EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF THE OIL AND GAS SECTOR IN NIGERIA

BY

JOEL, SOLOMON UDAGBEMU.

16020101025

A PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE, COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES, MOUNTAIN TOP UNIVERSITY, OGUN STATE, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR DEGREE (B.Sc.) IN ACCOUNTING.

JULY, 2019

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DECLARATION

I hereby declare that this project report written under the supervision of Dr. Omokehinde Joshua, is a product of my own research work. Information derived from various sources have been duly acknowledged in the text and a list of references provided. This research project report has not been previously presented anywhere for the award of any degree or certificate.

_____ _____

JOEL, Solomon U. **Date**

CERTIFICATION

This is to certify that this research project report titled **"EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF THE OIL AND GAS SECTOR IN NIGERIA"** was carried out by **JOEL, SOLOMON UDAGBEMU**, with matriculation number 16020101025. This project report meets the requirements governing the award of Bachelor of Science (B.Sc.) Degree in Accounting, Department of Accounting and Finance of the Mountain Top University, Ogun State, Nigeria and is approved for its contribution to knowledge and literary presentation.

_____ _____

Dr. Omokehinde, Joshua **Date**

(Project Supervisor)

_____ _____

Dr. Akinyomi, Oladele John **Date**

(Head of Department)

DEDICATION

This research project is dedicated to the Almighty God for His utmost help towards me throughout my stay in Mountain Top University.

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And to my colleagues (Pioneer Accounting Students of Mountain Top University; Class 2019), I sincerely love you all.

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ABSTRACT

The subject of capital structure is very germane to financial management and to the successful operation of any firms. It is the decision of financing business operations with either shareholders' equity or debts or proportional combination of both. The main purpose of this study is to investigate debt to equity ratio that will optimise the financial performance of downstream oil and gas firms in Nigeria. The sample size was selected using the simple random sampling method. Seven (7) out of ten (10) downstream oil and gas firms listed in the Nigerian Stock Exchange, taking the period 2014 to 2018 were selected for this study. Secondary data were extracted from the annual reports and accounts of the firms. The study formulated four hypotheses and descriptive statistics and linear regression were used for its analysis. The descriptive statistics provide summary statistics of the variables. Subsequently, results of the regression analysis revealed that though the whole four independent variables have a positive relationship with the Return on Asset (ROA); total debt to total assets ratio (p-value=0.018) and total debt to total equity ratio (p-value=0.000) have significant effect on the financial performance while long-term debt to total assets (p-value=0.875) and short-term debt to total assets (p-value=0.152) have no significant effect on the financial performance of the downstream oil and gas firms in Nigeria. Summarily, the result reveals a positive relationship with ROA and the variables representing capital structure have a significant relationship with ROA with the p-value of 0.005. It is recommended for future researchers to carry out similar studies in multiple sectors.

KEYWORDS: Capital Structure, Financial Performance, Oil and Gas Companies, Return on Asset, Debts, Equity, and Stock Exchange.

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Chapter One

INTRODUCTION

1.1 Background to the Study

One of the most significant areas of a firm is its financing. The finance department is concerned with the financing decision of determining the best capital structure or financing mix for the firm. This has been a major point of decision in Nigeria because financial constraints are a major factor affecting companies' performance.

And according to Akinyomi (2013), one of the toughest challenges that organizations face is the choice of capital structure. And the move towards a free market, joined with the widening and expanding of various financial markets has provided the basis for the corporate sectors to determine their capital structure optimally (Salawu & Agboola, 2008).

Capital structure decision is the mix of debt and equity that a company uses to finance its business (Damodaran, 2001). Alfred (2007) suggested that a firm's capital structure suggests the amount of debt and equity in the total capital structure of the firm. A company's capital structure talks about to how a company finances its operations whether through shareholders equity fund or debt or a mixture of both (Akinsulire, 2008). Usually, capital structure is made up of ordinary share capital, preference share capital, and debt capital which includes long term and short term debts. But Pandey (1999) distinguished between capital structure and financial structure by asserting that capital structure signifies the equivalent relationship between long-term debt and equity capital while the many ways used to increase funds is regarded as the firm's financial structure. Therefore, a firm's capital structure simply refers to the mixture of long-term debt and equity financing.

Hence, there are two means by which a firm can fund its assets and future growth. First, by debts or by equity financing. Financing by debts is taking a loan in form of corporate bond. While financing by equity can be gotten from either financing internally or externally. Financing internally is from retained earnings from the previous year reinvested into the operations of the firm. Financing externally is by issuing common (ordinary) or preferred stocks.

According to Dare and Sola (2010), capital structure is the debt-equity mix of business finance. It is used to signify the balanced relationship between debt and equity in corporate firms' finances to do financially well. And since one of the countless objectives of a financial manager is to make sure the lower cost of capital and thus make the most of the wealth of shareholders. Capital structure is one of the effective tools of organization to manage the cost of capital. And a firm's capital structure has a significant effect on the financial performance and firm proficiency. (Ghosh, 2008).

Financial performance is the overall state of health of the financial objectives and operations in monetary terms of a firm over a given period of time. Erasmus (2008) illuminated that financial performance measures like profitability and liquidity among others make available a treasured tool to stake holders which assists in appraising the past financial performance and present position of a firm.

Capital structure is closely linked with financial performance (Tian & Zeitun, 2007). Therefore, capital structure is one of the foremost subjects that could impact the firm's financial performance.

1.2 Statement of Problem

The determination of capital structure or optimal capital mix is highly essential for firms in any economy to achieve health financially. In the recent years, many companies in Nigeria have been experiencing a decline in their financial performance and some have been liquidated as a result of not determining well the ratio or proportion of their debts to equity financing. This has been the fundamental problem of so many firms. In fact, it is one of the toughest challenges that organizations face. (Akinyomi, 2013). This has made it one of the greatest frequently discussed topics in financial management (Pinkova, 2012).

The determination of optimal capital structure has always been causing huge difficultly to every firm. The theory of capital structure with relation to financial performance has been an argument for some years. Because there are tax benefits attached to using debts for financing a firm, many are on a desperate side that the use of debts should be used as primary source of financing. Interest paid on the debts is deductible, therefore the tax liability will be reduced and the net income will be increased. However, the firm will have to pay back the debts which is still putting the firm in overall risk while equity financing which does not have tax benefits will not be repaid. This has made the determination of optimal capital structure difficult.

For a firm to maximize its overall value, it must be able to combine the issuance of various securities to get a particular optimal capital mixture or structure. Optimal capital structure also means that with a minimum weighted-average cost of capital, the value of a firm is maximized. However, according to Rahul (1997), poor capital structure choices may lead to a likely decrease in the value gotten from planned assets. According to Adeyemi and Oboh (2011), deciding the capital mix that will optimize the firm's financial performance has been a major challenge in Nigeria.

Therefore, it is important to have or manage a good set of financial policies to achieve optimal capital structure that will positively impact the financial performance of a firm. Since the objective of a financial manager is towards financial management, the relationship between capital structure and financial performance of firms have gotten the attention of numerous scholars or researchers over the years. However, according to Akinyomi, (2013), the study is largely foreign based; It has been conducted majorly in the advanced market economies such as USA and the UK. Only few have been able to research into it in an emerging economy like Nigerian's economy. And the study of capital structure is usually peculiar to each countries as the factors that determines the optimal capital structure vary from one country to another. This study will therefore add to the existing knowledge on financial management in Nigeria especially in the oil and gas sector.

1.3 Objective of the Study

The main objective of this study is to critically determine the effect of capital structure on the financial performance of the listed oil and gas firms in Nigeria. Other specific objectives are:

1. to examine the effect of total debt to total asset ratio on the financial performance of some selected firms in the oil and gas industry of Nigeria.
2. to assess the significant effect of total debt to total equity ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria
3. to investigate the effect of long-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector of Nigeria.
4. to determine the significant effect of short-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria.

1.4 Research Questions

To achieve the objectives, the study is guided by the following questions:

1. Does total debt to total asset ratio has any significant effect on the financial performance of some selected firms in the oil and gas industry of Nigeria?
2. What is the significant effect of total debt to total equity ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria?
3. What is the effect of long-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector of Nigeria?
4. What is the significant effect of short-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria?

1.5 Research Hypotheses

The answers to the research questions were used to test the research hypotheses stated below in the null:

$H0_1$: Total debt to total asset ratio has no significant effect on the financial performance of some selected firms in the oil and gas industry of Nigeria.

$H0_2$: Total debt to total equity ratio has no significant effect of on the financial performance of some selected firms in the oil and gas sector of Nigeria.

$H0_3$: Long-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.

$H0_4$: Short-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria

1.6 Significance of the Study

This study is of great importance to both business analysts and researchers as it adds to the existing knowledge in the realm of capital financing. It also makes up for the scarcity of scholarly papers in Nigeria on firms' capital structure and their financial performance.

