

## DETERMINANTS OF CAPITAL STRUCTURE IN QUOTED AGRO-ALLIED COMPANY IN NIGERIA

Uwasomba C.E.<sup>1</sup>; Boniface M.O.<sup>2</sup> Dibie, V.M.<sup>3</sup>

<sup>1</sup>Department of Entrepreneurial Studies, College of Management Sciences, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria

<sup>2&3</sup>Department of Marketing, College of Management Sciences, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria

Emails: [chidiemmanson@gmail.com](mailto:chidiemmanson@gmail.com); [bonifaceosumba@gmail.com](mailto:bonifaceosumba@gmail.com)

**CITATION:** Uwasomba C.E.; Boniface M.O.; & Dibie, V.M. (2024). Determinants of capital structure in quoted agro-allied company in Nigeria, *UBS Journal of Business and Economic Policy*, 2(5), 12 - 28.

**Paper Type:** Original Research Paper; **Correspondence:** [chidiemmanson@gmail.com](mailto:chidiemmanson@gmail.com)

### Abstract

*The study analyzed the determinants of capital structure in quoted agro-allied company in Nigeria (A study of British Tobacco Company in Nigeria). The specific objectives are to analyze the factors affecting capital structure in quoted agro-allied company in Nigeria. Debt to equity were used as a proxy to capital structure while the determinants were proxied by Liquidity ratio, dividend payout, total asset, profitability. The study adopted expo facto design and data were sourced from British Tobacco Company in Nigeria annual financial statement. The data were analyze and tested using multiple regression model. The result shows that liquidity ratio has positive and significant impact on debt to equity ratio while total asset and profitability negative and significant impact on debt to equity ratio. However, dividend payout has positive and insignificant impact on debt to equity ratio of British Tobacco Company in Nigeria. Based on the findings, the selected agro allied firm raising fund for operations or expansions should not give debt ratio (higher) priority. A rightful and correct combination of equity and debt must be ensured with equity given priority over debt. This is evidenced from the result when profitability on its own is negatively related with debt to equity but, leverage ratio is positively related.*

**Key Words:** Capital structure, Liquidity ratio, Total assets.

### Introduction

A firm basic resource is the stream of cash flows produced by its assets. When the firm is financed entirely by common stock, all of those cash flows belong to the stockholders. When it issues both debt and equity securities, it undertakes to split up the cash flows into streams- a relatively safe stream that goes to the debt holders and a riskier one that goes to the stockholders. Financing is one of the crucial areas in a firm. A financial manager is always concerned with the determination of the best financing mix and combination of debt and equity that a company uses to finance its business (Damodaran, 2011). To understand how companies, finance their operations, it is necessary to examine the determinants of their capital structure decisions. Most of the decision making process related to capital structure are deciding factors when determining the capital structure

such as cost, various taxes and rate. Interest rate has been proposed to explain the variation in financial leverage across firms (Hampton, 2009). Knowledge about these factor is pertinent in capital structure decision making of any firm.

In finance, capital structure refers to the way in which an organization is financed, a combination of long term capital (ordinary shares and preference shares, debentures, bank loans, convertible loan stock and so on) and short term liabilities such as bank overdraft and trade creditors. Capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surplus of an enterprise. It is the mix of debt and equity capital maintained by a firm (Osuji and Odita, 2012). A mixture of a firms financial liability is referred to as leverage; 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. The capital structure of a company is such a vital factor that it enhances its operations. As a result, the relevance of capital structure to company's operations and performance cannot be overemphasized. Many studies have previously been undertaken to determine and possibly develop theories that will enhance the financial mix suitable for corporate organizations to apply in order to maximize shareholders value (Schiantarelli and Sembenelli, 1997; and Efobi, 2008).

