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THE IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF LISTED FIRMS IN THE NIGERIAN OIL AND GAS INDUSTRY

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ABSTRACT

This study examines the impact of capital structure on financial performance of listed firms in Nigerian Oil and Gas industry. The study adopted an ex-post facto research design and utilized panel data collected from annual reports and accounts of the sampled firms for the periods of 2005 to 2014. The Data was first analysed using descriptive statistics to provide summary statistics of the variables. Subsequently a panel data regression technique was used to assess the extent of the effect of the independent variables on the dependent variables. It was found that capital structure proxied by STD, LTD and TD has negative and significant relationship with financial performance (ROA and EPS) of listed petroleum marketing companies in Nigeria. Furthermore, the result also shows that firm size and tangibility have positive and significant relationship with ROA and EPS. Thus, the study concludes that statistically, capital structure is a major determinant of firm financial performance. Therefore it is recommends that managers of oil and gas companies should exercise caution while choosing the amount of debt to use in their capital structure as it affects their performance negatively.

Keywords: *Capital Structure, Financial Performance, Nigerian Oil and Gas Industry, NSE.*

INTRODUCTION

Investors, government and other external users of financial information often need to measure the performance of an organization. This is done in order to evaluate the success of the business, determine any weaknesses of the business, compare the current and past performance and compare the current performance with industry standard. A company can be recognized as performing effectively and efficiently if it can satisfy the interest of all its stakeholders. For instance managers are interested in their welfare and profit maximization, current and potential shareholders perceive performance as the company's ability to distribute dividends to their investment, commercial partners look for the solvency and stability of the company while the state seek a company to be efficient in paying its tax and help in creating new jobs. The ability of companies to carry out their stakeholders' needs is tightly related to capital structure (San and Heng 2011).

The determination of a company's capital structure constitutes a difficult decision, one that involves several and opposed factors, such as risk and profitability. The decision becomes even more difficult, in times when the economic environment in which the company operates presents a high degree of instability. Capital structure is the various means in which a firm finances its operations which can either be through debt or equity capital or combination of both (Saad, 2010). Through this definition, we can deduce that if the company makes a weak decision related to capital structure, it may face a high risk, or higher cost of capital and this will lead to a decline in the overall performance of the company.

Since the path breaking seminal paper by Modigliani and Miller (1958), the issue of capital structure has generated great interests in finance literature. It has provided a substantial boost in the development of the theoretical framework within which various capital structure theories have been developed. Based on very restrictive assumptions of perfect capital markets, homogenous expectations, no taxes and no transaction costs, Modigliani and Miller concluded that financial leverage does not affect the firm's market value.

There are many internal and external factors impacting the decision of choosing a suitable financing structure. These factors may include sensitivity of creditors due to high debt on a company and the nature of industry in terms of competition, growth, stability of sales and profit and the assets value. In both developed and developing economies, the primary purpose of taxation is mainly to generate revenue for settling government expenditure and for provision of social amenities and welfare of the populace (Kiabel and Nwoka, 2009).

Company income tax serves as a tool in achieving economic growth in any country and is accepted not only as a means of raising the required public revenue, but also as an essential fiscal instrument for managing the economy. The World Bank (1991) noted that of all the taxing systems, income tax plays a major role in generation of revenue and distribution of income in any country. However companies will only pay income tax if they generate profit at the end of the year. Therefore this study evaluates the impact of capital structure on financial performance of listed firms in the Nigerian Oil and Gas Industry.

OBJECTIVES OF THE STUDY

The aim of this study is to assess the relationship between capital structure and financial performance of listed firms in the Nigerian Oil and Gas Industry. Other specific objectives are to:

i. Ascertain the relationship between capital structure and ROA of listed firms in the Nigerian Oil and Gas Industry.
ii. Measure the relationship between capital structure and EPS of listed firms in the Nigerian Oil and Gas Industry.

RESEARCH HYPOTHESIS

Based on the aforementioned objectives the following hypotheses were formulated in the null form

H_{o1}: There is no significant relationship between capital structure and ROA of listed firms in the Nigerian Oil and Gas Industry.

