THE IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF NIGERIAN LISTED FOOD PRODUCT COMPANIES

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ABSTRACT

This study is purposely carried out to examine the impact of capital structure on financial performance of Nigerian listed food product companies. Annual financial report of five (5) companies listed on the Nigeria stuck exchange under the food product categories were used within the study period of seven (7) years from 2006-2012. Least square regression analysis was applied on Return on Asset (ROA) and Return on Equity (ROE) as performance indicators while Long-term Debt to Capital (LTDC), Total Debt to Capital (TDC), Total Debt to Equity (TDE) are used as capital structure proxies and AGE as control variable. The study reveal that there is a negative and insignificant relationship between LTDC, TDC, TDE and ROA while the relationship between LTDC, TDC, TDE and ROE is positive but also insignificant. More so, from the result positive and significant relationship exist between AGE and the two performance variables (ROA and ROE). The study concludes that capital structure is not a major determinant of firm performance and recommends that organization managers should focus more attention on firm age when making capital structure decision that will improve firm's financial performance.

Keywords: Capital Structure, Financial Performance

INTRODUCTION

In financial term capital structure means the way firms finance their assets through the mixture of equity, debt, or hybrid securities (Saad, 2010). Tsuji (2011), fundamentally view

capital structure on how a firm finances its overall operation and growth by using diverse sources of funds. The article of Modigliani and Miller (1958) was the first contemporary theory of capital structure that provided boost in the development of the theoretical framework within which various capital structure theories have been developed. Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk and have greater control over decisions. An appropriate capital structure is a critical decision for any business organization. The decision is important not only because of the need to maximize returns to various organizational constituencies, but also because of the impact such a decision have on an organization's ability to deal with its competitive environment.

The capital structure decision that has been difficulty facing firms in Nigeria has to do more with the financing – whether to raise debt or equity capital. The issue of finance is so important that it has been identified as an immediate reason for business failing to start in the first place or to progress. Thus it is necessary for firms in Nigeria to be able to finance their activities and grow over time, if they are ever to play an increasing and predominant role in creating value added, as well as income in terms of profits. From the foregoing, it is therefore important to understand how firms financing choice affects their performance. What determines the capital structure of firms has been an on going debate in the corporate finance world. There are many factors both internal and external impacting the decision of choosing the suitable financing structure. The internal and external factors include sensitivity of creditors due to high debt on the company and the nature of industry in terms of competition, stability of sales, profit, growth and asset value. These factors determine the capacity of the debt, i.e. the optimal debt ratio and the evolution of the cost of capital for different levels of debt

(Alkhasawneh, 2006). For a company capital to be well structured and effectively utilized, various ways must be devised for selecting the best components of its capital which would be used in the company operation to raise its productivity and or achieve performance. This process should be base on criteria well drawn up by the manager after making a careful financial planning and control for the company (Uremadu, 2004). Efobi (2008), opines that the ability of a company to effectively choose adequate sources of capital to finance its operations will differentiate a good capital structure management and a poorly managed capital structure. Thus, this study examine the impact of capital structure on the financial performance of food product companies in Nigeria.

REVIEW OF RELATED LITERATURES
Conceptual Framework
The capital of a company, according to Akinsulire (2002), is "a stock of money, possessed by a person or a business firm, that could be invested, from time to time, in order to earn income, but for which it is intended not to diminish." Uremadu (2004) sees the capital of an organization as "those pool of funds that the company commits to its fixed assets, to inventories, to account receivables, and to cash or marketable securities" that lead to corporate growth. An economist views capital as any material or item which can be consumed in the production process to create wealth. These materials or items are said to be factors of production which are usually grouped into man, machine and money (including information as the fourth category) (Efobi, 2008). Capital structure in other words, refers to the various financing options of the asset by a firm. A business concern can go for different levels of the mixture of equity, debt and other financial facilities with equity having the emphasis on maximizing the firm's market value. Capital structure affects the liquidity and profitability of a firm (Raheman, Zulfiquar and Mustafa, 2007). However, not all business firms use a standardized capital structure hence they differ in their financial decisions under various terms and conditions. It is therefore a difficult situation for these firms to determine the capital structure in which risk and costs are minimum and that can raise the value of shareholders wealth

and or maximize profits (Raheman, Zulfiquar and Mustafa, 2007). This difference of choices about the financing decisions gives rise to various capital structure theories.