How an organization is financed is of paramount importance to both managers of the firms and providers of fund. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected. Another importance of capital structure is that it is highly related to the ability of firms to fulfill the needs of various stakeholders (DAVE and Sola, 2010). Capital structure represents the major claims to a corporation's asset which comprises the different types of both equities and liabilities. According to Sola (2010) there is various mix of debt /equity ratio. These includes; 100% equity: 0% debt, 0% equity: 100% debt, and certain percentage of equity with debt. From these three alternatives, option one is that of the unlevered firm, that is the firm that shuns the advantage of leverage (if any). Option two is that of a firm that has no equity capital. This option may not actually be realistic or possible in the real life economic situations, because no provider of funds will invest his money in a firm without equity capital. This partially explains the term "trading on equity", that is, it is the equity element that is present in the firm's capital structure that encourages the debt providers to get their scarce resources to the business. Option three is the most realistic one in that, it combines both a certain percentage of debt and equity in the capital structure and thus, the advantages of leverage is exploits. However, a firm's capital structure refers to the mix of its financial liabilities. The choice of an appropriate financing mix constitutes a crucial decision for the survival and continuous growth of any business organization not only because of the need to maximize returns to the various interest holders, but also because of the impact such informed decision has on the performance of an organization in a competitive environment (Roy and Maifang, 2000). In reality, optimal capital structure of a firm is difficult to determine. Having seen a lot of previous research on capital structure, there has not been a consensus from the studies on which financial structure is appropriate for effective operation and better performance of firms in Nigeria. Also, the body of finance holds widely divergent opinions on

controversial issues such as the best financial mix that will improve firm performance. Therefore, this study seeks to provide more empirical evidence on the effect of capital structure on firm's performance.

Managers have numerous opportunities to exercise their discretion with respect to structure decisions. The capital structure employed may not be meant for value maximization of the firm but for protection of managers interest especially in organizations where corporate decisions are dictated by managers and shares of the company closely held (Dimitris and Psillaki, 2008). Even where shares are not closely held, owners of equity are generally large in number and an average shareholder controls a minute proportion of the shares of the firm. This gives rise to the tendency for such a shareholder to take less interest different from owners of equity. This resulted to the agency problem in the theory of finance and has adversely influenced the capital structure decision of firms. This study wants to contribute to the debate on the relationship between capital structure and firm performance from the agency cost theory perspective. The standard of increasing capital in Nigeria became higher hard to achieve due to the associated cost and risk. As financial capital is uncertain but critical resource for all firms, suppliers of financial are able to exert control over firms. Debt and equity are the two major classes of capital, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of cost, risk, benefit and control. Debt holders exert lower control; they earn a fixed rate of return and are protected by contractual obligation with respect to their investment. While equity holders are residual claimants, bearing most of the risk and have greater control over decision. It is important to note from the above exposition, that there is still a gap in the area of capital structure and agro-allied companies in Nigeria which is attributable to the determinants of capital structure.

Broadly, this study analyze the determinants of capital structure in quoted agro-allied company in Nigeria (A study of British Tobacco Company in Nigeria). The specific objectives are to:

1. analyze the factors affecting capital structure in quoted agro-allied company in Nigeria.

In line with the objective of the study, the following hypotheses have been formulated

H<sub>01</sub>: Liquidity ratio, dividend payout, total asset, profitability have no significance impact on debt equity ratio of British Tobacco Company in Nigeria.

### **Conceptual Review**

Investors and potential investors will be obliged to invest their hard earned savings in a company that promised to make a return that will change their wealth position at a particular point in time. However, as sound as this objective is, it will be illusive if the hard earned resources are not combined for optimum utilization. The essence of capital structure decision is to ensure the right combination of financing resources that will yield maximum return without necessarily hampering the interest of stakeholders. The term capital structure according to Kennon (2010) refers to the percentage of capital (money)

at work in a business by type. There are two forms of capital: equity capital and debt capital. Alfred (2007) explained that a firm's capital structure implies the proportion of debt and equity in the total capital structure of the firm. Pandey (2009) explained the difference between capital structure and financial structure of a firm by affirming that the various means used to raise funds represent the firm's financial structure, while the capital structure represents the proportionate relationship between long-term debt and equity.

The capital structure of a firm as discussed by Inanga and Ajayi (2009) does not include shortterm credit, but means the composite of a firms long-term funds obtained from various sources. Therefore, a firms capital structure is described as the capital mix of both equity and debt capital in financing its assets. However, whether or not an optimal capital structure exists is one of the most important and complex issues in corporate finance. Capital structure, preferred stock and common equity are most used by firms to raise needed funds; capital structure policy seeks a trade-off between risk and expected return. The firm must consider its business risk, tax position, financial flexibility and managerial conservatism or aggressiveness, while these factors are crucial in determining the target capital structure, operating conditions may cause the actual capital structure to differ from the optimal capital structure. A firm's capital structure is then the composition of its liabilities. The various components of a firm's capital structure according to Inanga and Ajayi (1999) may be classified into equity capital, preference capital and long-term loan (debt) capital. Equity capital refers to the contributed capital; money originally invested in the business in exchange for shares of stock; and retained profits; profits from past years that have been kept by the company to strengthen the balance sheet, growth, acquisition and expansion of the business. Preference capital refers to a hybrid that combines the features of debentures and equity shares except the benefits while debt capital refers to the long term bonds used by the firm in financing its investment decisions while coming up with its principal and also paying back interest.