H_{o2}: There is no significant relationship between capital structure and EPS of listed firms in the Nigerian Oil and Gas Industry.

LITERATURE REVIEW

The capital structure decision is an important managerial decision, it influence the shareholder's return and risk. The firm will have to plan its capital structure initially at the time of its promotion and subsequently, whenever funds have to be raised to finance investments, a capital structure decision is involved. Capital structure is referred to as the way in which a firm finances assets through debts, equity and securities. It is the composition of debt and equity that is required for a firm to finance its assets (Saad, 2010). The capital structure of a firm is very important since it is related to the ability of the firm to meet the needs of its stakeholders.

Capital structure is one of the most controversial issues in corporate finance and it has been receiving due attention of researchers since the prominent work of Modigliani and Miller (1958). The breakthrough made by the famous article of Miller (1958), is one of the most important release of the theory of capital structure. The most important conclusion from his study was that there is no relationship between the company's value and the cost of capital, therefore one can find that each company has a different capital structure. Miller concluded that it doesn't matter how a firm finances its' operations and that the value of a firm is independent of its' capital structure making capital structure irrelevant. His study was based on

the assumptions that there are no brokerage cost, earnings before interest and tax are not affected by the use of debt and that investors could borrow at the same rate as corporations.

According to Akinsulire (2011) company's capital structure show all the sources of finance the company is utilizing to finance its operation and is usually made up of ordinary share capital, preference share capital and debt capital. Brigham (2004) view capital structure as the way in which a firm finances its operations which can either, be through debt or equity capital or combination of both.

Similarly Pandey (2005) opined that capital structure is used to measure the proportionate relationship between debt and equity by obtaining the debt and equity ratio which enables the financial manager to ascertain the number of times the equity of a company covers the debt obtained for a period. Capital Structure attempt to define the degree of leverage employed by the firm in financing its operations, this affects the cost of capital and the value of the firm (Udoayang and Asuquo, 2008). Abor, (2007) in his research on debt policy and performance of Medium Sized Enterprises found the effect of short-term debt to be significantly and negatively associated with gross profit margin for both Ghana and South African firms. This indicated that increasing the amount of short-term debt would result in a decrease in the profitability of the firms. Nimalathasan & Valeriu (2010) studied the impact of capital structure on profitability of listed manufacturing companies in Sri Lanka. The analysis reveals that debt equity ratio is positively and strongly associated to all profitability ratios (Gross Profit, Operating Profit & Net Profit Ratios).

Ozkan (2001) reported in his study that the British companies assume that profitability, liquidity, and opportunities to grow have a negative impact on financial structure, while the researcher found that the size of the company impacts the company's debt, and there is a negative relationship between tax considerations and debt ratio. Erasmus, (2008) noted that financial performance measures like profitability and liquidity among others provided a valuable tool to stakeholders to evaluate the past financial performance and the current position of a firm. Zertun and Tian (2007) examines the effect which capital structure has had on corporate performance using a panel data sample representing of 167 Jordanian companies during 1989- 2003. The study showed that a firm's capital structure had significantly negative impact on the firm's performance measures, in both the accounting and market's measures. However Abor (2005) founds a positive relationship between total assets and return on equity and those profitable firms in Ghana depended more on debt as a main financing option due to a perceived low financial risk. San and Heng (2011) focused on construction companies which are listed in Main Board of Bursa Malaysia from 2005-2008, their result shows that there is a relationship between capital structure and corporate performance and there is also evidence that shows no relationship between some of the variables investigated. For big companies, ROC with DEMV and EPS with LDC have positive relationship whereas EPS with DC is negatively related.

