in Table 4.4. The correlation results show that a positive but non-significant relationship exists between TDE ratio and ROA ($r = 0.121$, Sig. = 0.222). According to this finding, the TDE ratio may not significantly affect the ROA of listed oil and gas businesses in Nigeria.

Table 4.4: Correlations			ROA	TDE
ROA	Pearson Correlation		1	.121
	Sig. (2-tailed)			.222
	N		104	104
TDE	Pearson Correlation		.121	1
	Sig. (2-tailed)		.222	
	N		104	104

Source: Researcher's Computation (2022)

4.2.4 Research Question Four

The fourth research question examines the effect of INC on Nigerian listed oil and gas firms' ROA. Table 4.5 below contains the correlation results for the listed Nigerian oil and gas enterprises' INC and ROA. The correlation results indicate that a positive but non-significant relationship exists between INC and ROA (r = 0.042, Sig. = 0.672). This finding implies that the INC may not significantly affect the ROA of Nigerian listed oil and gas firms.

Table 4.5: Correlations			ROA	INC
ROA	Pearson Correlation		1	.042
	Sig. (2-tailed)			.672
	N		104	104
INC	Pearson Correlation		.042	1
	Sig. (2-tailed)		.672	
	N		104	104

Source: Researcher's Computation (2022)

4.3 Test of Hypotheses

Four hypotheses were formulated for this study. Multiple regression analysis was explored to test the hypotheses of the study. The output of multiple regression analysis excluded the independent variable in the first hypothesis, STD. Therefore, basic linear regression was considered to assess the first hypothesis.

4.3.1 Hypothesis One

According to hypothesis 1, the assets return of Nigerian quoted oil and gas businesses is not considerably impacted by the fraction of STD. Table 4.6 through Table 4.8 show the simple linear regression's findings. model summary is provided in Table 4.6. The overall model demonstrates that the ratio of STD and asset return have a positive but non-significant association (r = 0.064). The resulting R square value is very low (R square = 0.004). This result suggests that the STD ratio only explain for 0.4% of the variation in asset return. Therefore, more variables are needed to be able to predict the profitability among the sampled companies.

Table 4.6: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.064	.004	-.006	.18808
a. Predictors: (Constant), STD				

Source: Researcher's Computation (2022)

Table 4.7 contains the analysis of variance (ANOVA) results. The F-Value obtained is very small and insignificant (F-Value = 0.418, Sig. = 0.520). This result implies that the model is not of good fit and cannot predict the variation in return on asset accurately.

Table 4.7: ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.015	1	.015	.418	.520

		3.608	102	.035		
	Residual	3.608	102	.035		
	Total	3.623	103			
a. Dependent Variable: ROA						
b. Predictors: (Constant), STD						

Source: Researcher's Computation (2022)

Table 4.8 contains the regression coefficient. The computed beta value (Beta = 0.064, t-value = 0.646, Sig = 0.520) is positive but not statistically significant. This finding implies that the asset return is not considerably impacted by the short-term debt to overall debt. The hypothesis was accepted, leading to the conclusion that the assets return of Nigerian quoted oil enterprises is not significantly impacted by the ratio of STD.

Table 4.8: Regression Coefficient						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.027	.064		-.419	.676
	STD	.050	.078	.064	.646	.520
a. Dependent Variable: ROA						

Source: Researcher's Computation (2022)

4.3.2 Hypotheses Two, Three and Four

Hypotheses two, three and four were tested with multiple regression analysis. The results of the multiple regression analysis were presented in Tables 4.9 – Table 4.11. Table 4.9 contains the model summary. The model summary shows that a positive but non-significant relationship exists between the three independent variables (LTD, debt to equity ratio and INC) and ROA (r = 0.135). The R square value obtained is also very small (R = 0.018). This outcome implies that only 1.8% of the variation in ROA can be accounted for by LTD, debt to equity ratio and INC.