### **Concept of Capital Structure**

A firm's capital structure refers to the mix of its financial liabilities. As financial capital is an uncertain but critical resource for all firms, suppliers of finance are able to exert control over firms. There are two different ways of financing the assets of an organization; through internal equity or external debt. Capital structure refers to the way a corporation finances its assets through some combination of equity and debt (Tsai et al, 2010). The study on capital structure attempts to explain the mix of securities and financing sources used by companies to finance investments (Myers, 2001). Brigham (2004) referred to Capital structure as the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both. In addition, Singh and Hamid (1992) in their research used data on the largest companies in selected developing countries and found that firms in developing countries used more of debt finance in financing their growth than was the case in industrialized countries.

Abor (2005) also found a positive relationship between total assets and return on equity and that profitable firms in Ghana depended more on debt as a main financing option due

to a perceived low financial risk. How to plan financing decision using a particular means or mix of funding to maintain a proper capital structure is an important issue of concern demanding urgent for financing managers if their sectors is ever to play a major role in economic development. In short, capital structure is a mixture of a company's debt (long-term and short-term), common equity and preferred equity. Capital structure is essential on how a firm finances its overall operations and growth by using different sources of funds. Medigliani- Miller (MM) theorem is the broadly accepted capital structure theory because is it the origin theory of capital structure theory which had been used by many researchers.

### **Composition of Capital Structure of a Company**

The capital structure of a firm comprises of both the long-term sources of finance which include debt and equity financing, and the short-term sources of finance. Myers (1984) in his study, which developed the pecking order theory, explained that the capital structure of firms range from internal financing to external financing. He identified internal financing to include retained earnings while the external financing include debt financing and equity financing. Jansen (2004), in line with Myer (1984)' s model explained that the capital structure of a company ranges from share capital, retained earnings and debt financing. In similar vein, Hovakimian and Tehranian (2002) and Frank and Goyal (2003) explained that the capital structure of a firm ranges from internal finance, which include retained earnings to external finances, that is, debt and equity capital. Zoppa and McMahon (2002) identified a more comprehensive capital structure composition, based on their study of Australian small and medium scale businesses capital structure behavior. Consequently, they identified that a company's capital structure should include the following;

- a. Reinvested profits;
- b. Short-term debt financing like trade credit;
- c. Long-term debt financing like debentures and long-term debts etc.
- d. New equity capital injections from existing owners and owner managers;
- e. New equity capital from uninvolved parties like outside investors, venture capitalists etc.

These scholars therefore, pointed out that the sources of corporate capital comprise more than just debt capital and equity capital. Though these two are broad classifications of the composition of the capital structure of a company, the capital structure of a company should not be limited to them only. Akinsulire (2002) explained that the capital structure of a firm refers to how the company finances its operations. According to him, the "how" is usually made up of the three sources, which include the ordinary share capital, the preference share capital and debt capital. This is in relation with Uremadu (2004) who explained that the capital structure of the company comprises of debentures, preference share capital (which includes reserves and surpluses and retained earnings).

To further elaborate on capital structure, it becomes pertinent to elaborate on the meaning of the forms or elements of the firm's capital structure. Debt financing is a kind of finance that becomes a commitment for the company to repay back interest and principal at the

end of a particular period. These interests are tax deductible and the tax authorities make an allowance for these expenses. The inability of the company to repay back this commitment and the interest accruable to this commitment would attract distress for the company and this may ultimately lead to bankruptcy. Equity financing entails the ability of the firm to raise its external funds from the public and at the same time, issue out a part of the firms ownership right evidenced by share certificate. The equity holders are part owners of the firm. At the end of the financial period, the firm rewards the equity stockholders with dividend from the profit made by the company.