Theoretical Framework

The two outstanding theories that emerged and present a clear direction on firm behavior about debt and capital structure are pecking order and trade-off theory. The pecking order theory articulated by Myers and Majluf (1984) and Myers (1984), stated that firms having high profits tend to attain low debt profile because when firms are more profitable their first priority is to generate financing through retained earnings (R.Es) because they maximize the value of the existing shareholders. If retained earnings are not sufficient, the firms can then go for debt and if further financing is required they issue new equity. The retained earning is preferred because it almost has no cost, but if the external resources are used for financing like issuance of new shares it may take very high costs. The pecking order theory is as a result of information asymmetries existing between insiders of the firm and outsiders (Rahaman, Zulfiquar and Mustafa, 2007). Thus, the model leads to managers to adopt their financing policy to minimize these associated costs. It means that they will prefer internal financing to external financing and very risky debt to equity. In wither ward, the tradeoff theory propounded by Modigliani and Miller (1958) opined that, if firms are more profitable they prefer debt financing as compared to equity for the sake of profit. This posture is driven by three forces (Raheman, Zulfiquar and Mustapha, 2007):

1. More debt in a firm's capital structure allows for more tax benefits as their tax liabilities become lower and even in some cases it is waved off. Some firms having more profits go for more debts rather than equity.

2. If a firm has a low profit then there exist greater chances of bankruptcy. So if the firm takes more debts there are chances that it is bankrupt and as a result of this, investors cannot have trust on it. On the other hand, if a firm has more profits than exists less chances of bankruptcy so that investors' trust rises and the firm tends to earn more profits.

3. The agency cost which has to be borne by investors is a cost in form of interest rate because creditors always check the position of the company and monitor the management. So, if a firm has a good image that it can get loan at a lower cost because creditors are not worried about bankruptcy and their agency cost is very low, it can acquire more debts.

Amidst all these different shades of theoretical views on the effect of capital mix on corporate performance, therefore, the central issue before a financial manager is to determine the appropriate mix between equity and debt for his/her firm.

Empirical Review

John (2013), studied the effect of capital structure on firm performance among 3 quoted manufacturing companies under the food and beverages categories in Nigeria between 2007-2011 using ROA and ROE as performance proxies while LDC, DC, DCE, SDTD are use as capital structure variables and AGE was use as control variable. Using correlation analysis the result reveals that there is significant relationship between capital structure and firm performance. Akintoye (2008) carried out a research on the sensitivity of performance to capital structure on selected companies in Nigeria. The study used earning before interest and tax (EBIT), earning per share (EPS), and dividend per share (DPS) as measures of performance and degree of operating leverage (DOL), Degree of financial leverage (DFL) as measures of leverage.

The result showed positive associations between debt ratio, firm size and growth, while asset tangibility, risk, corporate tax and profitability regularly related to debt ratio. Abor (2005), carried out a study on the influence of capital structure on profitability of listed Ghana Stock Exchange during a five year period. He found out that there is significant positive interrelationship between DA, SDA and ROE, and adverse relationship between LDA and ROE. This shows that firms which earn a lot use more short-term debt to finance their business. Ahmed et al., (2012) examine capital structure effect on performance of Malaysian consumer industrial sectors. The study used return on asset (ROA) and return on equity (ROE) as proxies for performance and short term debt (STD), long-

term debt (LTD) and total debt (TD) as proxies for capital structure. The result reveal that only STD and TD have significant relationship with ROA while ROE has significant on each of the debt level. Zeitun and Tian (2007) in his study on the Jordanian firms found a highly negative relation between the firm performance by employing both market and accounting based variables. Whereas the relation among capital structure variables and firm performance varies across industries. The relation is insignificant between capital structure and performance variables in the engineering sector firms. Accounting based variables of capital structure were debt (short term, long term and total debt) to total assets and total debt to total equity whereas accounting based measure for performance was ROA. The accounting based measure ROE (return on equity) has an insignificant relation with capital structure in all forms in Jordanian firms. Further, the market based measures for performance was Tobin's Q and price earnings ratio.

