Original Research Article

Effect of capital structure on retained earnings in the oil and gas sector – Evidence from Nigeria

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This study is an effort to answer the question on whether Retained Earnings is determined by capital structure in the oil and gas sector in Nigeria and the population of study is the Nigerian Oil and Gas industry. Data covering the period, 2002-2011, were gathered through secondary method and the study is descriptive. The analysis was carried out using simple statistical tools like Correlation Co-efficient (r), F-test (ANOVA), Co-efficient of Determination (R2), and Regression Analysis. The study revealed that Retained Earnings is strongly and positively determined by borrowing or debt; that Share Capital positively determines Retained Earnings; and that Retained Earnings had significant relationship with debt and share capital over the period of study. Among other things, the study recommends that debt or borrowing should be increased so as to increase retained earnings to be used for further investment or other purposes; that capital structure should be balanced so that more share capital or equity financing should be encouraged as opposed to debt financing in the oil and gas sector; and that future researchers, financiers and policy makers should emphasize more on how to balance debt and equity financing in the oil and gas sector in Nigeria.

Key words: Capital structure, debt financing, share capital, retained earnings.

INTRODUCTION

Capital structure refers to the mix of long-term sources of funds, such as debentures, long-term debt, preference share capital and equity share capital including reserves and surpluses (i.e. retained earnings) – Pandey, (2003).

Capital structure is the choice between right proportion of debt and equity that will maximize the shareholder's worth (Saleem et al., 2013). According to Kennon (2010),capital structure refers to the percentage of capital at work in a business. Capital structure is the combination of debt and equity structure of a company. Alfred (2007) stated that a firm's capital structure implies the proportion of debt and equity in the total capital of the firm. Saheed (2007), recognizes three general means by which firms raise funds for new investments as use of retained earnings, issue of debt, and equity. He further said that those three sources make the capital and ownership structure. The choice of capital structure mix remains a very critical decision faced by organizations. When a firm needs to procure funds, the financial manager would have to analyze every aspect of sources of finance and select the most advantageous source in view of the the targeted capital structure. The capital structure decisions of private firms are significantly different from public funds as the private firms have been found to be relying more on debt financing (Brav, 2009).

The concept of capital structure forms a major part of capital and investment theory. Businesses are usually financed through the use of equity or shareholders fund. But where this does not ensure adequate or enough capital, then the entrepreneur or investor resorts to obtaining additional money by borrowing. The funds acquired through this source constitute what is referred to (in finance) as 'liability'. If the loan is to be repaid over a short period of time, then we refer to it as short-term liability. On the other hand, if the loan repayment will spread over a long period of time, then it is called long-term liability.

''The addition of own capital (equity) to borrowed money (liability) for the purpose of financing a venture is known

as capital mix or capital structure. The techniques or methods used by management to reach the decision pertaining to the amount or ratio of own funds to liability, are very complex issues considering all the factors affecting businesses including cost of capital (interest on loan), loan repayment period, profit or revenue, as well as prevalence of business prospect in the industry''(Pandey, 2003). A business financed mainly by loan capital stands the risk of collapsing under the weight of heavy debt servicing and high cost of capital.

Retained earnings on the other hand are profits that were not distributed to shareholders or owners of capital. The concept of retained earnings gives a perfect understanding of what we may call 'saving for the rainy day'. These funds may either be paid at a latter date or be reinvested in the same business (expansion) or in another kind of venture. The purpose is simply to earn more money through reinvestment and to increase the total assets of the organization'' -Pandey, 2003.

''The oil industry (in Nigeria) is dominated by 6 major joint venture operations managed by a number of well known multi-nationals- Shell, Mobil, Chevron, Agip, Elf, and Texaco. The production concessions are managed through joint venture companies, in which the Nigerian Government, through the Nigerian National Petroleum Company (NNPC), holds about 60% shareholding. The foreign joint venture partners manage the operations under a joint equity financing structure regulated by a Joint Operating Agreement. All operating costs are financed jointly, by a system of monthly cash-calls. A Memorandum of Understanding defines the commercial agreement between the partners and the government"- (Chiakwelu, 2010).

"As the objective of a firm should be directed towards the maximization of the value of the firm, the capital structure, or leverage, decision should be examined from the point of its impact on the value of the firm. If the value of the firm can be affected by capital structure or financing decision, a firm would like to have a capital structure which maximizes the market value of the firm". (Pandy, 2003).

Since the size of capital invested in business tends to be mostly (positively) correlated to the size of expected revenue or profit, we can assume that retained earnings may also increase or decrease with capital size.

"The goal of the capital structure decision is to determine the financial leverage that maximizes the value of the company (or minimizes the weighted average cost of capital)" –(Pande, 2003).