### **Factors Influencing the Choice of Capital Structure**

Capital structure decisions are so important and sensitive that it is of necessity that firms should know this before deciding its mix. Benito (2003) explained that the capital structure decisions of firms have serious implications on both the macro and micro-levels of the economy. On the micro level, the capital structure decisions of companies cost them a lot of time and money in searching out and ascertaining the best capital structure policy to adopt and has been evidenced amongst firms (Harris and Raviv, 1991). Similarly, at the macroeconomic level, the capital structure decisions have great implications.

Eugene, Gapenski and Ehrhardt (2001) believe that it occurs due to the risk associated with corporate debt in terms of bankruptcy and liquidity caused by the inability to pay back debts and its accrued interest. They further noted that bankruptcy related problems become rampant when firms have a lot of debts in their capital structure. In deciding the capital structure of firms, Benito (2003) explained that firms should determine their capital structure based on applying the trade-off theory or the pecking order theory. He argues that in applying the trade-off theory, firms will settle for the capital structure at that margin where firms trade-off the benefits of an additional debt against the costs. The benefits of additional debt include reduced agency cost of driving the debt, tax cover as a result of interest payable on the debt; and the costs of debt include bankruptcy cost as a result of non-re-payment of debt (Benito, 2003; Eugene, Gapenski and Ehrhardt, 2001; Brealey and Myers, 2000; Hovakimian, Hovakimian and Tehranian, 2002 and Frank and Goyal, 2003). There are several other factors influencing companies' choice of an appropriate capital structure. Some companies are not able to receive bank loans (Kamsvag, 2001), some have enough retained earnings to undertake their desired investment without taking any loans (Andreson, Wahlbery and Ostlund, 2006), and some does not want to undertake any debt by principle (Anderson and Williamson, 2001). Petersen and Rajan (1994) explained that there are more relevant and suitable measures to use when analyzing the capital structure of an organization than those presented by Miller and Modigliani (1958).

Business size, age and cash flow is according to Petersen and Rajan (1994) important factors. I. The larger the company is, normally the debts are too.

- ii. The age of a company affects the capital structure. As the company matures debt decreases.

- iii. Young companies are more or less forced to finance through bank loans while older have had/ possibilities to build capital from previous revenues.

### **Capital Structure and Financial Gearing**

Financial gearing according to Anderson (2012), is the mix of long-term corporate funding provided internally by shareholders and that contributed externally by lenders. Surprisingly, there is no clear-cut definition of leverage in the academic literature. The specific choice depends on the objective of the analysis. A company is however said to be unlevered as long as it has no debt, while a firm with debt in its capital structure is said to be leveraged (Song, 2005). The easy but high-risk increases in stock prices due to leveraging at banks in the United State has been blamed according to Robert (2009) for the unusually high rate of pay for top executives during the financial crisis of 2007-2010, since gain in stocks are often rewarded regardless of method. The fact that an optimal capital structure has not been found is an indication of some flaws in the logic. An appreciation of the factors that influence a company's gearing and the effects of gearing on shareholders return are vital to interpreting gearing ratios.

### **Theoretical Framework**

#### **Modigliani and Miller (1963) Theory**

The roots of capital structure theory refers to more than fifty decades since the seminal work which presented by Modigliani and Miller 1958 (thereafter MM). They proved, under restrictive assumptions (no taxes and transaction costs) that cost of capital does not effect on capital structure, particularly debt then not effect on firm value where this theory called irrelevancy proposition. In other words, the value of levered firm equals the value of unlevered firm. Later, Modigliani and Miller (1963) presented new proof that cost of capital effect on capital structure, and therefore effect on value of the firm with relaxing unrealistic assumptions that there are existing taxes, which indicate that borrowing give tax advantage, where the interest deducted from the tax and it will result tax shields, which in turn reduce the cost of borrowing and then maximize the firm performance (Miller, 1977) and this require from the firm to make trade-off between the cost of debt from side and the benefits of using debt from another side. Consequently, the researchers studied the relationship between capital structure and the value of the firm through appearing new theory called the agency theory which indicates to potential conflict between shareholders and managers from on the one hand and the potential conflict between shareholders and managers and debtors form on the other hand. Potential conflict between shareholders and managers arises when the shareholders choose the manager as an agent of their selves to manage the firm on order to maximize their wealth's, but the managers concentrate on the high profitable and risky projects to achieve their interests at first that represented incentives and rewards, and after that concerning of shareholders benefits, all of these lead to maximize the firm value (Jensen and Meckling (1976), Harri and Raviv (1991), and Myer (2001).