This outcome suggests that more variables are needed to be able to predict the profitability among the sampled companies accurately.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.135	.018	-.011	.18860
a. Predictors: (Constant), INC, TDE, LTD				

Source: Researcher's Computation (2022)

The analysis of variance (ANOVA) results is presented in Table 4.10 below. The F-Value obtained is also very small and insignificant (F-Value = 0.618, Sig. = 0.605). This result implies that the model is not of good fit and cannot predict the variation in ROA accurately.

Table 4.10: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.066	3	.022	.618	.605
	Residual	3.557	100	.036		
	Total	3.623	103			
a. Dependent Variable: ROA						
b. Predictors: (Constant), INC, TDE, LTD						

Source: Researcher's Computation (2022)

The multicolinearity statistics and the regression coefficients are contained in Table 4.11 below. The multicolinearity results show that all the tolerance values obtained for all the independent variables are greater than 0.2 (Mernard, 1993) and all the variance inflation factors (VIFs) obtained for all the independent variables are less than 10 (Belsely, 1991). These outcomes suggest that there is no multicolinearity problem among the independent variables of the study. Therefore, the results of the multiple regression results can be interpreted with high level of

confidence. However, in relation to hypothesis two, the beta value obtained is negative but insignificant (Beta = -0.043, t-value = -0.417, Sig. = 0.678). This outcome suggests that the ratio of long-term debt to total debt does not significantly affect ROA. The null hypothesis was therefore accepted, and it became reasonable to draw the conclusion that the long-term debt to total debt ratio has an insignificant influence on the ROA of quoted oil and gas organizations in Nigeria.

Table 4.11: Regression Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.005	.030		.155	.877		
	LTD	-.034	.082	-.043	-.417	.678	.911	1.098
	TDE	.006	.005	.110	1.076	.284	.933	1.072
	INC	.000	.000	.050	.503	.616	.975	1.026
a. Dependent Variable: ROA								

Source: Researcher's Computation (2022)

Moreover, concerning hypothesis three, the beta value obtained is positive but non-significant (Beta = 0.110, t-value = 1.076, Sig. = 0.284). This outcome suggests that TDE ratio does not have a significant impact on ROA. As a result, the null hypothesis was accepted, and it was feasible to draw the conclusion that the TDE ratio did not significantly affect ROA of listed oil and gas firms in Nigeria.

Nevertheless, in connection with hypothesis four, the beta value obtained is negative but insignificant (Beta = 0.050, t-value = 0.503, Sig. = 0.616). This study indicates that ROA is not significantly impacted by INC. The null hypothesis was accepted, leading to the conclusion that among Nigeria's publicly traded oil and gas businesses, INC had no significant effect on ROA.

4.4 Discussion of Results

The result of hypothesis one demonstrates that the ratio of STD has no significant effect on the ROA of listed oil and gas enterprises in Nigeria. This finding is contrary to the outcome of the study of Nathan and El Hadidi (2020) which revealed that short-term debt had a considerable negative impact on ROA. Similarly, the study of Salim and Yadav (2012), which showed that short term debt had a negative association with company performance, is not in consonance with this finding. In addition, the study of Amin and Jamil (2015), which found that a significant positive relationship existed between short-term debt and corporate performance, does not align with the outcome of the current study.

With regard to hypothesis two, this study found that among Nigeria's listed oil and gas corporations, the ratio of long-term debt to total debt did not significantly affect ROA. The study of Vatavu (2015), which revealed that the relationship between long-term debt ratio and corporate profitability is not statistically significant, gave support to the outcome of this study. Further support was derived from the study of Basit and Irwan (2017) which revealed that total debt had insignificant impact on ROA. However, the study of Antwi et al. (2012) which posited that long-term debt had positive significant impact on firm's value does not support the outcome of this study. Also, the study of Nathan and El Hadidi (2020), which revealed that long-term debt had a considerable negative impact on ROA, is contrary to the result of this study. Similarly, the study of Salim and Yadav (2012), which showed that long term debt had a negative association with company performance does not support the finding of this study.