Each time capital structure is mentioned, what readily comes to mind is the delicate issue of how to balance equity capital and debt in the process of financing a business. The use of equity finance as the only means of raising capital for a business venture in the oil industry has been found to be grossly inadequate hence many companies borrow money to do business. It is a well established fact that the proportion of debt to equity is growing everyday due to increasing cost of operations and infrastructure in the oil industry. Oil companies are expected to fall back on

retained earnings and curtail their dependency on debt financing. The burden of debts services on these oil companies expectedly brings down or reduces the amount of profit available for distribution and saving or retained earnings. But in sharp contrast is the fact that equity financing enhances increase in retained earnings.

The problem therefore is how to ascertain if capital structure determines retained earnings of the oil and gas industry in Nigeria.

The study tends to provide solution to the following questions:
• Does loan capital (or borrowing) determine Retained Earnings of Oil and Gas Sector?
• Does equity or Share Capital financing determine retained earnings of Oil/Gas sector?
• What is the relationship between debt, equity or Share Capital, and Retained Earnings in the oil and Gas Sector in Nigeria?

This study is of great benefit to various constituencies of the Nigerian Oil and Gas industry and the economy as a whole.

Firstly, the management of the oil and gas industry will be interested in the findings and recommendations of this study with a view to adopting them in the process of decision making. Management is always interested in cost reduction techniques and the improvement of financial control (as related to debt and equity management in the oil and gas sector of Nigeria).

Secondly, owners of capital (hereby referred to as equity or shareholders) will be interested in the outcome of this study, as they prefer to put their money where it would be profitable to them.

Others that will benefit from this study are financial analysts, members of the academia and those doing research on related topics in Nigeria and elsewhere in the world.

Review of Related Literatures

Theoretical Framework

Capital Structure Policy: Modigliani and Miller's Capital Structure Theories

Modigliani and Miller, two professors in the 1950s, studied capital-structure theory intensively. From their analysis, they developed the capital-structure irrelevance proposition. Essentially, they hypothesized that in perfect markets, it does not matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined by its earning power and by the risk of its underlying assets; that its value is independent of the way it chooses to finance its investments or distribute dividends.

The basic M and M proposition is based on the following assumptions:
• No taxes
• No transaction cost

- No bankruptcy cost
- Equivalence in borrowing costs for both companies and investors
- Symmetry of market information, meaning companies and investors have the came information
- No effect of debt on a company's earnings before interest and taxes

What is Equity Theory?

"First developed in the early 1960s by behavioral psychologist, John S. Adams, equity theory is concerned with defining and measuring the relational satisfaction of employees. Adams suggested that employees try to maintain a balance between what they give to an organization against what they receive, and base satisfaction with their own balance on perceptions of the same balance in colleagues.

"The 'input', or what the employee gives to an organization, can be broken down to many metrics including time, loyalty, effort, tolerance,, flexibility, enthusiasm, personal sacrifice, skill and trust in superiors. Outcomes include 'hard' factors, such as salaries, job security and employee benefits, but extend to less tangible aspects such as praise, sense of achievement, praise and reputation.

"Equity theory is based on a principle that peoples' actions and motivations are guided by fairness and that discrepancies in this fairness in the workplace will spur them to try and redress it. According to Carrell and Dittrich (1978), "employees, who perceive inequity will seek to reduce it, either by distorting inputs and/or outcomes in their own minds (cognitive distortion), directly altering inputs and /or outcomes, or leaving the organization".[Sift media, 2015]

Pecking Order Theory

The Pecking Order Theory was first introduced by Donaldson in 1961 and was modified and popularized by Myers Majluf (1984). The theory is among the most influential theories of corporate leverage. The theory tries to generate ideas that firms will use hierarchy of financing by prioritizing their sources of financing. It states that a firm should utilize it's internal funds, i.e debt and equity. The theory argues that the more profitable a firm becomes, the lesser it borrows because it would have sufficient internal finance to undertake its investment projects. According to the theory, it is only when the internal financing is not adequate that firms should source for external finances. The theory tries to capture the cost of asymmetric information where companies prioritize their source of financing from internal financing to equity, according to the law of least effort, or least resistance. This means that companies prefer to raise equity as a financial means of least effort or last resort. Myers and Majluf went further to explain the theory by affirming that equity is a less preferred means to raise capital.

This is so because investors believe that managers are better informed of the price, sensitive information of the firm and as a result, when they issue new equity, they will think that the firm is over-valued and would take advantage of the valuation. However, this theory will not be favorable to existing firms. This is because the existing firms are still struggling to stand talk less of making enough profit that would be used to off-set all their future activities.