#### **Agency Cost Theory**

The agency theory concept was initially developed by Berle and Means (1932), who explained that due to a continuous dilution of equity ownership of large corporations, ownership and control become more separated. This situation gives professional

managers an opportunity to pursue their interest instead of that of shareholders. This is a theory concerning the relationship between the principal (shareholders) and the agent of the principal (company's managers). This suggests that the firm can be viewed as a nexus of contracts (loosely defined) between resource holders. An agency relationship arises whenever one or more individual, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decisionmaking authority to the agents. Jensen and Meckling (1976) explained that, for an optimal debt level in capital structure by minimizing the agency costs arising from the divergent interest of managers with shareholders and debt holders. They suggest that either ownership of the managers in the firm should be increased in order to align the interest of managers with that of the owners or use of debt should be motivated to control manager's tendency for excessive extra consumptions. Jensen (1986) presents agency problem associated with free-flow. He suggested that free cash flow problem can be somehow controlled by increasing the stake of managers in the business or by increasing debt in the capital structure, reducing the amount of "free" cash available to managers.

Therefore, firms which are financed by debt given managers less decision power of those finance mostly by equity, and thus debt can be used as a control mechanism, in which lenders and shareholders becomes the principal parties in the corporate governance structure.

### **Pecking Order Theory**

The pecking order theory of capital structure as introduced by Donaldson (1961) is among the most influential theories of corporate leverage. It goes contrary to the idea of firms having a unique combination of debt and equity finance, which minimize their cost of capital. The theory suggests that when a firm is looking for ways to finance its long-term investments, it has a well-defined order of preference with respect to the sources of finance it uses. It states that a firm's first preference should be the utilization of internal funds (i.e. retain earnings), followed by debt and then external equity. He argues that the more profitable the firms become, the lesser they borrow because they would have sufficient internal finance to undertake their investment projects. He further argues that it is when the internal finance is inadequate that a firm should source for external finance and most preferably bank borrowings or corporate bonds. And after exhausting both internal and bank borrowing and corporate bonds, the final least preferred source of finance is to issue new equity capital.

Pecking Order theory tries to capture the costs of asymmetric information which states that companies prioritize their sources of financing (from internal financing to equity) according to the principle of least effort, or of least resistance, preferring to raise equity as a financing means of last resort. Hence, internal funds is used first, and when that is exhausted, debt is issued, and when it is not sensible to issue any more debt, equity is issued. On the other hand, Pecking Order Theory (Myer & Majluf, 1984), captures the effect of asymmetric information upon the mispricing of new securities, which says that there is no well-defined target debt ratio. They opined that investors generally perceived that managers are better informed of the price sensitive information of the firms.

Investor's perception is such that managers issue risky securities when they are overpriced. This perception of investors leads to the underpricing of new equity issue. Sometimes this underpricing becomes so severe that it causes substantial loss to the existing shareholders. To avoid the problem arising from information asymmetry firms usually fulfil their financing needs by preferring retained earnings as their main source of financing, followed by debt and finally external equity financing as the last resort.

### **The Trade-Off Theory**

The trade-off theory suggests that firms can determine their optimal capital structure by striking a balance between the benefits and costs related with debt financing. According to Myers (1984), firms set a target debt to value ratio and steadily adjust towards the target ratio to balance the trade-off between tax savings and bankruptcy cost. The purpose of the trade-off theory of capital structure is to explain the strategy a firm uses to finance investments which may be by equity and sometimes by debt, it was concluded that trade-off theory couldn't account for the correlation between high profitability and low debt ratios. Levels of capital mix are liable to increase the cost of debt and also the chance of default, bankruptcy and eventually liquidation of a firm (Myers, 2001). Miller (1977) to explain that it doesn't matter how a firm finance its operations and that the value of a firm is independent of its capital structure making capital structure irrelevance, suggests that more profitable firms need to shelter their earnings and save taxes by opting for higher leverage in their capital structure. It was found out that firm's performance and high debt level are positively associated, a hypothesis that is supported by a number of studies (Gosh et al., 2000; Hadlock and James, 2002; Abor, 2005; and Bonaccorsi di patti, 2006).