The findings of this study will assist in an effective and efficient financing decision making by firms in Nigeria especially in the oil and gas sector. They would be placed on a sound footing to understand the effect of various financing mix on their operations. Financial analysts and consultants will find this study useful in their financial and advisory services to waning and financially distressed companies.

This study anticipates that the result will also be useful to owners in making informed decisions with regard to their equity interest in relation to the debt financing options available to their firms, creditors in ascertaining credit worthiness of a firm that is being able to identify the firms that are financially strong enough to settle their claim as at when due. Government too is no exception as it will be helpful to them in making favourable financial policies. Hence, having right decision to these issues will help to improve more on the Gross Domestic Product contribution by the oil and gas sector and also improve on employment rate once the sector is more viable since the investors are interested in knowing the impact of such decisions on an organisation performance.

1.7 Scope of the Study

The scope of this study covers a sample of 7 firms out of ten (10) listed downstream oil and gas companies in the Nigeria Stock Exchange as 2019. This study covers the financial year period of five (5) years from 2014 to 2018. The study chooses the oil and gas sector of Nigeria as its domain because it is a major determinant of Nigerian's revenue which determines the economic growth.

1.8 Limitations of the Study

This study was limited by various number of factors which among are financial constraint, limited number of published research papers on related study in Nigeria especially in the oil and gas sector and so on. Nevertheless, the above-mentioned limitations did not hinder the study from achieving its objectives as they were managed as much as possible. It is limited to the sample of seven (7) firms out of the ten (10) downstream oil and gas firms listed in the Nigerian Stock Exchange as at May 2019. And it covers only the period of 2014-2018 financial year.

1.9 Operational Definitions of Terms

1. **Capital Structure:** Capital structure is the amount of debt and equity in financing a firm. It refers to the fraction of the combination of both long-term debt and equity financing in the entire amount of money which a firm should raise to run its business.
2. **Financial Performance:** Financial Performance is the overall state of health of the financial objectives and processes in financial terms of a firm over a specified period of time. It measures the outcomes of a firm's strategies and operations in financial terms.
3. **Debt**: Debt is the loan taken in form of corporate bond.

4. **Equity**: Ownership interest or claim of a holder of common stock (ordinary shares) and some types of preferred stock (preference shares) of a company.
5. **Profitability**: The condition of yielding a financial profit or gain. It is often measured by price to earnings ratio.
6. **Return on Asset**: Return on Asset is the ratio measuring the functional profitability of a (non-financial) firm, stated as a percentage of the operating assets.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter discusses the conceptual, theoretical and empirical framework of capital structure and financial performance of renowned theories and studies by other researchers in the field of capital structure that provide foundation to the study and shows the effect of capital structure on the oil and gas sector of Nigeria.

2.1 CONCEPTUAL REVIEW

2.1.1 Definition of Capital Structure

Alfred (2007) indicated that the capital structure of a company means the percentage of debt and equity in the company's complete capital structure. According to Aliu (2010), the capital structure of a firm relates to the mixture of its economic liabilities and its equities. It's the manner a corporation funds its property through a combination of equity and debt. Semiu and Collins (2011) pointed to it as the ratios of capital working in a company by sort, namely equity and debt capital, each of which has its own advantages and disadvantages. Hence, capital structure is defined as the mixture of both equity and debt capital in funding the assets of a firm. From the abovementioned, capital structure is basically a firm’s financial structure, which comprises of a firm’s reserves, debt financing and equity financing to remain effective in financing its activities. But, whether or not optimal capital structure occurs, it is still one of the most significant and hard issues in corporate finance.

Capital Structure according to Weston and Brigham (1979) is related to as the funding of a business defined by long-term debt, net worth and preferred stock. The capital structure of a firm as discussed by Inanga and Ajayi (1999) does not comprise short-term credit, but means the compound of a firm's long-term funds gotten from many sources. Van Horne and Wachowicz (1995) define capital structure as a combination of company's perpetual long-term financing represented by preferred stock, debt and common stock equity. According to (Suhaila and Mahmood, 2008), the capital structure of a company is a mix of debt and finance which includes preference stocks and equity as well as the reference as the firm's long term funding fusions (Goyal, 2013). It is the means a formation funds its operations using some mixture of equity plus debt (Tsai, 2010). Nirajini and Priya (2013) explain it as the method an establishment applies for funding based on a combination of long-term capital (ordinary and preference shares, debentures, loans, loan stock, etc.) in addition to short-term responsibilities like overdraft and other payables. Also, Lambe (2014), Akinyomi and Olagunju (2013), Salawu (2009) taught that capital structure is the concoction of varied securities used by a firm in funding its lucrative business. Abdul (2010), Saad (2010), Shehu (2011), Miheala (2012) and Ishaya and Abduljaleel (2014) also supports this by referring it to as a mix of different types of securities (long-term debt, common stock) which are issued by a firm to finance its assets.

Kennon's word equity composition (2010) relates to the proportion of equity (cash) at job in a company by form. There are two systems of capital: equity capital and debt capital. Equity capital refers to the donated capital; money originally invested in the business in interchange for shares of stock; and retained earnings; earnings from past years that have been kept by the company to strengthen the statement of financial position, growth, acquisition and expansion of the business.

And debt capital is the long term bonds used by the firm in funding its investment choices while coming up with its primary and also paying back interest.

Pandey (1999) differentiated between capital structure and financial structure by asserting that capital structure signifies the equivalent relationship between long-term debt and equity capital while the many ways used to increase funds is regarded as the firm's financial structure.

2.1.2 Components of Capital Structure

The various components of a firm's capital structure according to Inanga and Ajayi (1999) may be classified into equity capital, preference capital and long-term loan (debt) capital.

2.1.2.1. Equity Capital

This includes the ability to supply externally and also the ability to purchase equity shares approved by a share certificate. The investors own portion of the company. Companies award dividends to shareholders from the company's profit at the end of the economic era (Efobi, 2008). Equity financing is the process of raising capital through the sale of shares. This style of funding is particularly significant during a company's start-up period. In this technique of funding, shareholders make gains when there is a rise in the share price, as well as through the sharing of dividends by the company in which the investor has purchased a stake. Companies collect cash because they may have a short-term need to cover charges or they may have a long-term objective and need resources to spend in their development. By selling shares, they sell in return for cash ownership in their company. Equity financing can be obtained either from internal or external financing. Financing internally is from retained earnings reinvested in the company's operations

from the previous year. External financing means the issuance of common (ordinary) or preferred stocks

2.1.2.2 Ordinary Shares

An ordinary share is a method of corporate equity ownership, that is, a type of company share. It is also called a voting share. It is the most common kind of share that shareholders buy and sell in stock marketplaces. Ordinary shares serve as evidence of proportionate ownership of a company. In other words, they are proof of ownership of part of a company.

2.1.2.3 Preference Shares

Preference shares are shares by whatever name called, which do not entitle the holders to a right to vote or to partake outside a specific amount in circulation of dividend, redemption or winding up. Preference shares give their owners preferred treatment. Owners usually receive fixed dividend payments and have priority over ordinary shareholders. In other cases, shareholders of choice obtain their dividends first. What remains gets to normal investors. If a business becomes insolvent, preferential shareholders are further up in the queue for repayment. Shareholders of choice have liquidation priority over normal shareholders. Preference shares, more commonly stated as preferred stock, are shares of a company's stock with dividends that are paid out to shareholders before common stock dividends are distributed. If the company becomes bankrupt, preferred stock holders are eligible to be paid from company assets before common stockholders. Most preference shares have a static dividend, while common stocks generally do not. Preferred stock shareholders also typically do not hold any voting rights, but common shareholders usually do.

2.1.2.4 Debt Capital

Ihenetu, Iwo and Ebiware (2016) suggests that debt capital is the long span duty an entity applies in financing its investment events which is complemented by a long repayment period. The charge of debt in an entity's capital structure hinge on the state of its financial position. Debt financing is the borrowing of credits from other companies, banks, or financial institutions in order to support a company's operations. The loan principal is repaid at a later point in time, with some interest expenses being paid before the debt's maturity.

2.1.2.5. Long Term Debts

Long-term debt which is also known as long-term liabilities, refers to any financial responsibility that extend more than a 12-month period or beyond the present business year or operating cycle. Some common examples of long-term debt include bonds, individual notes payable, convertible bonds, lease or contract obligations, pension or post-retirement benefits, contingent obligations, etc.

2.1.2.6. Short Term Debts

Also recognized as short-term liabilities, short-term debt relates to any economic commitments owing within a 12-month span or within the present business year or working cycle. Some prevalent instances of short-term debt include short-term bank lending, deposits payable, salaries, lease fees, tariffs on revenue payable, etc.