Agency theory

This theory is focused on the relationship between the principal (shareholders) and the agent (company's manager). An agency relationship arises whenever one or more individuals called principals hire one or more other individuals called agents to perform some services and then delegate decision making authority to the agents (Lawal et al., 2014). The Agency Theory's concept was initially developed by Berie Means (1992). They argued that ownership and controls are more separated to a continuous interference of equity ownership of large corporations. This condition gives professional managers an opportunity to pursue their individual interest instead of that of shareholders (Jensen and Runback, 1983). In theory, shareholders are the only owners of a company and the task of its directors is merely to ensure that shareholders' interests are maximized. The duty of directors is more especially to run the company in a way that maximizes the long-term return to the shareholders and thus maximizes the company's profit and cash flow (Eliot, 2002). The problem is that the interest of the principal and the agent are never exactly the same, thus the agent who is in charge of the decision making, tend to pursue his own interest instead of the principal's. It means that the agent will always tend to spend the free cash flow available to fulfill his needs for greater power and prestige instead of returning it to shareholders.

In this respect, Jensen (1986) presents agency problem associated with free cash flow. He suggested that free cash flow problem can be somehow controlled by increasing the stake of managers in the business or by increasing debts in the capital structure, thereby reducing the amount of cash flow available to managers. Therefore, firms which are mostly financed by debt give managers less decision power than those financed mostly by equity. Thus, debt can be used as a control mechanism in which lenders and shareholders become the principal parties in the corporate governance structure (Lawal et al., 2014).

Market Timing Theory

The market timing theory of capital structure argues that firms time their equity issues in the sense that they issue new stock when the stock price is perceived to be overvalued, and buy back own shares when there is undervaluation.

Consequently, fluctuations in stock prices affect firms'

capital structures. There are two versions of equity market timing that lead to similar capital structure dynamics.

The first assumes economic growth agent to be rational. Companies are assumed to issue equity directly after a positive information release which reduces the symmetry problem between the firm's management and stockholders. The decrease in information asymmetry coincides with an increase in the stock price. In response, firms create their own timing opportunities.

The second theory assumes the economic agent to be irrational (Baker and Wurgler, 2002). Due to irrational behavior, there is a time varying mispricing of the stock of the company. Managers issue equity when they believe its cost is irrationally low and repurchase equity when they believe its cost is irrationally high.

From these theories, one could have a clear direction of the issue at hand and ascertain optimum capital structure that will enable or enhance the value and profitability of oil firms.

Conceptual Review

The idea or principle of equity originated from the rights or opportunity given to holders of shares to purchase additional equity interests in a company at a big discount (Cambridge Advanced Leaner's Dictionary, 3rd Edition). In stock exchange, equity is used to describe stock entitling holder to profits: shares of stock in a corporation that pays the holder some of its profits (Microsoft, Encarta 2004).

Meyer (2008), opined that when an enterprise is operated as a sole proprietorship, the balance sheet may disclose the amount of each owner's equity and that when the organization is a corporation, the balance sheet shows the equity of the owners (the stockholders) as consisting of two elements. These two elements, he said are the amount originally invested by the stockholders and corporation's cumulative reinvested income, or retained Earnings – that is, income not distributed to stockholders as dividends.

"The oil industry remains the backbone and driver of development across sectors of the economy, especially infrastructure in other regions of the country apart from the Niger Delta" – Obem-Torkornoo. Elorm Obem-Torkornoo in an overview of the Oil and Gas Industry in Nigeria, gave an account that "Nigeria, with a population of over 140 million people, is the largest oil producer in Africa and the sixth largest producer in OPEC with an average of 2.6 million barrels per day (bpd). Nigeria's economy is heavily dependent on the oil sector, which accounts for nearly 80% of government revenue and over 90% of total foreign exchange earnings. Estimates of the total crude oil reserves vary, but are generally accepted to be about 36 billion barrels.

This overview also revealed that most of Nigeria's crude oil production comprising 10 major crude streams (including condensate), is light sweet crude, API grades 21-45, with a low sulphur content. Nigeria's marker crudes on the International oil market are Bonny light and Forcados.

All of the crude oil in Nigeria come from numerous, small, producing fields, located in the swamps of the Niger Delta, and the product is exported through 7 terminals and a number of floating productions of longstanding vessels. There are about 606 fields, most with less than 100 million bpd of extractible reserves.