### **Empirical Review**

Magara (2012) did a study on capital structure and its determinants at the Nairobi Securities Exchange. The study sought to find out the major determinants of capital structure. It was established that from the period 2007 to 2011, there was a positive significant relationship between the firm size, tangibility and growth rate and the degree of leverage of the firm. The study did not take into consideration macro-economic factors like inflation and interest rates.

Mwangi (2010) did a study on capital structure on firms listed at the Nairobi Stock Exchange also tried to look on the relationship between capital structure financial performances. Data was collected using structure questionnaires. The study identified that a strong positive relationship between leverage and return on equity, liquidity, and return on investment existed. This hypothesis is also supported by a number of studies, to them the benefits of debt financing are less than its negative aspects, so firms will always prefer to fund investments by internal sources (Jensen and Meckling, 1976; Kester, 1986; Rajan and Zingales, 1995; and Fama and French, 2002).

Holz (2002) investigated the relationship between financial leverage and firm value on some industries which marked on high degree in difference characteristics from where growth, cost and demand. The study used debt to equity ratio as financial leverage

indicator and earnings to market value of common stock as performance indicator. Result showed that capital structure (debt ratio) related positively with the firm performance, the result ascribes to the willing of firms managers to finance their projects by borrowing and then use theses money optimally to maximize the performance. On the same manner, Dessi and Robertson (2003) found that financial leverage affect positively on the expected performance, where they explained this result to that low growth firms attempt to depend on the borrowing for utilizing the expected growth opportunities and investing borrowing money at the profitable projects, therefore it will increase the firm performance. Margraves and Psillaki (2010), proved also that financial leverage (debt ratio) correlated positively and significantly with firm performance (added value, labor and capital).

On the other hand, Abor (2005), noted that various capital structure measures which represented short term debt, long term debt and total debt associated negatively and statistically with firm performance. The conclusion refers to that firms rely on borrowing extremely, it will not achieve tax shields and then it lead to increase borrowing cost of which the firm exposes to the bankruptcy risks and reduce the term.

Rao, Hamed, Al-yahee and Syed (2007) reached that capital structure related inversely on financial performance on Oman firms. The relationship refers to high borrowing costs in Oman economy and to the weakness of the debt market activity in Oman. They suggested that tax savings as a result of debt using are not sufficient to meet the costs of debt and it would be the cost of debt greater than the rate of return. Krishnan and Moyer, (1997); Gleason, and Mathur, (2000); Simerly and Li, (2000); King and Santor, (2008) and Onalapo and Kajola, (2010) proved that capital structure also related negatively with firm performance.

Akinyomi (2013), using three manufacturing companies selected randomly from the food and beverage categories and a period of five years (2007-2011) using the static trade-off and the pecking order theory point of view. He adopted the use of correlation analysis method and 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 equity but long term debt to capital is significantly and relatively Capital Structure on Firms Performance of Manufacturing Companies in Nigeria related to return on asset and return on equity. His hypothesis also tested that there is significant relationship between capital structure and financial performance using both return on asset and return on equity. Taiwo (2012), using ten firms listed on the Nigerian Stock Exchange for a period of five years (2006-2010) from the static trade-off, pecking order and agency theory point of view. In his findings, He employed the Impesaran and shine unit root test and panel Least Square test and revealed 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.

Bassey, Aniekan, Ikpe and Udo (2013), using a sample of 60 unquoted agro-based firms in Nigeria within a period of six years (2005-2010) from the agency cost theory point of

view. They employed the Ordinary Least Square regression and descriptive statistic and revealed that only growth and educational level of firms owners were significant determinants of both long and short term debt ratios, assets structure, age of the firms, gender of owners and export status impacted significantly on long term debt ratios, while business risk, size and profitability of firms were major determinants of short term debt ratio for the firms under investigation. SimonOke and Afolabi (2011), using a study of five quoted firms within a period of nine years (1999-2007) from the static trade-off and agency cost theory point of view. They employed the panel data regression model and revealed in their study a positive relationship between firms' performance and equity financing as well as between firms' performance and debt-equity ratio. There is also a negative relationship that exists between firm's performance and debt financing due to high cost of borrowing in the country.