Moreover, concerning hypothesis three this study discovered that among Nigeria's publicly traded oil and gas firms, the TDE ratio had no significant effect on ROA. The outcome of this study is contrary to the study of Vatavu (2015) showed that debt to equity ratio had significant positive impact on corporate performance. Also, the study of Antwi et al. (2012) which posited that debt-to-equity capital had positive significant impact on firm's value, is not in agreement with the outcome of this study. The outcome of this study is also contrary to the study of Akeem et al. (2014) which documented a significant negative relationship between total debt-to-equity ratio and firm performance. In addition, the study of Basit and Irwan (2017), which revealed that debt to equity ratio has a negative impact on ROA, does not align with the result of this study.

Nevertheless, in connection with hypothesis four, this study observed that INC does not have significant impact on ROA among listed oil and gas companies in Nigeria. This result is not in tandem with the finding in the study of Singh and Bagga (2019) which showed that capital structure had a strong favorable impact on a firm's profitability. Also, the study of Zeitun and Tian (2007), which showed that a company's capital structure had a considerable negative influence on its performance indicators, does not support the outcome of this study.

4.5 Summary of Results

INDEPENDENT VARIABLE	DEPENDENT VARIABLE	RESULTS
STD	ROA	The STD had a positive but insignificant influence on the ROA ($r = 0.064$, Sig. $= 0.520$).
LTD	ROA	The LTD had a negative but insignificant influence on the ROA ($r = -0.064$, Sig. $= 0.520$).
TDE	ROA	The TDE had a positive but insignificant influence on the ROA ($r = 0.121$, Sig. $= 0.222$).
INC	ROA	The INC had a positive but insignificant influence on the ROA ($r = 0.042$, Sig. $= 0.672$).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Preamble

This is the concluding chapter, and it represents the end of the study. It includes a quick summary and overview of the entire study project conducted, recommendations based on the study's findings, and suggestions for future research.

5.2 Summary of the Work Done

This study paper is segmented into five chapters. The first chapter introduces the study and includes the history to the study, the statement of problem, the research objectives, the research questions, the research hypotheses, the significance of the research, the scope of the research, and the definition of important concepts vital to this research project.

The literature review of the influence of capital structure on company performance was a major emphasis of chapter two. Review of the concepts of optimal capital structure and capital structure determinants. All of the theories looked at are the pecking order theory, trade-off theory, signaling theory, and agency theory. In accordance with the study, pertinent empirical papers were also examined.

The third chapter focuses on the technique used to conduct the research. The research design used was explanatory. To get appropriate data, cross-sectional data were employed. The variables used in this study includes capital structure; STD, LTD, TDE, INC (the independent variable) and performance; ROA (the dependent variable). The data used was secondary data harvested from the annual report of eight Nigerian quoted oil enterprises over a period of thirteen years from 2009 to 2021, from the website of the Nigerian Exchange (NGX), and the website of the companies.

Data presentation, analysis, interpretation, and discussion of findings are all included in the fourth chapter. The hypotheses of the study were tested with multiple regression; hypotheses one

was tested using linear regression, while hypotheses two, three and four were tested using multiple regression.

The study done is summarized, a conclusion is drawn, recommendations are given, and suggestions for more research are made in chapter five. The work done is summarized by the review of the literature, the research techniques used, and the statistical analysis. The study's conclusions, recommendations, and suggestions for additional research were all based on the study's results and constraints, respectively.

5.3 Conclusion

The purpose of this study was to investigate the correlation between the capital structure and operating efficiency of Nigerian listed oil and gas businesses. It was discovered that all oil and gas firms fund their operations with more debt rather than equity because of the huge capital outlay involved. Additionally, it was discovered that STD, LTD, TDE, and INC had a positive but insignificant impact on Nigeria's quoted oil firms' performance.

5.4 Recommendations

The study's findings recommend adding more factors to the model when assessing how capital structure affects company performance.

5.5 Suggestion for Further Studies

This study solely examined ROA as the dependent variable and LTD, STD, TDE, and INC as the independent variables in the oil and gas sector of the Nigerian economy. Future research on the correlation between capital structure and performance may concentrate on areas not included in this study, such as the agriculture and health services sectors, and also investigate additional variables like ROE and EPS.

REFERENCES

Ahmadimousaabad. A., Anuar. M.A., Sofian. S., & Jahanzeb. A. (2013). Capital Structure Decisions and Determinants: An Empirical Study in Iran. *International Research Journal of Applied and Basic Sciences, 5*(7), 891-896.