Empirical Review

A number of studies have been carried out on the relationship between capital structure and firm's' value. Lawal et al. (2014) conducted a research on capital structure and firm's performance of ten manufacturing companies in Nigeria from 2003 to 2012. They employed descriptive and regression techniques with key variables as Return on Assets (ROA) and Return on Equity (ROE) for profitability and total debt to total assets, total debt to total equity ratio for capital structure. The study revealed that capital structure is negatively related to firm's performance. Mujahid et al. (2014), examined the impact of capital structure on banks performance in Pakistan. They adopted multiple regression model and performance was measured by Return on Assets, Return on Equity and Earnings Per Share, while long term debt to capital ratio were the proxies for capital structure. The result of the study validated a positive relationship between factors of capital structure and performance of banking industry.

Ong and The (2011), investigated the capital structure and firm's performance of construction companies for a period of four years in Malaysia. Long term debt to capital, debt to assets, debt to equity, market value, debt to common equity, long term debt to common equity were used as proxies for the independent varaiable (capital structure) while return on capital, return on equity, long term debt, earning per share, operating margin and net margin were used as proxies for corporate performance,

Ogebe et al. (2013), carried out a study on six Nigerian firms that covered ten years. They used fixed effect regression estimation model, and relationship was established between performance and leverage of the firms.

Akinyomi (2013), studied three manufacturing companies selected randomly from the food and beverage categories for the period of five years. Correlation analysis method was adopted and it revealed that each of debt to capital, debt to common equity, short term debt to total debt and the age of the firm is significantly and positively related to return on asset and return on equity.

Chandrasekharan (2012), conducted a study on eighty seven Nigerian firms out of the population of 216 firms listed on the Nigerian stock exchange for the period of five years. Panel multiple regression analysis was used and revealed that firm's size, growth and age are significant to the debt ratio of the firm, whereas profitability and tangibility are not related.

Saleem et al (2013), studied oil and gas firms listed on Karachi stock exchange of Pakistan for the period of five years. They used multiple regression technique for analysis and concluded that firm size, tangibility of asset and

profitability have positive relationship with leverage.

Oke and Afolabi (2011), studied five quoted firms within a period of 9 years. Panel data regression model was used and revealed positive relationship between firm's performance and debt financing as well as between firm's performance and debt equity ratio. The result equally revealed negative relationship between firm's performance and equity financing.

Kuang-Hua Hsu, an Associate Professor of Chaoyay University of Technology, Taiwan, and Ching-Yu Hsu, Finance Department of National Taiwan University, on their work, ''An empirical study of capital and financing decisions (Evidence from East Asian Tigers and Japan), came with the results that are more in line with the dynamic trade-off theory rather than the equity market timing or Pecking Order hypothesis of capital structure. They came to the conclusion that firms have their target capital structures, determined by the marginal benefits of debts and costs associated with debt. Asian firms follow the trade-off theory more than Pecking Order theory or Market Timing theory. They further suggested that in Japan and Korea the reason why firms follow Pecking theory partly may be that lower law enforcement would lead to a higher level in information asymmetry.

Joshua (2015), also did a similar study on the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange. He applied regression analysis and the study revealed that there is a significant and positive relationship between the ratio of short-term debt to total assets, and Return on Capital Employed (ROCE). However, he also found out that there is a negative relationship between the ratio of long-term debt to total assets, and ROCE. He then suggests that profitable firms should depend more on debt as their main source of financing.

Amarjit, Nalum and Neil (2011), carried out a study titled, ''The effect of Capital Structure on Profitability: Evidence from the United States'', in which they investigated the relationship between capital structure and profitability of American service manufacturing firms, using the correlations and regression analyses. They found out that there is a positive relationship between short-term debt and profitability; between long-term debt and profitability; and between Total debt and profitability in the manufacturing industry.

In summary, all the empirical works have one thing in common, that is, their concentration on firms outside of oil and gas industry, and essentially about capital structure but not on retained earnings. We have found it most appropriate to carry out a study on this aspect.

Empirical Review on Debt financing and Retained Earnings

In finance, a loan is a debt provided by one entity (organization or individuals) to another entity at an interest rate, and evidenced by a note which specifies, among other things, the principal amount, interest rate, and date of repayment..

Debt financing is the act of a business raising operational capital or other capital by borrowing. Most often, this refers to the issuance of a bond, debenture, or other debt security. In exchange for lending the money, bond holders and others become creditors of the business and are entitled to the payment of interest and to have their loan redeemed at the end of a given period. Debt financing can be long-term or short-term. Long-term debt financing usually involves a business need to buy the basic necessities for its business, such as facilities, and major assets, while short-term debt financing includes debt securities with shorter redemption periods and is used to provide day-to-day necessities such as inventory/or payroll (Farlex Financial Dictionary, 2012).