2.1.3 Financial Performance

A company has taken countless steps to assess and derive from its economic results; there is a absence of agreement as to the metric or variable that should be implemented to a company's proxy

results. Different measurements implemented in evaluating efficiency and used by varying writers to examine capital structure and profitability include yields on equity, yields on assets and income per stock. The steps are used to determine the employees' contributes to the company's development and sustainability. Performance is generally evaluated in terms of profitability. Profitability according to Owolabi and Obida (2012) is the capability of a business to make profits from all its operations (operating, investing and financing activities).

And economic efficiency can be evaluated by factors involving productivity, profitability, development, or even customer satisfaction. These steps are interrelated. Financial measurement is one of the tools which shows the financial strengths, weaknesses, opportunities and threats. Those measurements are return on investment (ROI), residual income (RI), earning per share (EPS), dividend yield, return on assets (ROA), growth in sales, return on equity (ROE), etc. (Stanford, 2009).

2.1.3.1. Return on asset (ROA)

Return on investments is evaluated by income before interest and payment (EBIT) divided by complete investments. Return of asset is used to measure the firm performance. It is a pointer of how lucrative a business is comparative to its total assets. ROA gives a manager, shareholder or analyst an awareness as to how efficient a company's administration is at using its assets to produce incomes. Return on assets is displayed as a percentage. It is computed thus:

$$\frac{\text{Profit Before Tax/Earnings Before Interest and Tax}}{\text{Total Assets}} \times 100$$

2.1.3.2. Return on equity (ROE)

Return on equity is a determinant of financial performance computed by dividing net income by shareholders' equity. Because shareholders' equity is equivalent to a company's assets minus its debt, ROE could be thought of as the return on net assets. It is regarded a metric of how efficiently leadership uses the resources of a company to generate earnings. It is therefore computed thus:

$$\frac{\text{Profit After Tax/Earnings After Interest and Tax}}{\text{Shareholders' Equity}} \times 100$$

2.2 THEORETICAL REVIEW

The foundation for contemporary thoughts on capital structure is the 1958 Modigliani-Miller theorem quoted by Ogbulu & Emeni (2012). It neglects some variables and is therefore viewed as a sheer theoretical consequence.

2.2.1. Modigliani & Miller Theory

The concept of Modigliani & Miler (MM) (1958) created that the company valuation is autonomous of its asset framework under the ideal equity system in the lack of commercial income, operation and organization costs and the more data is disseminated. According to Chatham & Sharma (2015), the investment environment is presumed to be ideal if there is no open entry to data and business costs for insiders and outsiders, no tax and divorce costs. MM Theory (1958) is of the opinion that the valuation company is autonomous of its equity framework (Akeem et al. 2014). That is, the selection of equity and debt does not count and the inner and external resources are perfect substitutes. Although the relevance of the capital structure of MM theory is doubtful, it has drawn much exposure to the reasonableness of its premises, which include the lack of

bankruptcy costs, taxes and other imperfections that occur in the globe. There are different kinds of finance, each with unique features, according to Muritala (2011). The nature of the finances needed by firms could therefore be short, medium and long-term in order to carry out their business, so that they could also be internal or external in nature..

2.2.2. Pecking Order Theory

Stewart & Myers, (1984) created the theory or hypothesis to justify the economic behavior of the selection of social composition to the public. That is, the main opinions the firm managers should follow and highly pertinent to capital structure decisions are manager want to uphold steady shareholder dividends over the period, in spite of the fluctuating incomes, investment chances and stock prices; Managers choose internal financing when comparing it to external financing and if the external financing is necessary, hereafter, then choose for least risky choice first before the much riskier ones (Chadha & Sharma, 1915). The securities are listed at the other hand depending on their presumed danger of debt on one side to common stock. However, commercial funding behavior is the consequence of information asymmetry, so managers are notified about the importance of the proposal within a business for instances where the company surrenders significant amounts of the net present value of a project to shareholders in internal financial times. A number of new theories have emerged from traditional financial discourse compared to MM proposals in decades to explain the choice of capital structure of companies.

2.2.3. Trade-off Theory

According to Graham & Harvey (2001), the tradeoff principle refers to the selection of compromise between the advantages and expenses of bonds and the trade-off of lending expenses

and advantages while retaining the property of companies as a determinant of the ideal equity proportion of companies. Trade-off can therefore be regarded as a summarized equilibrium of various advantages and debt-related expenses for optimal capital structure. In addition, a company adapted to the optimum debt ratio, expenses and lags recognized as adaptation expenses. It is therefore regarded as the company's ideal investment framework (Myers, 1984).

2.2.4. Agency Theory

According to the agency cost hypothesis established by Jensen & Meckling (1976), it argues that it is a agreement in which one individual (the main) invites another individual (officer) to conduct a obligation on his basis which includes the transfer of obligation and power to the officer within the limited responsibilities. However, competent leadership of property segregation from leadership may lead in an agency conflict that is inadequate director (officer) job capacity in selecting variables and outputs according to one desires. As a result the firm may fail to maximize the own wealth and utilities. Hence, the theory recommends that the best way eases the problem. Berle & Means (1932) who is the first advocate of the concept puts forward that as a continuous weakening of equity possession of the large company, equity and control becomes more divided, which gives the managers a chance to chase their interest as an alternative of the shareholders'. Wangi et al. (2014) claim that debt funding is intended to limit the skilled manager's inclination toward opportunistic private benefit conduct. Thus, funding to decrease free money transfers within the company by charging a fixed interest rate and this fixed interest payment would allow the manager to deviate from negative investment and push the shareholder to operate in the exchange of the shareholders, so optimum debt level in the capital structure would minimize the agency costs owing to divergent interest of executives and shareholders and debt owners.

2.3 EMPIRICAL REVIEW

This section offers some perspectives into previous research conducted by distinct writers in distinct nations at distinct times in the field of capital structure and economic results.

2.3.1 Total Debt to Total Assets and Financial Performance

The total debts to total assets measure the amount of the total funds provided by creditors in relation to the total assets of a firm. Generally creditors would desire low ratio for all debts for the reason that the lower the ratio the greater cushion against the creditors losses in the occurrence of liquidation. There are different views in the literature as to the relationship between total debt to total assets and financial performance. In their studies on 1022 New York Stock Exchange (NYSE) firms and 244 America Stock Exchange (AMEX) firms, Forsberg and Ghosh (2006) found that the connection between complete debt and economic results is positive. In the studies undertaken on 1200 Chinese companies between 1994 and 2003, Huang and Song (2006) found that leverage has a adverse connection with economic results. Andersen (2005) studied the connection between capital structure and firms performance for 1323 companies from various industries and concluded that there is a significant relationship between total debts to total asset and financial performance. Ebaid (2009) researched the impact of capital structure on the results of 64 Egyptian firms from 1997 to 2005. The findings proposed that there is a important adverse connection between complete debt to complete resources and economic performance. Mramor and Crnigoj (2009) established that there is a significant negative relationship between total debt to total assets ratio and financial performance.

Zeitun and Tian (2007) have discovered a significant negative relationship between total debt to total asset and financial performance. Abolfazl et al (2013) study showed significant negative relationship between total debt to total assets and financial performance. This confirms that the lesser total debt to total assets ratio, the better the financial performance. The study is in line with the result of Heydar, Elham, Vahid and Mohsen (2012) which exposed that there is significant negative relationship between total debt to total assets and financial performance. Abdul (2010) examined the connection between capital structure choices and the strong results of Pakistan's engineering industry. Results found that complete debt to complete resources has a important adverse connection to strong economic performance. Onaolapo and Kajola (2010) explored the impact of capital structure on the economic results of businesses mentioned on the Nigerian Stock Exchange. The research was conducted for the era 2001 to 2007 on 30 non-financial businesses in 15 sector industries. Results found that complete debt to complete resources has a substantial adverse impact on economic performance.

Osuji and Odita (2012) researched the effect of capital structure on Nigerian companies ' economic results using a sample of 30 non-financial companies registered on the Nigerian stock exchange for the era 2004-2010. Results found that complete debt to complete resources has a substantial adverse effect on companies ' economic performance. Taiwo (2012) examined the effect of capital structure on firm's performance in Nigeria using five-year annual data of 10 firms. The result of the regression indicated a negative 36 relationship between the explanatory and outcome variables. Suleiman and Nour (2012) examined the effect of capital structure on the performance of Palestinian financial institutions. The outcome disclosed that complete debt to complete asset has a beneficial connection to economic results. Abbasali, Ali, Hamid and Kambiz (2012) explored

the effect of capital structure on the economic results of businesses mentioned on the Tehran Stock Exchange using a sample of 400 businesses from 2006 to 2010. The results suggested that there is a significant negative relationship between total debt to total asset and financial performance. Rasa and Jurgita (2012) studied the relationship of corporate governance decisions on capital structure and performance of Lithuanian food and beverages companies for the period 2005 to 2010. The outcome disclosed that complete debt has a powerful adverse connection with the economic results of Lithuanian registered manufacturing companies.