Ebaid (2009) investigates the impact of capital structure choice on performance of 64 firms from 1997 to 2005 in the Egyptian capital market. He employs three accounting-based measures including ROA, ROE and gross profit margin, and concludes capital structure choices, generally has a weak-to-no impact on firm performance. Razak and Aliahmed, (2008) empirically examines the impact of an alternative ownership control structure of corporate governance on firm performance in Malaysia, The study was based on a sample of 210 firms over the period from 1995 to 2005. Findings appear that there is a significant impact of government ownership on company performance after controlling for company specific characteristics such as company size, non- duality, leverage and growth. The finding is off significant for investors and policy marketers which will serve as a guide for better investment decision. Likewise Akinyomi (2013), examines three manufacturing companies selected randomly from the food and beverage industry and for a period of five years (2007-2011) and using correlation analysis revealed that each of debt to capital, debt to common equity, short term debt to total debt and the age of the firms' is significantly and positively related to return on asset and return on equity but long term debt to capital is significantly and relatively related to return on asset and return on equity. Taiwo (2012) empirically studied ten firms listed on the Nigerian Stock Exchange for a period of five years (2006-2010) concludes that the sampled firms were not able to utilize the fixed asset composition of their total assets judiciously to impact positively on their firms' performance.

Arowoshegbe and Idialu (2013) reported in their studies on capital structure and profitability of listed companies in Nigeria for the period from 1996-2010. Penal data was used in this study and the results shown that there were negative relationships between capital structure and profitability.

RESEARCH METHODOLOGY

This study employed the ex-post facto research design which is based on the use of documented audited annual reports and accounts of the selected firms. The population of this study comprises all the nine (9) listed firms operating in the Nigerian petroleum oil and gas industry out of which seven (7) were sampled. For a firm to qualify for selection, two criteria were used, first only those firms who report their financial statement consistently during the period under study (2005 to 2014) were considered. Secondly, a firm must have been quoted without being delisted from 2005 to 2014. The data for the study were obtained from the audited annual reports and accounts of the sampled firms for the period of 10years from 2005- 2014.

The variables of the study comprise of dependent and independent variables. The independent variables is capital structure proxied by short term debt ratio (STD), long term debt ratio (LTD) and total debt ratio (TD) while the dependent variable is financial performance proxied by return on assets (ROA) and earnings per share (EPS) as used by Khalid (2012), Tukur and Aliyu (2014) and Saleem and Rehman (2011) among others.

Model Specification: To assess the nature and strength of the relationship between firm characteristics and financial performance, three models were developed each to test one hypothesis of the study. This is in line with Velnampy and Nimalathasan (2010), Saleem and Rehman (2011), Shehu (2012) and others with modification.

$$ROA_{it} = \beta_o + \beta_1 STD_{it} + \beta_2 LTD_{it} + \beta_3 TD_{it} + \beta_4 FSIZE_{it} + \beta_5 TAG_{it} + \mu_{it} \ldots\ldots\ldots 1$$

$$EPS_{it} = \beta_o + \beta_1 STDit + \beta_2 LTD_{it} + \beta_3 TD_{it} + \beta_4 FSIZE_{it} + \beta_5 TAG_{it} + \mu_{it} \ldots\ldots\ldots 2$$

Where ROAit is the return on assets, EPSit denote earning per share, β0 represent the fixed intercept, β1-5 is the coefficient of the independent variables, STDit denotes short term debt, LTDit denotes long term debt, TD denotes total debt, FSIZEit denotes firm size and TAGit denotes tangibility and are used as control variables while i represents the number of firms in the panel data, t represent the time period of the panel data and μit is the error term.

This study relied on secondary data from the annual report and account of the sampled firm in trying to test the hypotheses formulated. As the research focuses on the relationship between capital structure and financial performance, the data collected were analyzed using descriptive statistics and regression techniques.

RESULT AND DISCUSSION

Descriptive Statistics

The descriptive statistics is presented in Table 4.1 where minimum, maximum, mean and standard deviation of the data for the variables used in the study are described.

Table 4.1: Descriptive Statistics

Var.	Minimum	Maximum	Mean	Std. Dev
ROA	-1.526	0.353	0.022	0.213
EPS	-4.524	16.013	4.976	4.530
STD	0.223	2.445	0.745	0.306
LTD	0.001	0.387	0.095	0.086
TD	-3.599	63.231	5.274	7.975
FSIZE	12.309	20.055	17.085	1.354
TAG	0.008	0.581	0.238	0.137

Source: Author's Compilation, generated using STATA.