Chiakwelu (2010), on his own part propounded that, "Oil and Gas Industry is large capital intensive that requires enormous resources for its finance, management and operation. The inability of local banks in Nigeria and South of Sahara to finance massive Oil and Gas projects is not news anymore. The capitalization of banks in Africa is quite low to engage in large capital financing of Oil and Gas. But gradually things are changing and local banks are beginning to engage in participation of underwriting and financing of Oil and Gas projects through the leverage of consortium loans". He added that, it was widely reported that "a consortium of eight Nigerian banks led by UBA, as the lead bank, are in a $265 million supplementary financing deal for ExxonMobil and the Nigerian National Petroleum Corporation (NNPC)". The article emphasized that "most of the financing for the Oil and Gas projects are from international financial institutions particularly World Bank and International Financial Corporation (IFC)". At the continental level, they mentioned African Development Bank (ADB) by "playing important role in the financing scheme of African based industries".

Another African based financial institution is African Finance Corporation (AFC) that plays a major role in financing the Oil and Gas Industry in Africa.

Chiakwelu concluded among other things that, "the lack of large capital financing is a major obstacle for oil and gas industry in Africa.

Empirical Review on Equity Financing and Retained Earnings

Equity financing is "selling stock to raise capital: it is the sales of share capital of a company in order to raise money for use in the business" (Encarta Dictionaries)

Another definition of Equity financing by Investopedia is that, it is "the process of raising capital through the sale of shares in an enterprise". This definition also emphasizes that "Equity financing essentially refers to the sale of ownership interest to raise funds for business purposes, and also that it spans a wide range of activities in scale and scope, from a few thousand dollars raised by an entrepreneur from friends and family, to giant Initial Public Offerings (IPOs) running into the billions by household names such as Google and Face book". It adds that" while

the term is generally associated with financings by public companies listed on an exchange, it includes financings by private companies as well".

The term equity financing has been used to represent "not just the sale of common equity, but also the sale of other equity or quasi-equity instruments such stock and equity units that include common shares and warrants".

Furthermore, this definition by Investopedia explains that "the equity-financing process is governed by regulation imposed by a local or national securities authority in most jurisdictions. Such regulation is primarily designed to protest the investing public from unscrupulous operators who may raise funds from unsuspecting investors and disappear with the financing proceeds. An equity financing is therefore generally accompanied by an offering memorandum or prospectus, which contains a great deal of information that should help the investor make an informed decision about the merits of the financing. Such information includes the company's activities, details on its officers and directors, use of financing proceeds, risk factors, financial statements and so on".

In the Oil and Gas Industry, it is serious business to put one's money into buying of shares and the expectation of high returns to such investments.

Empirical Review on Relationship between debt, equity and Retained Earnings

Debt and equity are two components of capital structure. Their relationship is expressed by the formula:

Debt to equity ratio = Total Liabilities / Stockholders equity

Debt to equity ratio is a long-term solvency ratio that indicates the soundness of long-term financial policies of the company. It shows the relation between the portion of assets provided by the stockholders and the portion of assets provided by creditors. It is also known as "external-interval equity ratio" (Accounting for Management, 2015).

On the other hand, Retained Earnings also known as "retention ratio" or "retained surplus", is "the percentage of net earnings not paid out as dividends but retained by the company to be reinvested in its core business, or to pay debts. It is recorded under shareholders' equity on the balance sheet". The formula is expressed as:

Retained Earnings (RE) = Beginning RE + Net Income – Dividends

The relationship between the three variables, namely, debt, equity and Retained Earnings is largely tilted in the direction of how Capital Structure can help to create fund that may either be used for business expansion or growth, or be expended in debt repayment.

In view of all these empirical results, we established that the way profitability reacts with capital structure differs. Some of these results reveal positive relationship between capital structure and profitability while some disagreed with that. These differences could be because of different methods used for analyses, different variables, firm size

and age of the firm.

Having gone through all the empirical works of some researchers, we have discovered that the Oil and Gas Sector has not been adequately addressed with respect to Capital Structure as it affects Retained Earnings. The Oil and Gas Sector in Nigeria is a vast industry that holds much potential for investors and the government in particular. So it is our desire to carry out a research which can fill the gap, namely, "Does Capital Structure Determine Retained Earnings?''

METHODOLOGY

This study made use of Survey Design and with particular emphasis on exploratory and explanatory designs. Both explanatory and exploratory designs are variants of descriptive designs.

"Exploratory design is a descriptive design directed towards the collection of data for hypothesis testing. Explanatory design is directed towards collecting data to answer research questions or explain the relationship among variables" (Abosede et al., 2001)

This study is on Nigerian oil industry with particular reference to Capital Structure and its determination of Retained Earnings in the Oil and Gas Sector, for the period 2003-2013.