Gholamreg, Alireza and Alireza (2013) explored the connection between corporate capital structure and economic results in Iran. The population of the study consists of 380 companies listed on Tehran Stock Exchange for 13 years from 2001 to 2013. To test the hypotheses, the pooled data regression method was used. F and T statistics were used to test the significance of patterns. The result of the study showed a significant negative relationship between total debt to total assets and financial performance. Roanne (2013) explored the impact of capital structure on strong economic results from 2003 to 2011. The result indicated a significant negative relationship between total debt to total assets and financial performance.

Maniagi, Mwalati, Ondiek, Mesiega and Ruto (2013) inspected the relationship between firm's capital structure and performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period of 5 years, 2007 to 2011. Results indicated that complete debt to complete asset proportion substantially influences yield on investments of registered companies in Nairobi. Waqas, Imran, Hafiz, Jawad and Zahid (2013) observed the causes of the textile and water sector's economic results in Pakistan. The outcome disclosed that complete debt to complete resources has

a highly adverse connection with economic results at a meaning point of 5 percent. Appah, Okoroafor and Bariweni (2013) explored the effect of the capital structure on the results of 32 listed companies in the Nigerian Stock Exchange for the era 2005 to 2011. They discovered that complete debt to complete resources has a important adverse connection to economic results.

In addition, Saeed et al (2012) studied the impact of the capital structure on the performance of listed banks in Pakistan for the period 2007-2011. The finding showed that total debt to total assets has a strong, positive relationship to financial performance. Akinyomi (2013) studied the impact of the capital structure in Nigeria. Data was obtained from the companies' annual reports from 2007 to 2011. Analysis of the correlation was used in data analysis. The finding showed that total debt to total assets has a significant positive effect on financial performance. Jude (2013) examined the impact of capital structure on financial performance of 30 listed manufacturing firms in Sri Lanka from 2008 to 2012. The results exposed that there was no significant relationship between total debt to total assets and financial performance. Abdullah (2014) inspected the impact of capital structure of 74 firms on financial performance in Saudi Arabia for the period 2004 to 2012. The regression outcome indicates that complete debt to complete resources has a important connection with economic results.

Rafiu, Taiwo, and Dauda (2012) explored the impact of monetary strategy on corporate results in Nigeria. Panel data for 70 firms covering a period from 1990 to 2006 were analyzed. The outcome stated a powerful favorable connection between complete debt and complete resources and economic results. Similarly, Idode et al (2014) research examined the impact of capital structure on the profitability of registered companies in Nigeria. The research discovered a important beneficial connection between complete debt and complete resources and economic results.

Mwangi, Makau and Kosimbei (2014) explored the connection between the capital structure and results of 42 non-financial firms mentioned on the Nairobi Securities Exchange, Kenya. The study used panel data extracted from the annual reports and financial statements of the sampled listed firms, and employed random effects model and feasible generalized least square (FGLS). The outcomes showed that total debt to total assets has significant negative relationship with to financial performance. Innocent, Ikechukwu and Nnagbogu (2014) piloted a study on the effect of financial leverage on financial performance of quoted pharmaceutical companies in Nigeria for the period 2001-2012. The study used secondary data found from financial statements of three pharmaceutical companies. Descriptive statistics, Pearson correlation and multiple regressions were employed in order to decide the relationship between financial leverage variables and performance. The results showed that total debt to total assets has negative relationship with financial performance.

Almustapha (2014) inspected the relationship between capital structure and firm performance during and after the global financial crisis among Malaysian listed companies. The research used a panel data approach on a sample of 278 non-financial listed companies. The regression models revealed that total debt to total assets has a significant negative relationship with financial performance. Maina and Ishmail (2014) studied the relationship between capital structure and financial performance of all the firms listed at Nairobi Securities Exchange from 2002 to 2011. The result generated from the output of Gret statistical software indicated a negative relationship between total debt to total assets and financial performance. Lawal, Edwin, Kiyanjui and Adisa (2014) considered the effect of capital structure on performance of manufacturing companies in

Nigeria for the period 2003 to 2012. The regression outcome disclosed an adverse connection between complete debt to complete wealth and economic results.

In addition, Harwood (2015) studied the effect of debt on the performance of commercial banks listed on the Nairobi Securities Exchange. The study used longitudinal research design on 11 commercial banks and tested information using variant 16.0 of SPSS. The regression result revealed that total debt to total assets has negative relationship with firm performance. Aransiola and Oluwadetan (2015) examined the relationship between capital structure and profitability of quoted manufacturing companies in Nigeria. Using data extracted from the Nigerian Stock Exchange fact book and annual reports of the selected companies. The result showed that there is negative relationship between total debt to total assets ratio and financial performance. Mathanika, Virgina and Paviththira (2015) inspected the impact of capital structure on firm value of listed manufacturing companies in Sri Lanka. Secondary data was extracted from the financial statements of 15 companies. The result indicated that total debt to total assets has insignificant association with financial performance.

2.3.2 Total Debt to Total Equity and Financial Performance

Total debt to complete equity assesses the magnitude to which a company uses loaned money. This is generally calculated by separating a company's complete debt (including current liabilities) by its owners' shares. Creditors would like this ratio to be lower; because the lesser the ratio the greater the level of a firm's funding that is being provided by shareholders and the bigger the cushion (margin of protection) in the incident of shrinking asset values or outright losses. The total debt to total equity ratio compares the company's total liabilities to its total shareholder equity.

This is a measure of how much suppliers, lenders, creditors and obligors have dedicated to the company versus what shareholders have committed. A company's total debt to total equity ratio is expected to have a significant impact on a firm's financial performance as shown by many empirical studies conducted in Nigeria and in other Countries.

Lorpev and Kwanum (2012) inspected the relationship between capital structure and performance of manufacturing firms listed on Nigerian Stock Exchange. The study found insignificant relationship between total debt to total equity and financial performance. Rasa and Jurgita (2012) considered the effect of corporate governance decisions on capital structure on Lithuanian food and beverages companies for the period 2005 to 2010. The study found negative relationship between total debt to total equity and financial performance. Heydar et al (2012) reflected the effect of capital structure on performance of firms listed on Tehran Stock Exchange. They found a significant positive relationship between total debt to total equity and financial performance. Also, Karadeniz, Kandir, Balcilar and Onal (2012) examined the determinants of capital structure of Turkish companies. The outcomes presented a significant positive relationship between total debt to total equity and financial performance. Simon and Afolabi (2011) studied the impact of capital structure on industrial performance of five quoted firms in Nigeria from 1999 to 2007 using panel data. The regression result showed a positive relationship between firm's performance and debt to equity ratio.

Olokoyo (2012) also researched the effect of capital structure on the results of the company in Nigeria. The discoveries opened that there is a significant relationship between total debt to total equity and return on assets. On the contrary, Cengiz, Yunus and Sukriye (2013) inspected the effect

of capital structure decisions on firm performance in Turkey. The results showed an insignificant positive relationship between total debt to total equity and return on assets. Maina and Kondongo (2013) examined the effect of debt-equity ratio on performance of firms listed at the Nairobi Securities Exchange for the period 2002-2011. The result revealed that significant negative relationship exists between total debts to total equity ratio and financial performances.

Syed (2013) investigated the connection between financial leverage and efficiency of registered sugar businesses in Pakistan. The result indicated a significant positive relationship between total debt to total equity and financial performance. Akinyomi (2013) researched the impact of corporate capital structure in Nigeria using information from the company's quarterly accounts from 2007 to 2011. The result indicated a positive relationship between total debt to total equity and financial performance. Gholamreg et al (2013) investigated the connotation between capital structure and financial performance of 380 companies listed in Tehran Stock Exchange for the period 2001 to 2013. To test the hypotheses, the pooled data regression method was used. F and T statistics were used to test the significance of patterns. The result of the regression showed that total debt to total equity ratio has insignificant relationship with financial performance.

Khalaf (2013) used a sample of Jordanian 45 listed manufacturing companies to inspect the relationship between capital structure and firm performance across different industries. The sampled firms' annual financial statements have been used for a period of five (5) years from 2005 to 2009. The multiple regressions outcome discovered a positive relationship between total debt and total equity and financial performance. Babalola (2014) conducted a triangulation analysis of capital structure and corporate performance in Nigeria using thirty-one (31) manufacturing firms

from 1999 to 2012. The results revealed a significant relationship between total debt to total equity and financial performance.

Another study by Amara and Bilal (2014) investigated the impact of the capital structure on the performance of 33 food companies listed on the Karachi Stock Exchange from 2007 to 2012. The study found a negative relationship between total debt with total equity and financial performance. Amos and Francis (2014) also investigated the relationship between the wealth of shareholders and the debt-equity mix of 60 listed non-financial companies in Nigeria between 1997 and 2011. The results showed a significant negative relationship between total debt and total equity and return on assets and earnings per share.