Table 4.1 shows that the mean ROA of the sample firms is 11% which indicate that on the average, for every N100 worth of total assets of the firms, N11 was earned as profit before tax. While the mean of EPS is approximately N5 which indicate that for every issued and fully paid equity share of the study firms about N5 profit after tax is earned by the shareholders. However the minimum value of ROA and EPS is -0.319 and -0.948 which attributes to the losses incurred by forte oil plc and eternal oil plc. The mean of the short term debts is 0.745 (74.5) percent of the total equity, mean of the long term debts is 0.095 (9.5) percent and mean of the total debt is 5.274 (52.7) percent of the total equity during the period: this result show that about 52 percent of the total assets of the oil and gas companies in Nigeria are financed by debt.

The ratio of short term debt is 74 percent of total equity while the ratio of long term debt is just 9.5 percent of total equity which shows that the companies in the oil and gas sector mainly use short term debt to finance it operations and is less dependent on long term debt. This significant dependence of Nigerian companies on the short term debt instead of long term dent could be due the absence of proper or an established public debt market.

The minimum and maximum value of ROA is -0.319 and 0.595, this means that for every one hundred naira worth of net investment, the industry had at worst made a loss of N31.9 and had at best earned a maximum of N59.5. On the other hand, the minimum and maximum value of EPS is -0.947 and 16.013 which indicate that on every one ordinary share issued the industry had at worst made a loss of N0.947 and had at best earned a maximum of N16.013.

REGRESSION RESULT AND DISCUSSIONS

This section presents the regression results of the dependent variables (ROA and EPS) and the independent variables of the study. This is followed by the analysis and interpretation of the association between the variables individually and jointly. A multiple linear regression model was used to test the research hypotheses at 5% level of significance (95% confidence level.

Table 4.3: Regression Results

	Model 1	Model 2
Constant	-2.430***	-2.550**
	(-0.933)	(-19.807)
	0.018	0.013
STD	-0.040	0.820
	(-0.004)	(1.483)
	0.969	0.418
LTD	-1.160	-1.030
	(-0.333)	(-6.002)
	0.252	0.308
TD	-1.000	-1.940**
	(0.003)	(-1.119)
	0.323	0.056
FSIZE	2.630***	3.160***
	(0.052)	(1.269)
	0.001	0.002
TAG	2.570**	3.610
	(0.473)	(13.450)
	0.012	0.001
R-square: within	0.209	0.218
between	0.592	0.214
overall	0.219	0.287
F- value	3.480***	5.170***
P- value	0.0076	0.0005

Source: Authors' Compilation, generated using STATA
***** and ** indicate 1% and 5% significant levels respectively while in parenthesis is the coefficient, on top is the t- stat. and under is the p- value.**

The table above shows the regression result from model 1 which explained the association between STD, LTD, TD and ROA. The result indicates a negative relationship between STD, LTD and ROA and also a negative relationship between TD and ROA. This means an increase in STD and LTD by one will reduce ROA by 0.4% and 33% respectively while a unit change in TD will also reduce ROA by 0.3%. R^2 is 21% which indicates the variation in financial performance that is explained by the capital structure, as 79% of the variation is attributable to factors outside this study.

Hypothesis 1 predicts there is no significant relationship between capital structure and ROA of listed firms in the Nigerian Oil and Gas Industry which is in line with the first objective of the study. From the result of the analysis the F-statistics is 3.480 while the P-value is 0.0076 which is significant at 1 percent. Therefore this provides evidence for rejecting the null hypothesis and concludes that there is significant relationship between capital structure and ROA of listed firms in the Nigerian Oil and Gas Industry.

The table also represents the result of regression from model 2 which explain the relationship between STD, LTD, TD and EPS. The result indicates a negative relationship between LTD, TD and EPS while a positive relationship exit between STD and EPS. This means an increase in LTD and TD by one will reduce EPS by 0.2% and 111% respectively while a unit change in STD will increase EPS by 148%. R-square is 28% which means 72% of the variation in financial performance is attributable to factors outside this study.
The null hypothesis which states that capital structure does not significantly affect firm performance EPS is rejected for STD, LTD and TD because from the analysis the F-statistics is 5.170 while the P-value is 0.0005 which is significant at 1 percent. The findings of this study is consistent with Siddiqui and Shoaib, (2007); Onaolapo and Kajola, (2010) and Pratheepkanth, (2011).