The data used for analyzing the topic are secondary data obtained from financial reports of three reputable oil companies in Nigeria (Appendix: Tables 1-4).

The Oil and Gas Industry in Nigeria formed the population of this study while the sample selection was carried out using non-probability sampling techniques known as purposive sampling and convenient sampling.

This study made use of Regression model, Analysis of Variance (ANOVA), and Co-efficient of Determination (R^2) to explain the dependence and variations in the variables.

The model for this relationship is expressed completely thus:

RET = Constant + SCB_1 + DB_2

Where RET = Retained Earnings

$\quad\quad B_1$ = Rate of change in Share Capital

$\quad\quad B_2$ = Rate of change in debt level

Analysis on relationship between retained earnings and debt

The result of this analysis shows that Average Debt of the sampled companies far outweighs Retained Earnings over the same period. There also exists great disparity between the standard deviations of both variables, an indication that Retained Earnings is usually affected or determined by High debt profile (Table 1.1).

This analysis indicates that there was a strong positive correlation (r = 0.894 or 89.4%) between debt and Retained Earnings during the years under study. This also proves that Retained Earnings is determined by borrowing or debt (Table 1.2).

Table 1.1. Descriptive statistics (1)

RETNING	Mean	Std. Deviation	N
Debt	12054458.0000	9931850.04896	10
	47989196.1000	25821455.20958	10

Source: Researchers' analysis

Table 1.2. Correlation Analysis (1)

		RETNING	Debt
Pearson Correlation	RETNING	1.000	.894
	Debt	.894	1.000
P value	RETNING	.	.000
	Debt	.000	.
N	RETNING	10	10
	Debt	10	10

Source: Researchers' analysis

Table 1.3. Model summary (1)

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.894	.799	.774	4718456.20362

Source: Researchers' analysis

Table 1.4 ANOVA (1)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	P value
1	Regression	709664176990729.400	1	709664176990729.400	31.875	.000
	Residual	178110631563742.660	8	22263828945467.832		
	Total	887774808554472.00	9			

Source: Analysis by researchers.

Table 1.5. Regression Analysis (1)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	P value
		B	Std. Error	Beta		
1	(Constant)	-4448733.823	3281890.983		-1.356	.212
	DEBT	.344	.061	.894	5.646	.000

Source: Analysis by researchers.

Analysis under Table 1.3 indicates and supports the findings that the co-efficient of determination (R^2) is 0.799, which means that the data used is explainable or could be relied on at 79.9%, leaving 20.1% unexplainable.

The analysis of hypothesis reveals that the test is significant. Calculated F is 31.875 while the P-value is 0.000. Since F_{cal} > P-value, we conclude that Retained Earnings is determined by debt or borrowing, and the result is significant (Table 1.4).

The analysis in Table 1.5 measures or estimates the value of Retained Earnings at any given value of Debt during the period.

The model is RET = constant + b(DEBT), or SHRCAP = 4,448733.823 + 0.344(DEBT)

It shows that Retained Earnings is growing with a constant positive value of N4,448,733 and varies by 0.344 at any given level of debt per year.

Analysis on relationship between Retained Earnings and Share Capital

The analysis in Table 2.1 above shows that the mean

Table 2.1. Descriptive statistics (2)

Descriptive Statistics			
	Mean	**Std. Deviation**	**N**
RETNING	12054458.0000	9931850.04896	10
SHRCAP	3284870.4000	6109978.81493	10

Source: Analysis by researchers.

Table 2.2. Correlation Analysis (2)

Correlations			
		RETNING	**SHRCAP**
Pearson Correlation	RETNING	1.000	0.651
	SHRCAP	0.651	1.000
P value	RETNING	.	0.021
	SHRCAP	0.021	.
N	RETNING	10	10
	SHRCAP	10	10

Source: Researchers Analysis.

Table 2.3: Model Summary (2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651	.424	.352	7995631.40875

Source: Researchers Analysis.

Table 2.4. ANOVA (2)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	P value
	Regression	376333835557543.100	1	376333835557543.100	5.887	.041
1	Residual	511440972996928.900	8	63930121624616.110		
	Total	887774808554472.000	9			

Source: Researchers' Analysis

Retained Earnings of the sampled companies was approximately three times higher than the average share-capital during the period. Retained Earnings also shows a greater standard deviation than the average Share Capital. This supports the view that Retained Earnings does not determine Share Capital. This supports the view that Share Capital or equity does not determine Retained Earnings.

The analysis in Table 2.2 shows a relationship that is positive and high but is just not strong, being 0.651, an indication that Share Capital may determine Retained Earnings but do not have strong influence.

In this analysis, the data used explains that the relationship could be dependable only up to 0.424 or 42.4% leaving 0.576 or 57.6%. This casts doubt on the adequacy of the relationship between Retained Earnings and Share Capital (Table 2.3).