Additionally, Suleiman (2013) surveyed the effect of capital structure on the performance of the firm in Saudi Arabia. The study found a significantly negative relationship between total debt to total equity and asset returns. Maina and Ishmail (2014) observed the effect of capital structure on financial performance in Kenya. The population of the study consists of all firms listed at the Nairobi Securities Exchange and census approach was employed for the period 2002 to 2011. The result of the regression indicated a negative relationship between total debt to total equity ratio and financial performance. Lawal et al (2014) studied the effects of capital structure on performance of manufacturing companies in Nigeria for the period 2003 to 2012. Descriptive and regression technique were employed. The result revealed negative relationship between total debt to total equity and financial performance.

Idode et al (2014) assessed the impact of the capital structure on the performance of the banks listed in Nigeria for the period 2008-2012. Study findings showed that total debt to total equity has a significant positive relationship with financial performance. Innocent et al (2014) researched for the era 2001-2012 the impact of economic distortion on the economic results of listed pharmaceutical firms in Nigeria. The study used secondary data from the financial statements of three pharmaceutical companies quoted on the Nigerian stock exchange. Descriptive statistics, Pearson correlation, and multiple regressions were used. Results showed that total debt to total equity has a negative relation to financial performance. Mathanika et al (2015) investigated the impact of capital structure on the value of the listed manufacturing companies in Sri Lanka. The secondary data sources from 15 manufacturing companies were used. Correlation and analysis of multiple regression have been used. The finding showed that there is a significant association between total debt to total equity and financial performance.

2.3.3 Long-term Debt to Total Assets and Financial Performance

Long-term debt to total assets measures the relative weight of long-term debt to the capital structure (long-term financing) of a firm's long-term debt to- total assets. Suleiman (2013) argues that the higher the long-term debt to total assets the greater the return on assets. Empirically, Abor (2008) considered determinants of capital of Ghanaian firms listed on the Ghana Stock Exchange (GSE) for the period 1998 to 2003. The results suggested that there is a significant negative relationship between long term debt to total assets and financial performance. Karadeniz et al (2009) and Heydar et al (2012) found that long term debt to total asset has a positive and insignificant relation with financial performance. Khalaf (2013) inspected the relationship between capital structure and firm performance across different businesses using a sampled listed 45

Jordanian manufacturing firms for the period 2005-2009. The outcome presented that there is an insignificant negative relationship between long-term debt to total assets and financial performance. Maniagi *et al* (2013) examined the relationship between firm's capital structure and performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period of 5 years, 2007 to 2011. The outcomes exposed that long term debt to total assets ratio significantly influences financial performance of listed firms in Nairobi.

Lorpev and Kwanum (2012) researched the investment connection framework and efficiency of manufacturing companies mentioned on the Nigerian Stock Exchange. The study found insignificant relationship between long term debt to total assets and financial performance. Maniagi et al (2013) examined the relationship between a firm's capital structure and its performance among a sample of 30 companies listed on Nigeria Stock Exchange for the period 2007-2011. The findings showed that long-term debt to total assets has an insignificant positive relationship with financial performance. Gholamreg et al (2013) investigated the link between capital structure and financial performance of 380 companies listed in Tehran Stock Exchange for the period 2001 to 2013. The result of the regression showed that long term debt to total assets has insignificant relationship with financial performance. Akinyomi (2013) studied the effect of capital structure on financial performance in Nigeria. Data was obtained from annual reports of the sampled companies from 2007 to 2011. The result indicated insignificant relationship between long term debt to total assets and financial performance.

Abdullah (2014) examined the impact of capital structure on performance of 74 companies in Saudi Arabia for the period 2004 to 2012. The outcome of the regression displayed that long term

debt to total assets has significant relationship with financial performance. Amara and Bilal (2014) studied the impact of capital structure on performance of 33 food companies listed on Karachi Stock Exchange for the period of 2007 to 2012. The study exposed that there is no strong correlation between long term debt to total assets and financial performance. Khalaf (2013) probed the relationship between capital structure and firm performance across different industries using a sample of 45 Jordanian listed manufacturing firms. The annual financial statements of the sampled firms were used for a period of five (5) years from 2005 to 2009. The outcome of the multiple regression opened a negative and insignificant relationship between long term debt to total asset and financial performance. Cengizet al (2013) studied the effect of capital structure decisions on firm's profitability in manufacturing sector in Turkey. The investigation has been conducted on the basis of secondary information and for conducting smooth analysis data has been collected from different sources annual reports and publication. The outcomes disclosed that long term debt to total assets has a negative relationship with the financial performance.

Ngoc and Jeremy (2011) also observed the relationship between the company characteristics, capital structure and operational performance of 427 companies listed on the Vietnamese stock exchange for the period 2007-2009. They discovered a substantial negative relationship between long-term debt to total assets and financial performance. In addition, Heydar et al's study (2012) discovered that there is no significant relationship between short-term debt to total assets and corporate financial performance. Muhammad et al (2012) discovered that the long-term debt to total assets has a negative performance relationship. Mustafa and Osama (2013) found an insignificant negative relationship between long-term debt to total assets and company performance, while Zeitun and Tian (2007) found earlier that long-term debt has a significant

negative relationship to financial performance. Similarly, Rasa and Jurgita (2012) studied the relationship between the corporate governance decision on the capital structure and performance of Lithuanian food and beverage listed companies for the period 2005-2010. The result revealed a significant negative relationship between long term debt to total assets and financial performance. Waqas et al (2013) conducted a study on the determinants of the financial performance of companies in the textile and food sectors in Pakistan for the period 2005-2010. The result revealed significant negative relationship between long-term debt and financial performance. Contrary to the above discoveries, Rafiu et al (2012) discovered a significant positive relationship between total debt and total assets and financial performance.

Almustapha (2014) inspected the relationship between the capital structure and firm performance among Malaysian listed companies during and after the global financial crisis. The research used a data panel approach on a sample of 278 non-financial listed companies. The regression models discovered that there is a significant negative relationship between long debt and total assets and financial performance.

2.3.4 Short Term Debt to Total Assets and Financial Performance

This estimates how comparative short-term loans to a company's complete assets are to be repaid within an accounting period. Some academics asserted that the stronger the company is in enhancing its output, the lower the debt. Determinants of Ghanian companies mentioned on the Ghana Stock Exchange (GSE) during the six-year span 1998 to 2003 were researched by Abor (2008). The findings of the study indicated that short-term debt had a negative and significant impact on economic performance. Zeitun and Tian (2007) studied the effect of capital structure on

the results of 167 Jordanian firms from 1989 to 2003. The outcome stated that short-term debt to complete asset proportion (SDTA) has a significant adverse effect on economic results.

In addition, Abdul (2010) examined the relationship between capital structure decisions and firm performance of the engineering sector in Pakistan. The findings indicated that short-term debt to complete resources has an irrelevant connection with strong economic performance. Lorpev and Kwanum (2012) researched the impact of capital structure on the results of manufacturing companies mentioned on the Nigerian Stock Exchange. The research discovered an irrelevant connection between short-term debt to complete resources and economic results. Cengiz et al (2013) also explored the impact of capital structure choices on the profitability of companies in the manufacturing sector in Turkey from 2005 to 2011. The results revealed a important adverse connection between short-term debt and asset yield. Maniagi et al (2013) inspected the relationship between the capital structure and performance of the firm among a sample of 30 companies listed on the Nigeria Stock Exchange for the period 2007 to 2011. The research disclosed that short-term debt has a important adverse effect on economic results.

Gholamreg et al (2013) researched the connection between capital structure and economic results of 380 businesses mentioned on the Tehran Stock Exchange for the era 2001 to 2013. The result of the regression indicates that short-term debt to full resources has an irrelevant connection with economic results. Akinyomi (2013) considered the effect of capital structure on Nigeria's financial performance. The data were obtained from the sampled companies ' annual reports from 2007 to 2011. The outcome showed a favorable connection between short-term debt to complete resources and economic results. Appah et al (2013) examined the impact of capital structure in the Nigerian

Stock Exchange on the operating performance of quoted firms. They discovered that short-term debt to total assets has significant negative relationship with financial performance.

Abdullah (2014) inspected the impact of capital structure on the performance of 74 companies in Saudi Arabia between 2004 and 2012. The regression result showed that short-term debt to total assets has a significant relationship to financial performance. Khalaf (2013) used a sample of 45 manufacturing firms in Jordan for the period 2005 to 2009 to investigate the relationship between capital structure and firm performance across different industries. The result showed a negative and insignificant relationship between short-term debt to total assets and financial performance. Amara and Bilal (2014) investigated the impact of capital structure on the performance of 33 food companies listed on the Karachi Stock Exchange from 2007 to 2012. The study showed that there is no strong correlation between short-term debt to total assets and financial performance.

In addition, Ngoc and Jeremy (2011) studied the relationship between the corporate characteristics, capital structure and operational performance of 427 companies listed on the Vietnamese stock exchange for the period 2007-2009. They discovered a significant negative relationship between short-term debt to total assets and asset return. In addition, Heydar et al's study (2012) discovered that there is no significant relationship between short-term debt to total assets and corporate financial performance. Appah et al (2013) inspected the impact of the capital structure on the performance of 32 listed companies in the Nigerian Stock Exchange for the 2005-2011 period. The study found a significant negative relation between short-term debt to total assets and financial performance.