Ebaid (2009) in his study on the emerging market economy of Egypt find that the selection of capital structure mix has a very weak relationship with the performance. He found that the relation among capital structure variables including short term, long term and total debt to total assets has insignificant relationship with performance measured by ROE (return on equity). Whereas, the relation of short term debt and total debt to total assets is negative and statistically significant with the performance. A negative insignificant relation exists for the long term debt with return on assets. Further, the relation of the capital structure with performance measured by the gross profit margin is also insignificant. San and Heng (2011) also studied the relation of capital structure with performance of the firm in the Malaysian construction industry in the aftermath of financial crises of 2007-08 that badly affected most of the economies of the world including Malaysia. They found that the financial crises do not show any major impact on the performance of construction industry because of the large scale development work going on the country. Weak relation exists between leverage and performance measured by assets returns, equity returns and profitability in the Malaysian

construction industry including small, medium and large size companies. Zeitun and Tian (2007) in his study on the Jordanian firms found a highly negative relation between the firm performance by employing both market and accounting based variables. Whereas the relation among capital structure variables and firm performance varies across industries. The relation is insignificant between capital structure variables and performance variables in the engineering sector firms.

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METHODOLOGY

The study population comprises of 11 companies listed on the Nigeria stock exchange (NSE) under the food product sector of the economy. From the population a sample size was drawn. For any firm to be included in the sample, it must satisfy the following criteria. First, it must have been listed on or before 2005. Second, the firm must not be delisted between 2006 and 2012. The criteria are designed in order to ensure uniform

presentation and eliminate data omission. Applying the filter, only 5 companies (UTC Nig plc, Northern flour mills plc, National salt company of nig plc, Flour mills of nig plc, Multi-trex integrated foods plc) where able to meet up with the set criterion as such, ex-post factor research design is employed using panel data for the study period of seven years (2006-2012). The study proxies consist of dependent and independent variables. The dependent variables include, Return on Asset (ROA) and Return on Equity (ROE) which will be use to measure firm performance. The variables were also used by Ahmed et al., (2012), and John (2013). The independent variables consist of LTDC, TDC, and TDE as indicators of capital structure. The company's Age which are measure by the number of years the company has been in existence as an incorporated entity represent the control variable.

Empirical Model

The model used by Onaolapo and Kajola (2010) was adopted by the researcher with little modification to achieve the study objective. The model is as follows:
CS = f (STDTA, LTDTA, TDE)
PERF =f (CS), by expansion,
PERF = f (STDTA, LTDTA, TDE).

Where,
PERF=Performance (proxy by ROA, PM),
ROA =Return on Asset, PM = Profit Margin;
CS = Capital Structure,
STDTA = Short Term Debt to Total Assets,
LTDTA = Long Term Debt to Total Assets,
TDE = Total Debts to Equity,
B0 =The Constant and B1, b2, b3, b4 are Regression Coefficients.

Using least square regression analysis, the model is modified as follows:

$ROA_{it} = B0 + B1LTDC_{it} + B2TDC_{it} + B3TDE_{it} + B4AGE_{it} + e_{it}$
$ROE_{it} = B0 + B1LTDC_{it} + B2TDC_{it} + B3TDE_{it} + B4AGE_{it} + e_{it}$

Where:

ROAit = Return on Asset for Firm i at Time t (in years), used as a proxy for performance.

ROEit = Return on Equity for Firm i at Time t (in years), used as a proxy for performance.

LTDCit = Long-term Debt to Capital of Firm i in Year t used as Variable for Capital Structure

TDCit = Total Debt to Capital of Firm i in year t used as Variable for Capital Structure

TDEit = Total Debt to Equity of Firm i in year t used as Variable for Capital Structure

AGEit= Age of Firm i in Year t used as Control Variable

Eit = Error Term

RESULT AND ANALYSIS
Table 1: Descriptive Statistics

Variable	Mean	Min	Max	Std. Dev
ROA	0.0944831	-0.07836	0.49042	0.1306247
ROE	2.347578	-1.40614	15.65318	3.556163
LTDC	0.5493137	0.0282819	0.9839216	0.3426921
TDC	2.228246	0.8061845	7.240229	1.346008
TDE	21.26197	1.022545	114.9139	31.82722
AGE	33.2	7	52	13.35885

Source: Generated from annual report of sampled firms using stata.