The analysis under Table 2.4 shows that F(calculated) is 5.887, but P-value is 0.041. Since $F_{cal} > $ P-value, we conclude that the study is significant and Retained Earnings is determined by Share Capital or equity.

The regression model as revealed in Table 2.5 is:
SHRCAP = 8,577,944.549 + 1.058(SC)) representing
SHRCAP = constant + b(SC)

It implies that there was a constant value of N85,577,944.549 in Retained Earnings while the rate of change of Share Capital is N1.058 during the period.

Analysis on relationship between Retained Earnings, Share Capital and Debt.

The analysis shows a whooping debt profile over Retained Earnings and Share Capital. This reflects a huge negative influence of debt over Retained Earnings and Share Capital (Table 3.1).

The relationship between Share Capital and Retained Earnings (Table 3.2) is positive and above average i.e. r =

Table 2.5:   Regression Analysis (2)

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients		t	P value
	B	Std. Error	Beta			
1 (Constant)	8577944.549	2906227.690			2.952	.018
SHRCAP	.436	.436	.651		2.426	.041

Source: Researchers' Analysis.

Table 3.1: Descriptive Statistics (3)

Descriptive Statistics			
	Mean	Std. Deviation	N
RETNING	12054458.0000	9931850.04896	10
SHRCAP	3284870.4000	6109978.81493	10
DEBT	47989196.1000	25821455.20958	10

Source: Researchers' Analysis.

Table 3.2. Correlation Analysis (3)

		RETNING	SHRCAP	DEBT
	RETNING	1.000	.651	.894
Pearson Correlation	SHRCAP	.651	1.000	.626
	DEBT	.894	.626	1.000
	RETNING	.	.021	.000
P value	SHRCAP	.021	.	.026
	DEBT	.000	.026	.
	RETNING	10	10	10
N	SHRCAP	10	10	10
	DEBT	10	10	10

Source: Researchers' Analysis.

Table 3.3: Model Summary (3)

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	.902	.813	.760	4867921.33521

Source: Researchers' Analysis.

0.651, while the correlation between Share Capital and debt is also positive and high (0.894). So it implies that Retained Earnings is strongly correlated with debt at r = 0.894 or 89.4%. It means that Retained Earnings would be greatly determined by the amount of debt paid but with lesser emphasis on the effect of Share Capital on Retained Earnings.

The analysis of correlation in the previous session (Table 3.2) is supported strangely by a co-efficient of determination, that is, R^2 = 0.813 (Table 3.3). What this means is that the data analyzed is explainable at 81.3%. It is enough to deduce that Retained Earnings is strongly determined by debt.

Finding in Table 3.4 shows that F_{cal} = 15.232, but P-value = 0.003. Since F_{cal} > P-value, we conclude that there is a significant relationship between Retained Earnings, Share Capital and debt.

The analysis in Table 3.5 reveals that the model is:

RET = -3513834.5 + 0.245(SHRCAP) + 0.308(DEBT)

What this indicates is that while Retained Earnings estimation has a negative constant, Share Capital and Debt had small rates of change of 0.245 and 0.308 respectively over the years.

Conclusion and Recommendation

Retained Earnings is referred to as that part of the firm's profit which is not distributed to the shareholders but rather reinvested into the firm. This implies that the more profitable a firm becomes, the more likely the retained earnings will increase and the more the company can internally finance its operations. Thus the Pecking Order

Table 3.4:   ANOVA (3)

Model		Sum of Squares	df	Mean Square	F	P value
1	Regression	721898201674113.000	2	360949100837056.500	15.232	.003
	residual	165876606880359.060	7	23696658125765.582		
	Total	887774808554472.000	9			

Source: Researchers' Analysis

Table 3.5:   Regression Analysis (3)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	P value
		B	Std. Error	Beta		
1	(Constant)	-3513834.509	3627250.508		-.969	.365
	SHRCAP	.245	.340	.151	.719	.496
	DEBT	.308	.081	.800	3.819	.007

Source: Researchers' Analysis

by Donaldson (1960) would be fulfilled.

This work focused on ascertaining whether capital structure determines retained earnings. Capital structure is constituted or made up of debt and equity financing. The work reveals that debt financing has significant and strong relationship with retained earnings while equity financing has a positive but insignificant relationship with retained earning. But when combined, both sources of finance are positively correlated with retained earnings. So we can generalize that capital structure can determine retained earnings in the oil and gas industry in Nigeria, as opposed to M & theory.