Maina and Kondongo (2013) examined the effect of the debt-equity ratio on the performance of firms listed on the Nairobi Securities Exchange for the period 2002-2011. Results showed that short-term debt to total assets has a significant relationship with financial performance. Almustapha (2014) investigated the relationship between capital structure and firm performance among listed Malaysian companies during and after the global financial crisis. The research used a data panel approach on a sample of 278 non-financially listed companies. The regression models showed that short debt to total assets has a significant negative relationship with financial performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This study will employ the use of descriptive research design which will involve the use of cross-sectional time series data from the period of 2014-2018. This study is envisaged to discover the relationship between the independent variable (capital structure) and the dependent variable (financial performance) using secondary data obtained from the annual financial report of selected listed downstream oil and gas firms in Nigeria.

3.2 Population of Study

The population of this research work will constitute the total number of the downstream oil and gas firms listed in the Nigerian Stock Exchange as at the time of the study. The population of this study therefore is the total number of ten (10) downstream oil and gas companies listed in the Nigerian Stock Exchange as at when the study was carried out.

Table 3.1 - Listed Downstream Oil and Gas Companies

S/N	COMPANY
1.	11 Plc
2.	Amino International Plc [MRS]
3.	Capital Oil Plc [MRF]
4.	Conoil Plc [MRF]
5.	Eterna Plc
6.	Forte Oil Plc
7.	Mrs Oil Nigeria Plc
8.	Oando Plc
9.	Rak Unity Pet Comp. Plc
10.	Total Nigeria Plc

Source: **Listed Oil and Gas Companies (NSE Factbook: 2019)**

3.3 Sampling Technique

The Sampling technique employed for this study is the simple random sampling technique. The simple random sampling technique is used in order to select the oil and gas firms in the Nigerian Stock Exchange with the required audited financial statement in order to make inference to the total population.

3.4 Sample Size Determination

The sample size of this study shall be seven (7) companies out of the ten (10) listed downstream oil and gas companies in the Nigeria Stock Exchange as at when this study was carried out. The sample size is more than 50% of the population and therefore believed to be representative of the population.

3.5 Method of Data Collection

Secondary data will be used to collect data for this study. After which, the financial ratios will be computed from the financial data extracted from the annual financial statement (Statement of comprehensive income and Statement of financial position) of the sampled listed firms for the relevant years in order to test the relationship between the dependent and independent variables of this study.

3.6 Method of Data Analysis

Data will be computed using the relevant financial ratio for the dependent variable which is Return on Asset (ROA). And the components of capital structure will be analyzed using descriptive analysis and regression analysis on SPSS to answer the research questions and test the various research hypothesis to determine the effect of capital structure on the financial performance of the downstream oil and gas sector in Nigeria.

3.7 Model Specification

The model that will be used in testing the hypotheses of the study is presented below:

ROA = f(CS)

CS = f(E, Debts)

Debts = f(LTD, STD)

ROA = f(E, LTD, STD)

$$\mathbf{ROA = \alpha_1 + \beta_1 TDTA_t + \beta_2 TDTE_t + \beta_3 LTDTA_t + \beta_4 STDTA_t + \varepsilon_{it}}$$

Where:

CS = Capital Structure;

E = Equity;

ROA = Return on Total Asset to measure financial performance of oil and gas industry;

$\beta_0, \beta_1, \beta_2, \beta_3$ = parameters to be estimated;

TDTA = Total Debt to Total Asset;

TDTE = Total Debt to Total Equity;

LTDTA = Long-Term Debt to Total Assets;

STDTA = Short-Term Debt to Total Assets and;

ε_{it} = error term signifying other variables not captured in the study

3.8 Measurement of Variables

The variables of the study consist of dependent variable; financial performance measured by Return on Assets (ROA). However, the independent variable which is capital structure is proxied by total debt to total asset (TDTA), total debt to total equity (TDTE), long-term debt to total assets (LTDTA) and short-term debt to total asset (STDTA). The measurement of the variables will be supported by the Statistical Package for Social Sciences (SPSS) in order to test the relationship between the dependent and independent variables. The measurement of the variables are contained in the table below:

Table 3.2: Variables Measurement and Definitions

	Types of Variables	**Proxies**	**Variables Measurement**
Financial Performance	Dependent Variable	Return on Asset	Profit before Interest & Tax / Total Asset
Capital Structure	Independent Variable	Total debt to Total Assets	Total Debt / Total Equity
		Total debt to Total Equity	Total Debt / Total Equity
		Long term debt to Total Asset	Long term debts / Total Asset
		Short-term debt to Total Asset	Short-term debts / Total Asset

Source: generated by the author (2019)

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS

4.1. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter analyses and interprets the results gotten from the study. It begins with descriptive statistics and then the regression results.

4.1.1 Descriptive Statistics

The summary of the descriptive statistics of the variables for this project are presented in table 4.1.

Table 4.1. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Return on Asset	35	-0.19	0.19	0.0583	0.07861
Total Debt to Total Assets	35	0.32	0.95	0.6794	0.11005
Total Debt to Total Equity	35	0.48	18.54	3.1120	3.30982
Long-Term Debt to Total Assets	35	0.00	0.45	0.1363	0.13948
Short-Term Debt to Total Asset	35	0.26	0.83	0.5431	0.15620
Valid N (listwise)	35				

Source: Output of data analysis by author using SPSS.

Table 4.1 presents the descriptive statistics for the dependent and explanatory variables. From the table, return on assets has minimum and maximum values of -0.19 and 0.19 respectively and the mean value of 0.0583 as well as the standard deviation value of 0.07861. The standard deviation of 0.07861 signifies that the data deviate from the mean value from both sides by 0.07861 implying

that there is a wide dispersion of the data from the mean because standard deviation is higher than the mean value.

The table also shows that the mean of the total debt to total assets of the sampled firms is 0.6794 with standard deviation of 0.11005, and minimum and maximum values of 0.32 and 0.95 respectively. This implies that the performance of the firms in terms of total debt to total assets is on average 0.6794, and the standard deviation value indicates that the total debt to total assets of the sampled firms deviates from the mean value from both sides by 0.11005, implying that there is no significant dispersion of the data from the mean because the standard deviation is lower.

Moreover, the table shows that the mean of the total debt to total equity of the firms is 3.1120 with standard deviation of 3.30982. The minimum and maximum values are 0.48 and 18.54 respectively. This implies that total debt to total equity of the sampled firms is on average 3.1120, and the standard deviation value indicates that the value deviates from the mean from both sides by 3.30982, implying that there is significant dispersion of the data from the mean because the standard deviation is larger.

Furthermore, the table shows that the mean of the long-term debt to total assets of the firms is 0.1363 with standard deviation of 0.13948. The minimum and maximum values are of 0.000 and 0.45 respectively. This implies that long-term debt to total assets of the firms is on average 0.1363. The standard deviation indicates that the value of the firms' long-term debt to total assets deviates from the mean value from both sides by 0.13948. This implies that there is significant dispersion of the data from the mean because the standard deviation is higher.

Finally, the table portrays that the short term debt to total assets has an average value of 0.5431with standard deviation of 0.15620. The minimum and maximum values are 0.26 and 0.83 respectively.

The standard deviation indicates that the value of short term debt to total assets of the firms deviates from the mean value from both sides by 0.15620. This further implies that there is widely no dispersed data from the mean because the standard deviation is small.

4.2. TEST OF HYPOTHESES AND DISCUSSION

The hypotheses were tested using regression analysis.

4.2.1 REGRESSION RESULT

Objective 1: To examine the effect of total debt to total asset ratio on the financial performance of some selected firms in the oil and gas industry of Nigeria.

Hypothesis 1:

$H0_1$: Total debt to total asset ratio has no significant effect on the financial performance of some selected firms in the oil and gas industry of Nigeria.

H_1: Total debt to total asset ratio has significant effect on the financial performance of some selected firms in the oil and gas industry of Nigeria.

Table 4.2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.397[a]	.158	.132	.07324

a. Predictors: (Constant), Total Debt to Total Assets

The model summary shows the predictive power of the model. R is the correlation coefficient between the dependent variable (observed) and the independent variable(s); the predictor(s). The sig of R indicates the direction of the relationship (positive or negative). The value of R range from

-1 to 1. The absolute value of R indicates the strength, with larger absolute value indicating strong relationship.

In Table 4.2., R= 0.397. This means that there is a positive relationship between the return on asset and total debts to total assets, while its value shows moderate relationship.

The R squared (coefficient of determination) show the degree of linear- correlation of variables (goodness of fit) in regression analysis. This is the proportion of variation in the dependent variable explained by the regression model. In other words, it shows the extent to which the independent variable(s) can explain the variance in the dependent variable. The sample R squared tends to be the optimistic estimate of how well the model fit the population.