Akeem. L. B., Terer. E. K., Kiyanjui. M. W., & Kayode. A. M. (2014). Effects of Capital Structure on Firm's Performance: empirical study of manufacturing companies in Nigeria. *Journal of Finance and Investment Analysis, 3*(4), 39-57.

Aljamaan. B.E. (2018). Capital structure: definitions, determinants, theories and link with performance literature review. *European Journal of Accounting, Auditing and Finance Research, 6*(2), 49-72

Amin. S., Jamil. T. (2015). Capital structure and firm performance: evidence from cement sector of Dhaka stock exchange limited. *Journal of Finance and Banking,13*(1 &2), 29-41.

Antwi. S., Mills. E.F., & Zhao. X. (2012). Capital Structure and Firm Value: Empirical Evidence from Ghana. *International Journal of Business and Social Science, 3*(21).

Babu, Suresh N. (2014). Capital structure determinants in Indian industries an empirical analysis [Doctoral dissertation, Achaya Nagarjuna University]. Shodhganga a reservoir of Indian Theses. http://hdl.handle.net/10603/188190

Basit. A., & Irwan, N.F. (2017). The impact of capital structure on firms' performance: evidence from Malaysian industrial sector –a case based approach. *International Journal of Accounting & Business Management* 5(2), https://doi:24924/ijabm/2017.11/v5.iss2/131.148

Belsely, D.A., (1991). *Conditioning diagnostics: Collinearity and weak data in regressions*. New York: Wiley.

Benito, A. (2003). The capital structure decisions of firms: is there a pecking order? Capital Structure -Determinants and Theories.

Chartered Financial Analyst Institute (2022, November 2). *Capital structure, level 1*. Chartered
    Financial Analyst Institute. https://www.cfainstitute.org/en/membership/professional-
    development/refresher-readings/capital-structure

Corporate Financial Institute (2022, January 30). *What is capital structure?* Corporate Financial
    Institute. https://corporatefinanceinstitute.com/resources/knowledge/finance/capital-
    structure-overview/

Fernando, J. (2022, February 19). What is Debt-to-Equity (D/E) Ratio? Investopedia.
    https://www.investopedia.com/terms/d/debtequityratio.asp

Gitman and Zutter, C.J. (2012). Principles of Managerial Finance, (13thed). Boston: Prentice
    Hall.

Hargrave, M. (2022, March 5). What is Return on Assets? Investopedia.
    https://www.investopedia.com/terms/r/returnonassets.asp

Hayes, A. (2021, October 5). What is the Interest Coverage Ratio? Investopedia.
    https://www.investopedia.com/terms/i/interestcoverageratio.asp

Markopoulou, M.K., & Papadopoulos, D.L. (2009). Capital structure signaling theory; evidence
    from the Greek stock exchange. *Portuguese journal of management studies, 14*(3), 217-
    238

Mazeed. S. A., Rani. P.S., Raveendranath. R., Divya. P., & Sudharani. T. (2019). Effectiveness
    of Capital Structure on Profitability- IT Companies Perspective. *International Journal of
    Innovative Technology and Exploring Engineering,
    9*(1).https://doi.org/10.35940/ijitee.A4204.119119

Mernard, S. (1993). *Applied logistic regression analysis. Sage University paper series on
    quantitative applications in social sciences*. CA: Sage.

Modigliani. F., Miller, M. H. (1958). The cost of capital, corporation finance and the theory   of
    investment. *American Economic Review, 48*(3), 61–297.

Modigliani. F., Miller, M. (1963). Corporate income taxes and the cost of capital: a correction.
    American Economic Review, *53*(3), 433–443.

Modugu. K.P. (2013). Capital Structure Decision: An Overview. *Journal of Finance and Bank Management, 1*(1), 14-27.

Myers, S.C. (2001). Capital Structure. *Journal of Economic Perspectives, 15*(2), 81-102

Nathan. D & El Hadidi. A. (2020). Capital Structure and Firm Performance: Empirical Evidence from a Transition Country. *4*(2).