This study on Capital Structure as a determinant of Retained Earnings was analyzed with emphasis on whether debt or borrowing determines Retained Earnings; whether Share Capital determines Retained Earnings; and whether debt, Share Capital and Retained Earnings have relationship. It is important to reiterate that debt and Share Capital are two important components of Capital Structure. The other is ''reserve'' of which Retained Earning is a part.

It is important to state here that complete analysis and the findings are bared. The test of objective 1 revealed that Retained Earnings is determined by debt or borrowing; Objective 2 confirmed that Share Capital is also a determinant of Retained Earnings, though not significantly; and the test of objective 3 is also significant because it supports the claim that there is a positive and significant relationship between Capital Structure and Retained Earnings.

To answer the question as to whether capital structure determines retained earnings, we can deduce from the findings that this depends on the choice of capital structure mix. If the firm uses equity financing only, the answer is not likely to be based on the result of the analyses. But if debt or even debt and equity financing is used, the answer should be yes, as the result of the analyses also indicate.

Consequently, the following recommendations have been made:

•   That debt financing should be increased so as to increase Retained Earnings, which in turn would enable the oil industry to plough back such money into further investment or other uses.

•   That the oil industry should try to balance debt financing with Share Capital as it has become obvious that most of their project financing come from borrowing. This is in line with what other scholars have also proposed as debt financing is sometimes a huge burden on profitability.

•   Future researchers should also pay more attention to Capital Structure determination as a means of stabilizing projects financing in the Oil and Gas Sector in Nigeria.

•   Existing oil and gas firms should use more of debt financing irrespective of its higher cost over equity because of its tax advantage and checking the excesses of Managers over companies' fund.

•   Newly established oil and gas firms should go for more of equity financing to enjoy the benefit of obtaining the advise and support of investors who are also part of the owners, and to avoid the weight of regularly stipulated interest paid on debt or borrowing.

The findings provide answer to the research topic and it is our belief that the objectives of this study have been achieved and necessary recommendations have also been made. It is therefore imperative for interested users to key-in and enjoy the use or application of the information for necessary decision making in the Oil and Gas Sector, as well as in related firms in Nigeria and elsewhere in the world.

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Appendix

Table 1. MRS: Retained Earnings, Share Capital, Total Debt and Total Assets, 2002-2011

Year	Retained earning	Total debt	Share capital	Total asset
2002	1465964	1903473	90710	9002492
2003	1916353	1365515	90710	12940344
2004	1942546	1261336	126994	16336847
2005	1946818	1602124	120199	16068874
2006	3259468	1302617	120199	17176254
2007	3918361	967642	120199	20936575
2008	14680010	1242912	2363856	23401158
2009	14784800	1420628	2517479	18725781
2010	18113647	1694166	2517479	27974027
2011	18861691	22524171	18988685	72700238

Source: African financials (company annual report) library.

Table 2. OANDO: Retained Earnings, Share Capital, Total Debt and Total Assets, 2002-2011

Year	Retained earning	Total debt	Share capital	Total asset
2002	45135	28007974	148254	23566183
2003	27129	19422799	163079	22378858
2004	314669	20009558	286150	34763559
2005	2500659	21450199	286150	40389898
2006	3423584	24027668	286150	63961647
2007	3805863	36149496	377035	103882388
2008	2831967	73731892	452442	238079207
2009	4780188	80263640	452642	488094623
2010	706054	57067078	905084	512754360
2011	3886486	57389285	1137058	119836331

Source: African Financials (company annual report) library.

Table 3. MOBIL: Retained Earnings, Total Debt, Share Capital and Total Assets, 2002-2011.

Year	Retained earning	Total debt	Share capital	Total asset
2002	575544	2557480	96159	13312587
2003	551504	5479109	120199	16116796
2004	196468	2385709	120199	11996729
2005	747972	1,791,49	120199	6092668
2006	982891	3694695	120199	17415401
2007	982666	1144722	120199	18560849
2008	953854	5715852	150249	22069761
2009	1169953	999842	150249	22069771
2010	1908444	3032625	150249	30755210
2011	2909292	2077755	150249	23876789

Source: African Financials (company annual report) library.

Table 4. Combined Estimates for MRS, OANDO and Mobil

Year	Retained earning	Total debt	Share capital	Total asset
2002	2086643	3246827	33123	45881262
2003	2494986	26267423	373988	51435998
2004	2453683	23656603	533343	63097135
2005	5195449	23052323	526548	62551440
2006	7665943	29024980	526548	98553302
2007	8706890	38261860	617433	143379812
2008	18465831	80690655	2966547	283550126
2009	20734941	82684110	3120370	528890175
2010	27082745	61793869	3572812	571483597
2011	25657469	81991211	20275992	216413358

Source: Computation by researchers.