Table 4.2 show R square of 0.158, which means that total debts to total assets can only explain 15.8% variation in the value of return on asset while holding other independent variables constant.

Adjusted R square only adjust for the number of variables in the regression model. Standard error of the estimate is the standard deviation of the residuals. It attempts to correct R squared to a more closely reflect the goodness of fit of the model. It is also R squared value adjusted for the number of variables in the regression model. The value of Adjusted R in this table is 0.132.

The standard error of estimates is the standard deviation of the residuals. As R squared increases, the standard error of the estimate decreases. In other words, a better fit leads to less estimate error. It is an important indicator of how precise an estimate of the population parameter the sample statistic is.

Table 4.3: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.033	1	.033	6.170	.018[b]
	Residual	.177	33	.005		
	Total	.210	34			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Total Debt to Total Assets

The ANOVA table tells us the overall significance of the model. The F-statistics is the Regression Mean Square (RMS) divided by the Residual Mean Square. F-Statistics determine whether the model is a good fit for the data based on its significance level. A significant value of F-statistics shows that the model is better at predicting the outcome value of the dependent variable than its average. If the significance value of the F-statistics is smaller than 0.05 then the independent variable(s) is significant to explaining the variation in the dependent variable and the null hypothesis is accepted. Table 4.3 show a value of the p-value of 0.018 which is smaller than 0.05. It suggests that there is significant relationship between the return on asset and total debts to total assets. $H0_1$ is therefore rejected and H_1 accepted.

Table 4.4 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.251	.079		3.195	.003
	Total Debt to Total Assets	-.283	.114	-.397	-2.484	.018

a. Dependent Variable: Return on Asset

The standardized coefficients or beta is an attempt to make the regression coefficient more comparable. It provides a useful way of seeing what impact of changing the explanatory variable

by one standard deviation it will have on the dependent variable. It is usually equal to the correlation coefficient between the variables.

Objective 2: To assess the significant effect of total debt to total equity ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria.

Hypothesis 2:

$H0_2$: Total debt to total equity ratio has no significant effect of on the financial performance of some selected firms in the oil and gas sector of Nigeria.

H_2: Total debt to total equity ratio has significant effect of on the financial performance of some selected firms in the oil and gas sector of Nigeria.

Table 4.5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.580[a]	.337	.317	.06499

a. Predictors: (Constant), Total Debt to Total Equity

In Table 4.5, R value is 0.580. This mean that the positive correlation between the return on equity and total debts to total equity is 58%. The R square value is 0.337 (33.7%) meaning that total debts to total assets can only explained 33.7% variation of return on asset while holding other independent variables constant.

Table 4.6. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.071	1	.071	16.746	.000[b]
	Residual	.139	33	.004		
	Total	.210	34			

a. Dependent Variable: Return on Asset
b. Predictors: (Constant), Total Debt to Total Equity

Table 4.6 show an F-statistics value of 16.746 with a p-value of 0.000. This is less than 0.05 (5%) the critical value. This suggest the adoption of H_2 of significant relationship and the rejection of H_0 of no significant relationship between return on asset and total debts to total equity.

Table 4.7. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.101	.015		6.664	.000
	Total Debt to Total Equity	-.014	.003	-.580	-4.092	.000

a. Dependent Variable: Return on Asset

Objective 3: To investigate the effect of long-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector of Nigeria.

Hypothesis 3:

$H0_3$: Long-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.

H_3: Long-term debt to total assets ratio has significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.

Table 4.8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.028[a]	.001	-.030	.07976

a. Predictors: (Constant), Long-Term Debt to Total Assets

In Table 4.8, R = 0.028. This mean there is a positive relationship between Return on asset and long term debts to total assets. The positive relationship is weak (2.8%). The R square result show a value of -0.030. This mean the long term debt to total assets can only explain the variation to the return on asset by -3%.

Table 4.9. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	1	.000	.025	.875[b]
	Residual	.210	33	.006		
	Total	.210	34			

a. Dependent Variable: Return on Asset
b. Predictors: (Constant), Long-Term Debt to Total Assets

Table 4.9 showed an F-Statistics value of 0.025 with a p-value of 0.875. This is more than the 0.05 or 5%. This suggest the adoption of $H0_3$ of no significant relationship and the rejection of H_3

Table 4.10. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.060	.019		3.182	.003
	Long-Term Debt to Total Assets	-.016	.098	-.028	-.159	.875

a. Dependent Variable: Return on Asset

Objective 4: To determine the significant effect of short-term debt to total assets ratio on the financial performance of some selected firms in the oil and gas sector in Nigeria.

Hypothesis 4:

$H0_4$: Short-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.

H_4: Short-term debt to total assets ratio has significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.

Table 4.11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.247[a]	.061	.033	.07731

a. Predictors: (Constant), Short-Term Debt to Total Asset

In Table 4.11, R = 0.247. This mean there is a positive relationship between Return on asset and short-term debts to total assets. The positive relationship is weak (24.7%). The R square result show a value of 0.061. This mean the short-term debt to total assets can only explain the variation to the return on asset by 6.1%.

Table 4.12. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.013	1	.013	2.153	.152[b]
	Residual	.197	33	.006		
	Total	.210	34			

a. Dependent Variable: Return on Asset

b. Predictors: (Constant), Short-Term Debt to Total Asset

Table 4.12 showed an F-Statistics value of 2.153 with a p-value of 0.152. This is more than the 0.05 or 5%. This suggest the adoption of $H0_4$ of no significant relationship and the rejection of H_4.

Table 4.13. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.126	.048		2.628	.013
	Short-Term Debt to Total Asset	-.125	.085	-.247	-1.467	.152

a. Dependent Variable: Return on Asset.

4.2.2 THE OVERALL RESULT

Table 4.14. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618[a]	.382	.299	.06580

a. Predictors: (Constant), Short-Term Debt to Total Asset, Total Debt to Total Equity, Total Debt to Total Assets, Long-Term Debt to Total Assets

The overall result in Table 4.14 revealed R value of 0.618 (61.8%). This means that jointly, the independent variables has a positive correlation coefficient of this value. Although this is a strong value, the R square value is 0.382. This means that the independent variables jointly can only explain the variation in the return to asset to the tune of only 38.2%. The remaining 61.8% is explained by other variables outside the model.

Table 4.15. ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.080	4	.020	4.632	.005[b]
	Residual	.130	30	.004		
	Total	.210	34			
a. Dependent Variable: Return on Asset						
b. Predictors: (Constant), Short-Term Debt to Total Asset, Total Debt to Total Equity, Total Debt to Total Assets, Long-Term Debt to Total Assets.						

Table 4.14 show F-Statistics value of 4.632 with a p-value of 0.005 which is less than 0.05. This means that jointly the independent variables has a statistically significant relationship with the dependent variable (return on asset) which is a measure of financial performance.

Table 4.16. Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.116	.084		1.374	.180
	Total Debt to Total Assets	-1.205	1.712	-1.688	-.704	.487
	Total Debt to Total Equity	-.014	.004	-.599	-3.259	.003
	Long-Term Debt to Total Assets	1.266	1.747	2.246	.725	.474
	Short-Term Debt to Total Asset	1.166	1.752	2.316	.665	.511
a. Dependent Variable: Return on Asset						

Table 4.16 revealed the overall contribution of each variable to the model. It is also used for predictive purposes. Total debt to total assets, long-term debts to total assets and short-term debt to total asset contribution (p-values of 0.487, 0.474 and 0.511 respectively) are not significant, while total debts to total equity contribution (0.003) is significant to the model.

Therefore:

ROA = 0.116 -1.205(TDTA) - 0.014(TDTE) + 1.266(LTDTA) + 1.166(STDTA) +e_t

4.2.3 Summary Result of Hypothesis Testing

Table 4.17: Hypothesis Acceptance and Rejection

S/N	Hypothesis	Significance	Result	Explanation
1.	$H0_1$: Total debt to total asset ratio has significant effect on the financial performance of some selected firms in the oil and gas industry of Nigeria.	0. 018	Reject	The p-value is 0.0018 which is less than 0.05. This shows that total debts to total asset ratio is significant to the financial performance which led to the rejection of the null hypothesis.
2.	$H0_2$: Total debt to total equity ratio has no significant effect of on the financial performance of some selected firms in the oil and gas sector of Nigeria.	0.000	Reject	The p-value is 0.0000 which is less than 0.05. This shows that total debts to total equity ratio is significant to the financial performance which led to the rejection of the null hypothesis.
3.	$H0_3$: Long-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.	0.875	Accept	The p-value is 0.875 which is more than 0.05. This shows that long term debt to total asset ratio is not significant to the financial performance which led to the acceptance of the null hypothesis.
4.	$H0_4$: Short-term debt to total assets ratio has no significant effect on the financial performance of some selected firms in the oil and gas sector in Nigeria.	0.152	Accept	The p-value is 0.152 which is more than 0.05. This shows that short-term debt to total asset ratio is not significant to the financial performance which led to the acceptance of the null hypothesis.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF THE STUDY

The purpose of this study is to determine the effect of capital structure on the financial performance of the downstream oil and gas companies in Nigeria. The researcher search for different ideas from several articles and authors who studied in this area before now in order to make a comprehensive analysis of the study.