CONCLUSION AND RECOMMENDATIONS

This study examines the impact of capital structure on firm performance. Base on the selected sampled firms and using capital structure indicators like STD, LTD and TD as well as ROA and EPS as performance indicators reveals that there is a negative and significant relationship between capital structure and firm performance. The study concludes that capital structure represented by short-term debt to total equity (STD), long- term debts to total equity (LTD) and total debt to total equity (TD) is a major determinant of firm financial performance. Although, the study has found statistically significant relationship between capital structure and financial performance, the study recommends that managers should be careful while using debt as a source of finance since a negative relationship exist between the capital structure and performance variables used in this research. They should try to finance their activities with retained earnings and use debt as a last option as supported by the pecking order theory.

REFERENCES

Abor, J. (2007). Debt policy and performance of SMEs. *Journal of Risk Finance*, 364-379.

Akinsulire, C.O (2011). Financial Management. Lagos: El-Toda Ventures Ltd.

Akinyomi, I.R (2013). Effects of Capital Structure on Firm's Performance: Empirical Study of Manufacturing Companies in Nigeria. European Journal of Economics, Finance and Administrative Sciences, 10, pp 233- 243.

Arowoshegbe, A.O. and Idialu, J.O. (2013). Capital structure and profitability of quoted companies in Nigeria. International Journal of Business and Social Research, Volume 3, No 3.

Brigham, F. (2004). Leverage decision and manager compensation with choice of effort and volatility. Journal of Financial Economics 73, 71–92.

Erasmus, P. D. (2008). Evaluating Value Based Financial Performance Measures.

Kiabel, B. D. and Nwokah, N. G. (2009). Boosting Revenue Generation by State Governments in Nigeria: The Tax Consultants Option Revisited. European Journal of Social Sciences – Volume 8, Number 4.

Miller, M.H (1958). The cost of capital, corporate finance and the theory of Investment. American Economic Review,48 pp.261-297.

Nimalathasan, B. and Valeriu B., (2010). Capital Structure and Its Impact on Profitability: A Study of Listed Manufacturing Companies in Sri Lanka. Economists Journal 13,55.

Onaolapo, A. A. and Kajola, S. O. (2010). Capital structure and firm performance: evidence from Nigeria, European Journal of Economics, Finance and Administrative Sciences, Issue 25,70-77.

Ozkan,A.(2001).Determinant of Capital Structure and Adjustment to long Run Target: Evidence from UK panel Data. *Journal of Business Finance and Accounting* Vol.28

PP175-198.
Pandey, I.M (2005). Financial Management. New Delhi: Vikas Publishing House.
Pratheepkanth, P. (2011). Capital structure and financial performance: evidence from business companies in Colombo Stock Exchange, SriLanka, *Journal of arts, Science and Commerce*, Vol. 2(2), pp 171-173.
Razak, R. Ahmad, & Aliahmed, (2008). Government ownership and performance: An analysis of listed companies in Malaysia, Corporate Ownership and Control, 6(2).
Saad, N. M. (2010). Corporate Governance Cpmpliance and the Effects to capital Structure. *International Journal of Economics and Financial , 2(1),105-114.*
San, O.T. and Heng, B. (2011). Capital Structure and Corporate Performance of Malaysian Construction Sector. *International Journal of Humanities and Social Science*. Vol 1(2).
Siddiqui, M. A. and Shoaib, A. (2011). Measuring performance through capital structure: evidence from banking sector of Pakistan, *African Journal of Business Management*, Vol. 5(5), pp 1871-1878.
Taiwo, A. M. (2012). An Empirical Analysis of capital structure on firms' performance in technology (IJMSIT) , 1(2), 1-15.
Udoayang, J.O and Asuquo, A.I (2008). Analysis of the Impact of Corporate Income Tax on Investment/Financing Decision of Selected Quoted companies in Nigeria. *Journal of Financial Economics 39*(3), 375-592.
World Bank (1991). The impact of company income tax revenue on the developing Economies: The Nigeria Experience.
Zeitun, R. and G. Tian, (2007). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 1: 40-53.