Ong and Thie (2011) investigated on the capital structure and firms performance of construction companies for a period of four years (2005-2008) in Malaysia. Long term debt to capital, debt to asset, debt to equity market value, debt to common equity, long term debt to common equity were used as proxies as the independent variables (capital structure) while returns on capital, return on equity, earnings per share, operating margin, net margin were used to proxy the corporate performance. The result shows that there is relationship between capital structure and corporate performance.

### Materials and Methods

The study adopted *expo-facto* design in order to analyze the determinants of capital structure in quoted agro-allied company in Nigeria (A study of British Tobacco Company in Nigeria). This determinant are dynamic issues considered before formulation and implementation of capital structure in quoted agro-allied company in Nigeria. Thus, some methodological approaches have been employed by local/foreign authors to proffer solution to capital structure. However, this study adopts the methodology used by Bassey, Aniekan, Ikpe and Udo (2013), but with some major modifications to test the factors affecting capital structure in quoted agro-allied company in Nigeria (A study of British Tobacco Company in Nigeria).

To some measures, capital structure was proxy by debt to equity ratio (DER) where used over the period while the determinants was measured by Liquidity ratio (LR), dividend payout (DPO), total asset (TA), profitability (PAT). Specifically, arising from the evidences in the empirical studies reviewed in chapter two above, we adopted the model as stated by Bassey, Aniekan, Ikpe and Udo (2013), but with modifications. Consequently, the functional form of the model specification will be:

$$DER = f(LR, DPO, TA, PAT) \dots\dots\dots Eqn 1.$$

Explicitly, equation 1 can be written as:

$$DER_{it} = b_0 + b_1LR_{it} + b_2DPO_{it} + b_3TA_{it} + b_4PAT_{it} + \mu_{it} \dots\dots\dots Eqn 2.$$

Where

$DER_{it}$  = Debt to equity ratio as a proxy for capital structure

$LR_{it}$  = Liquidity ratio

$DPO_{it}$  = Dividend payout

$TA_{it}$  = Total asset  $PAT_{it}$  = Profitability  $b_0$  = Intercept  $b_1 - b_5$  = Parameters estimate  $\mu_{it}$  = Stochastic variables

The data for the study was collected from the various annual financial statement of British Tobacco Company. Data set spanning a period of 15 years (2002 – 2016). This study was carried out to analyze the determinants of capital structure in quoted agro-allied company in Nigeria (A study of British Tobacco Company in Nigeria). For the stated model, the dependent variable is debt to equity ratio (DER) and the independent are Liquidity ratio (LR), dividend payout (DPOtheses

## Results and Discussion

### Test of Hypothesis

$H_0$ : Liquidity ratio, dividend payout, total asset, profitability have no significance impact on debt equity ratio of British Tobacco Company in Nigeria.

Dependent Variable: DER

Method: Least Squares

Date: 01/22/18 Time: 14:12

Sample: 1 15

Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LR	0.702699	0.351428	1.999553	0.0503
DPO	0.005266	0.003828	1.375653	0.1954
TA	-0.125505	0.021905	-5.729514	0.0000
PAT	-1.197705	0.280009	-4.277380	0.0007
C	0.603262	0.419815	1.436971	0.8714
R-squared	0.905485	Mean dependent var		0.829400
Adjusted R-squared	0.852977	S.D. dependent var		0.628208
S.E. of regression	0.240877	Akaike info criterion		0.280117
Sum squared resid	0.522197	Schwarz criterion		0.563337
Log likelihood	3.899123	Hannan-Quinn criter.		0.277100
F-statistic	27.24464	Durbin-Watson stat		2.052179
Prob(F-statistic)	0.000025			

Source: Researcher's computation using E-views 8.0

As reflected in Table 4.1 above, liquidity ratio (LR) of 0.0702699 shows that, a unit increase in liquidity ratio, holding other variables constant, will increase the debt –to-equity ratio by 0.0702699 units. This implies that, a percentage increase in liquidity ratio of the studied sector leads to increase in debt-to-equity ratio. This exposes the organization to much risk because high leverage ratio leads to organizational deficiency and too much debt.