Nigerian National Petroleum Corporation (N.D.). History of the Nigerian Petroleum Industry. NNPC. https://www.nnpcgroup.com/NNPC-Business/Business-Information/Pages/Industry-History.aspx#:~:text=Oil%20was%20discovered%20in%20Nigeria,on%20stream%20producing%205%2C100%20bpd.

Owolabi. S. A., & Inyang. U. E. (2012). Determinants of capital structure in Nigerian firms: a theoretical review. *eCanadian Journal of Accounting and Finance, 1*(1), 7-15

Salawu, R. O. (2009). The Effect Of Capital Structure On Profitability: An Empirical Analysis Of Listed Firms In Nigeria. *The International Journal of Business and Finance Research, 3*(2)

Salim, M., & Yadav, R (2012). Capital structure and firm performance: evidence from Malaysian listed companies. *Social and Behavioral Sciences, 65,* 156-166. https://doi.org/10.1016/j.sbspro.2012.11.105

Sheikh, J., Shakeel, A. W., Iqbal, W., & Tahir, M. (2012). Pecking at Pecking Order Theory: Evidence from Pakistan's Non-financial Sector. *Journal of Competitiveness,* 4(4), 86-95. doi:10.7441/joc.2012.04.06

Singh, N., & Bagga, M. (2019). The Effect of Capital Structure on Profitability: An Empirical Panel Data Study. *Jindal Journal Of Business Research*, *8*(1), 65-77. doi: 10.1177/2278682118823312

Suardi, I., & Noor, K. D. (2015). The Impact of Capital Structure on Financial Performance of the listed Agriculture Companies in Indonesia. *Global Journal of Business and Social Science Review, 3*(1), 9-17.

Titman. S., & Wessels. R. (1988). The Determinants of Capital Structure Choice. *The Journal of Finance, 43*(1)

Tuovila, A. (2021, September 4). What is Capital Structure? Investopedia.

    https://www.investopedia.com/terms/c/capitalstructure.asp

Vătavu, S. (2015). The impact of capital structure on financial performance in

    Romanian listed companies. *Procedia Economics and Finance, 32,* 1314-1322.

    https://doi.org/10.1016/S2212-5671(15)01508-7.   Retrieved   from

    https://www.sciencedirect.com/science/article/pii/S2212567115015087

Zeitun, R., & Tian, G. (2007). Capital structure and corporate performance: evidence from

    Jordan. *Australasian Accounting, Business And Finance Journal, 1*(4), 40-61. doi:

    10.14453/aabfj.v1i4.3

APPENDIX I: LIST OF OIL AND GAS COMPANIES USED

S/N	COMPANIES
1.	Conoil Plc
2.	Ardova Plc
3.	MRS Oil Nigeria Plc
4.	Total Nigeria Plc
5.	Oando Plc
6.	Seplat Petroleum Development Company Plc
7.	Eterna Plc
8.	Japaul Gold and Ventures Plc