The first chapter introduces the topic by giving insight of capital structure of different firms and the oil and gas sector in Nigeria. This chapter also covers the statement of the problem, objectives of the study, research questions, hypotheses and the plan of the study generally.

The second chapter reviewed several literatures relevant to the study, some basic concepts were also explained to aid a better understanding of the study. Some theories reviewed in the course of this study include Modigliani and Miller theory, Pecking Order Theory, Tradeoff Theory and Agency theory but the study was anchored on Pecking Order theory, several literatures were also reviewed in the course of the study.

The chapter three of this study comprises of the methodology. Descriptive research design was used in this study, secondary data collected from audited financial statement of downstream oil and gas companies for a period 2014 to 2018. It also mentioned the method of data analysis which is descriptive, correlation and regression analysis, and the model specification.

Chapter four discusses the results obtained from the descriptive and regression analysis using SPSS version 22.

5.2 CONCLUSION

The study used data collected from secondary sources and was analyzed in line with the objectives of the study and the hypotheses were tested. The sample population of the study consist of 7 out of the 10 downstream oil and gas companies listed in the Nigerian Stock Exchange because their data were fully obtained. Data was mainly collected from Nigeria Stock Exchange (NSE) for a period of 5 years from 2014 to 2018 using panel data. When the data was collected it was presented and analyzed using regression analysis through SPSS version 22.

The regression result shows that the relationship between return on asset and total debt to total assets is positive and has significant relationship, also the relationship between return on asset and total debt to total equity is positive and there is significant relationship between the two variables which led to the acceptance of the alternative hypothesis and rejection of the null hypothesis.

The relationship between the return on asset and long term debts to total assets is also positive but having no significant relationship. Lastly, the result states that the relationship between return on asset and short-term debt to total assets is also positive but also no significant relationship. Thereby accepting the hypothesis in a null form and rejecting alternative hypothesis.

5.3 RECOMMENDATIONS

Recommendation for future researchers is to investigate other variables that are not used in this study. The other variables that can be used are Return on Equity (ROE), Earnings Per Share (EPS) and the firm's size which can be investigated to discover different factors of capital structure impacting on the financial performance of companies listed in the Nigerian Stock Exchange.

Since this study focuses on the oil and gas sector of the Nigerian economy. It is suggested for future researchers to conduct their studies with data from multiple sectors and compare the results among the sectors. This may provide evidence on the influence of capital structure on the financial performance of the whole economy.

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APPENDICE

APPENDIX A – Oil and Gas Companies Listed in the Nigerian Stock Exchange (2019)

S/N	COMPANY	DATE LISTED	DATE OF INCORPORATION	COMPANY TYPE
1.	***11 PLC***	***July 25th, 1991***	***December 31st 1951***	***Downstream***
2.	***AMINO INTERNATIONAL PLC [MRS]***	***January 2nd 1990***	***June 3rd 1981***	***Downstream***
3.	CAPITAL OIL PLC [MRF]	Invalid Date	August 29th 1985	Downstream
4.	CONIOL PLC [MRF]	Invalid Date	June 30th 1970	Downstream
5.	***ETERNA PLC***	***Invalid Date***	***January 13th 1989***	***Downstream***
6.	***FORTE OIL PLC***	***Invalid Date***	***November 12th 1964***	***Downstream***
7.	JAPAUL OIL & MARITIME SERVICES PLC	Invalid Date	Invalid Date	Upstream
8.	***MRS OIL NIGERIA PLC***	***Invalid Date***	***August 12th 1969***	***Downstream***
9.	***OANDO PLC***	***February 24th 1992***	***August 25th 1969***	***Downstream***
10.	***RAK UNITY PET COMP PLC***	***Invalid Date***	***December 20th 1982***	***Downstream***
11.	SEPLAT PETROLEUM DEVELOPMENT COMPANY PLC	April 14th 2014	June 17th 2009	Upstream
12.	***TOTAL NIGERIA PLC***	***Invalid Date***	***January 6th 1956***	***Downstream***

NOTE: Sample firms - **Boldened** and *Italised*

APPENDIX B - Data Employed in the Study

S/N	COMPANY	YR	PBT (N'000)	TA (N'000)	PAT (N'000)	EQUITY (N'000)	NCL (N'000)	CL (N'000)
1	11 PLC	2014	8,446,137	49,226,575	6,392,790	13,549,450	19,335,061	16,342,064
		2015	6,906,322	54,072,089	4,872,929	15,363,401	24,428,230	14,280,458
		2016	12,019,892	61,701,329	8,154,293	21,457,496	21,422,277	18,821,556
		2017	13,366,905	74,648,928	7,518,733	27,358,829	19,151,776	28,138,323
		2018	13,695,459	70,660,798	9,328,935	33,772,775	17,560,262	19,327,761
2	MRS	2014	1,282,053	57,846,626	746,404	20,218,121	5,538,217	32,090,288
		2015	1,460,834	66,893,741	935,625	20,977,324	5,324,717	40,591,700
		2016	2,287,347	81,364,815	1,465,905	22,163,841	5,130,795	54,070,179
		2017	(996,609)	62,190,318	1,385,056	23,109,497	2,166,677	36,914,144
		2018	(1,427,448)	54,283,202	1,264,941	20,720,698	1,329,370	32,233,134
3	ETERNA PLC	2014	1,792,066	18,566,895	1,289,566	8,420,172	1,373,252	8,773,471
		2015	1,306,585	28,565,409	1,278,073	9,684,305	1,311,095	17,570,009
		2016	2,400,172	31,690,081	1,477,559	10,828,227	2,557,604	18,304,250
		2017	2,812,941	48,045,732	2,001,902	12,417,042	1,951,658	33,677,032
		2018	1,989,899	53,136,461	1,008,996	12,878,205	3,676,714	36,581,542
4	FORTE OIL	2014	6,006,298	139,238,298	4,456,617	44,334,669	12,758,041	82,145,588
		2015	7,012,442	121,757,956	5,794,055	46,280,743	15,858,864	59,618,349
		2016	5,340,244	140,756,492	2,890,430	43,333,577	28,013,794	69,409,121
		2017	10,627,156	147,237,816	12,226,422	55,279,221	23,434,022	68,524,573

		2018	**758,544**	**141,537,600**	**361,471**	**63,568,441**	**7,542,122**	**70,427,037**
5	**OANDO PLC**	**2014**	**(171,323,265)**	**889,372,557**	**(179,282,210)**	**45,506,703**	**326,002,160**	**517,863,694**
		2015	**(32,735,583)**	**946,321,309**	**(31,197,703)**	**50,893,926**	**254,892,832**	**351,484,071**
		2016	**(63,375,512)**	**991,544,975**	**(25,806,484)**	**192,344,579**	**342,260,101**	**404,421,206**
		2017	**20,764,585**	**1,040,175,904**	**13,469,219**	**263,435,790**	**376,676,556**	**400,063,568**
		2018	**11,188,120**	**1,075,110,435**	**28,797,743**	**277,116,711**	**348,228,307**	**448,602,832**
6	**RAK UNITY**	**2014**	**79,268**	**1,185,834**	**53,872**	**380,218**	**3,168**	**802,447**
		2015	**132,264**	**696,140**	**89,759**	**469,977**	**4,444**	**221,719**
		2016	**80,849**	**1,409,693**	**53,346**	**506,336**	**8,433**	**827,417**
		2017	**45,254**	**1,336,315**	**30,351**	**573,124**	**7,936**	**755,255**
		2018	**45,278**	**1,993,797**	**29,614**	**597,075**	**8,793**	**1,387,929**
7	**TOTAL PLC**	**2014**	**5,558,326**	**95,512,428**	**4,423,733**	**13,929,778**	**2,978,663**	**78,603,987**
		2015	**6,495,390**	**83,653,555**	**4,047,051**	**16,242,481**	**3,461,135**	**63,949,939**
		2016	**20,353,076**	**136,928,160**	**14,797,095**	**23,570,097**	**245,202**	**113,112,861**
		2017	**11,795,283**	**107,981,873**	**8,019,298**	**28,225,551**	**2,817,414**	**76,938,908**
		2018	**12,098,463**	**132,520,783**	**7,960,893**	**30,730,888**	**5,805,841**	**95,984,054**

NOTE: PBT – Profit Before Taxation

TA – Total Asset

PAT – Profit After Taxation

NCL – Non-Current Liabilities

CL – Current Liabilities

Source: Author's computation from data extracted from the Factbook of Nigerian Stock Exchange (2019)