The descriptive statistic shows that ROE has an average value of 2.347578 and standard deviation of 3.556163. The highest ROE is 15.65318 while the lowest is -1.40614. The return on asset has its average at 0.0944831 with a standard deviation of 0.1306247 and the highest and lowest value at o.49042 and -0.07836 respectively. The ratio of long term debt to capital (LTDC) has an average of 0.5493137 with a standard deviation of 0.3246921 and a highest and lowest value of 0.9839216 and 0.0282819 respectively. Total debt to capital (TDC) which is measured at the ratio of total debt to total capital has an average value of 2.228246 with standard deviation of 1.346008 with highest and lowest value of7.240229 and 0.8061845 respectively. The ratio of total debt to equity (TDE) HAS an average value of 21.26197 with standard deviation of 31.82722 and highest and lowest value at 114.9139 and 1.022545

respectively. Logarithm of number of years of incorporation is use to measure AGE; as such, Age has an average value of 33.2, standard deviation of 13.35885, highest value of 52 and minimum value of 7.

Table 2: Regression Output with ROA as Dependent Variable

Variable	Coefficient	P-Value
LTDC	-0.0948117	0.314
TDC	-0.0033172	0.848
TDE	-0.0004008	0.694
AGE	0.0035374	0.055
R-square	0.2207	

Source: Generated from annual report of sampled firms using stata.

The regression result from table 2 above indicate that long term debt to capital (LTDC), total debt to capital (TDC) and total debt to equity (TDE) has a negative coefficient and positive insignificant impact on return on asset (ROA) or firm performance. This insignificant relationship explain the low leverage nature of the food product companies in Nigeria while Age has positive p-value and significant impact on return on asset (ROA) or firm performance at 5% level. This is a result of long years of existence that is associated with continuous need for improved assets that will increase productivity and efficiency which result to increase in profit. This means an increase in Age will increase ROA by 0.3%. R-Square is 22% which mean 78% of the variation is contributed by factors outside this study.

Table 3: Regression Output with ROE as Dependent Variable

Variable	Coefficient	P-Value
LTDC	2.864472	0.124
TDC	0.2877064	0.398
TDE	0.27467	0.173
AGE	0.127559	0.001
R-square	0.5986	

Source: Generated from annual report of sampled firms using stata.

Table 3 above represent the result of regression used to verify the relationship between LTDC, TDC, TDE, AGE and ROE. The result indicate a positive coefficient between LTDC, TDC, TDE and ROE at an insignificant rate of 12.4%, 39.8%, and 17.3% respectively while AGE and ROE has positive p-value at significant rate of 0.1%. This mean an increase in AGE will also increase ROE by 12.7%. The R-Square is 59.8%, this indicate high significant relationship between the variables, as 40.2% is attributable to factors outside this study.

CONCLUSION

The impact of capital structure on firm's financial performance was examined by this study. Five companies listed on the Nigeria stock exchange were selected from the food product categories as the sample size. The study used capital structure indicators like LTDC, TDC, and TDE as well as ROA and ROE as performance indicators while AGE was use as control variable.

The descriptive statistics results showed that the performance of the firms in the food product sector of Nigerian stock exchange was not satisfactory during the study period. This could be as a result of their low leverage nature. The minimum and maximum percent contribution of LTD to capital is 0.02 and 0.98 percent respectively while TD to capital is 0.8 and 7.2 percent respectively. This shows that the food product firms are highly financed with internal sources of finance as a result of information asymmetry problems and market inefficiency, the cost of external source of financing is much higher and difficult to obtain in the financial/capital market. From the regression output using ROA and ROE as dependent variable there is no significant relationship between LTDC, TDC, TDE and the two performance indicators (ROA AND ROE). These mean long-term debt to capital (LTDC), total debt to capital (TDC) and total debt to equity (TDE) are not major determinant of firm performance. This outcome is consistent with the findings of Taani (2013), The study only found a positive and significant relationship between AGE and the two performance indicators (ROA and ROE) which implied that AGE is a determinant of firm performance.

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RECOMENDATION

More attention should be focus on firm age by the firm's managers when making capital structure decision in order to have a grand position in making decisions that will improve the firm financial performance. The firms leverage status should be increase by raising the percentage of external financing sources in order to improve the firm profitability.

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