APPENDIX II: DATA USED FOR THE STUDY

COMPANY NAME	YEAR	RETURN ON ASSET	SHORT TERM DEBT TO TOTAL DEBT	LONG TERM DEBT TO TOTAL DEBT	TOTAL DEBT TO EQUITY	INTEREST COVERAGE RATIO
CONOIL PLC	2009	0.058138213	0.966713711	0.03328629	1.8374753	1.4979831
	2010	0.067411524	0.93442745	0.06557255	1.6843371	2.2785946
	2011	0.047840307	0.96110762	0.03889238	2.6513075	2.7754416
	2012	0.00860428	0.965634848	0.03436515	4.3058176	0.275704
	2013	0.037271039	0.986368515	0.01363148	3.5667264	2.0320504
	2014	0.009533332	0.979503362	0.02049664	4.4377753	0.6639206
	2015	0.03325617	0.976132612	0.02386739	2.9180533	0.9177351
	2016	0.040637882	0.98085	0.01915	2.7817973	2.4253818
	2017	0.025113434	0.979605089	0.02039491	2.5128435	1.0783546
	2018	0.029492992	0.977592494	0.02240751	2.3275231	1.7020266
	2019	0.031018733	0.97067699	0.02932301	2.2661661	2.5441574
	2020	0.029472933	0.967122043	0.03287796	1.5033103	3.0450968
	2021	0.057106579	0.975416981	0.02458302	1.4774168	5.0581593
ARDOVA PLC	2009	-0.109749517	0.941582239	0.05841776	8.2391145	-1.4307624
	2010	-0.041161653	0.975943901	0.0240561	1.6640268	-2.0205605
	2011	-0.339921833	0.988931769	0.01106823	3.8870492	-13.03219
	2012	0.017469064	0.937460691	0.06253931	4.4711587	0.4916613
	2013	0.070170031	0.837722324	0.16227768	4.2931791	4.2246514
	2014	0.028169907	0.939654797	0.0603452	6.7605262	1.3561374
	2015	0.072931366	0.93594016	0.06405984	4.0484042	1.8865087
	2016	0.044049459	0.810146758	0.18985324	5.1861602	2.0753742
	2017	0.020317227	0.780558638	0.21944136	3.7285242	0.8718715
	2018	0.010318444	0.839091124	0.16090888	3.4511174	0.3316194
	2019	0.083267271	0.863903471	0.13609653	1.9089902	0.9645113

	2020	0.033045239	0.972600245	0.02739976	2.4258807	0.8065404
	2021	0.014003525	0.705212324	0.29478768	3.9507634	0.4567931
MRS OIL NIGERIA PLC	2009	0.064165568	0.363738551	0.63626145	0.7785136	661.71429
	2010	0.044968898	0.870931232	0.12906877	1.2171011	31.796023
	2011	0.015354124	0.924029411	0.07597059	2.7546115	7.5190896
	2012	0.003689513	0.82329725	0.17670275	1.9177946	0.2788662
	2013	0.009657076	0.869812273	0.13018773	2.3467896	1.793663
	2014	0.012903155	0.852818575	0.14718143	1.8611277	0.8980622
	2015	0.013986735	0.884034571	0.11596543	2.1888596	0.7769603
	2016	0.018016449	0.913332591	0.08666741	2.6710611	1.3983296
	2017	0.022271248	0.944559072	0.05544093	1.6911152	-0.8234648
	2018	-0.023302623	0.960391215	0.03960878	1.6197574	-6.5444442
	2019	-0.038543849	0.9435227	0.0564773	1.3137187	-3.7360695
	2020	-0.061762165	0.952396349	0.04760365	1.1764572	-2.4339595
	2021	0.009135066	0.971615682	0.02838432	1.1651964	0.8636633
TOTAL NIGERIA PLC	2009	0.080241541	0.921016983	0.07898302	6.117568	11.933001
	2010	0.072743921	0.951724608	0.04827539	5.11493	12.454484
	2011	0.064938936	0.945825544	0.05417446	4.8566279	6.695573
	2012	0.050129475	0.956554166	0.04344583	5.7304587	4.5141223
	2013	0.067176953	0.954611324	0.04538868	4.9968942	4.0981526
	2014	0.046315784	0.963489014	0.03651099	5.8567086	2.1205183
	2015	0.048378709	0.948656285	0.05134372	4.1502942	3.6274936
	2016	0.10806466	0.997836925	0.00216308	4.8094016	23.892485
	2017	0.074265224	0.964674725	0.03532527	2.8256781	3.8498767
	2018	0.060072789	0.942962501	0.0570375	3.3122992	2.7120901
	2019	0.016877466	0.947786694	0.05221331	3.7680758	0.3481833
	2020	0.014367687	0.951121074	0.04887893	4.1015236	1.0057634
	2021	0.080784811	0.954108979	0.04589102	4.0151959	14.034107
OANDO PLC	2009	0.011498217	0.999157599	0.0008424	10.522431	1.1417475
	2010	0.010536671	0.172934427	0.82706557	1.1032729	7.0444035

	2011	0.008723298	0.485595403	0.5144046	1.9857191	0.5233022
	2012	0.019265599	0.715051366	0.28494863	2.9564885	0.8428166
	2013	0.008935393	0.916339544	0.08366046	1.4796299	0.196111
	2014	-0.368401558	0.979268926	0.02073107	8.821082	-3.4036475
	2015	-0.195183268	0.989387917	0.01061208	5.2743626	-1.6831034
	2016	-0.162646239	0.550412408	0.44958759	15.913157	-1.0141077
	2017	-0.143166387	0.610788609	0.38921139	-21.350474	-1.5965378
	2018	-0.077514626	0.765003054	0.23499695	-4.8812543	-1.0064214
	2019	-0.069976811	0.934992502	0.0650075	-2.7327102	-1.9876854
	2020	-0.115789111	0.937400618	0.06259938	-2.2473619	-2.1185695
	2021					
SEPLAT PETROLEUM DEVELOPMENT COMPANY PLC	2009					
	2010	0.024582905	0.829879989	0.17012001	8.9260544	0.6337708
	2011	0.079596772	0.447361754	0.55263825	5.2860153	6.2116143
	2012	0.121196602	0.608122688	0.39187731	3.9495087	8.2158339
	2013	0.426242868	0.757631942	0.24236806	0.7632479	20.980371
	2014	0.097608722	0.748406825	0.25159318	0.6947211	5.4995578
	2015	0.023101862	0.524466482	0.47553352	0.8953388	0.9898139
	2016	-0.068279884	0.509290573	0.49070943	0.7660034	-2.595457
	2017	0.101445433	0.611879132	0.38812087	0.7394974	0.6047285
	2018	0.058933501	0.452878862	0.54712114	0.6017621	5.7769137
	2019	0.062516249	0.513667217	0.48633278	0.8325483	7.8599072
	2020	-0.023429305	0.264039794	0.73596021	1.0730038	-1.5475986
	2021	0.029267195	0.220071275	0.77992872	1.2798096	2.3275659
ETERNA PLC	2009	-0.153362246	0.795832868	0.20416713	1.6136902	-1.6254338
	2010	0.076445872	0.670119564	0.32988044	0.9747912	1.8167161
	2011	0.084155979	0.950777213	0.04922279	1.4910756	4.8839664
	2012	0.002379629	0.972251487	0.02774851	4.293534	2.2634692
	2013	0.03467133	0.816456187	0.18354381	1.5430532	1.230122

	2014	0.069744084	0.867666697	0.1323333	1.2527657	4.5638065
	2015	0.045388826	0.93252881	0.06747119	2.0065144	2.3892135
	2016	0.048973951	0.878229918	0.12177008	1.9758277	0.6956252
	2017	0.043894629	0.944769703	0.0552303	2.8945015	5.4238748
	2018	0.021622943	0.914454864	0.08554514	3.149644	2.4400461
	2019	-0.001716803	0.871981941	0.12801806	1.2969511	0.1528624
	2020	0.028428337	0.911610847	0.08838915	1.682554	0.623611
	2021	-0.023405458	0.930560891	0.06943911	2.7977776	-0.7749143
JAPAUL GOLD AND VENTURES PLC	2009					
	2010	0.034945075	0.601716239	0.39828376	0.1221243	0.0507444
	2011	0.037406591	0.585048883	0.41495112	0.1346068	0.0626295
	2012	-0.141188509	0.278992014	0.72100799	0.8729664	-0.2534388
	2013	0.000756314	0.227869827	0.77213017	1.2694918	0.008732
	2014	-0.070800107	0.299597277	0.70040272	1.7192542	-0.1795605
	2015	-0.19901209	0.206104937	0.79389506	3.9660223	-0.9822486
	2016	-0.557564489	0.291556911	0.70844309	-3.6609798	1.4830788
	2017	-0.366373388	0.182238143	0.81776186	-2.1499295	0.4191362
	2018	-0.235781897	0.189576108	0.81042389	-1.8181155	0.1926174
	2019	1.510478382	0.660966393	0.33903361	1.8718023	4.3452443
	2020	0.002453677	0.561267485	0.43873251	4.5240135	0.0135541
	2021	-0.017399779	0.54195527	0.45804473	4.783948	-0.1006394