The coefficient of dividend payout (DPO) of 0.005266 shows that, a unit increase in dividend payout, holding other variables constant, will lead to increase the debt to equity ratio by 0.005266 units. Thus, a percentage increase in dividend per share of the organization leads to increase in debt to equity ratio of the British American Tobacco Company in Nigeria. This implies that, if an organization allocate much of their profit after tax to dividend payment, this will prompt the organization to source capital externally instead of retained earning hence, leading the organization to liquidation/winding up in a long run.

The coefficient of total asset (TA) of -0.125505 shows that, a unit increase in total asset, holding other variables constant, will lead to decrease the debt to equity ratio by 0.125505 units. Thus, a percentage increase in total asset leads to decrease in debt to equity ratio of the British American Tobacco Company in Nigeria. This agrees with priori expectations because, acquiring large percentage of fixed and current asset for production and management purposes will help the organization to deduce debt structure and increase organizational performance.

The coefficient of profitability (PAT) of -1.197705 shows that, a unit increase in profitability, holding other variables constant, will lead to decrease the debt to equity ratio by -1.197705 units. Thus, a percentage increase in profitability leads to decrease in debt to equity ratio of the British American Tobacco Company in Nigeria. The result is support by Agency theory which states that ownership of the managers in the firm should be increased in order to align the interest of managers with that of the owners or use of debt should be motivated to control manager's tendency for excessive extra consumptions.

The  $R^2$  which is the coefficient of determination was quite high with a value of 0.905485 which indicate as that 91% of the changes in the dependent variable can be explained by the changes in the independent variables while 9% can explained by the stochastic terms in model.. This implies that the independent variable (Liquidity ratio, dividend payout, total asset, profitability) can only explain 76 percent of changes in return on equity, leaving 9% percent unexplained... Also, Durbin-Watson stat is 2.052 and is close to 2.5, this implies that there is no evidence of firstorder autocorrelation. F-prob value of 0.000025 was observed from the analysis which is less than 0.05, indicating that the estimated regression model adopted in this study is statistically significant at 5% significant level. With this, the researcher alternative hypothesis thus, liquidity ratio has positive and significant impact on debt to equity ratio while total asset and profitability negative and significant impact on debt to equity ratio. However, dividend payout has positive and insignificant impact on debt to equity ratio of British Tobacco Company in Nigeria.

## Conclusion and Recommendation

In developing or expanding business operations, companies need of financial resources. Fulfilments of these funds come from internal resources or external sources. Therefore, financial managers with regard to the use of capital costs (*cost of capital*) and other costs need to determine the capital structure in an effort to determine whether the financing needs are filled with their own capital or filled with loan capital. In conducting the funding decisions, companies also need to consider and analyze the combination of economical sources of funds to finance investment requirements and business activities. The capital structure of a company consists of equity and debt to finance assets, operations and future growth of a firm. To finance, firms can choose for equity or debt. In this study the focus was to investigate how different determinants influence on the amount of capital structure of a firm. From the analysis and discussion, the study revealed that liquidity ratio has positive and significant impact on debt to equity ratio while total asset and profitability negative and significant impact on debt to equity ratio. However, dividend payout has positive and insignificant impact on debt to equity ratio of British Tobacco Company. The results are back up with pecking order theory and agency theory.

In view of the findings, the following policy recommendations were made:

- a. Based on the findings, the selected agro allied firm raising fund for operations or expansions should not give debt ratio (higher) priority. A rightful and correct combination of equity and debt must be ensured with equity given priority over debt. This is evidenced from the result when profitability on its own is negatively related with debt to equity but, leverage ratio is positively related. In raising finance, firms should strive and ensure that they are wholly financed by equity but if impossible, very little proportion should debt. No firms should rely only on the issue of debt financing in structuring its capital for profitability. Should that be done, it results to worsening the performance. This is evidenced from our finding depicting a positive though insignificant relationship with dividend per share.

## References

- Abor, J. (2005). Internationalization and financing Options of Ghanaian SMEs. *Acta Commercii*, 4: 60-72
- Akinsulire, D. (2002). Capital and ownership structure: a comparison of united states and Japanese manufacturing companies.
- Alfred, E. E. (2007). Corporate debt policy of small firms; an empirical (re) examination. *J. small business. Enterprise Dev.*, 10 (9), 62-80.
- Anderson, M. K. (2012). Pattern of corporate financing and financial system convergence in Europe.
- Andreson, R., Wahlberg, O. and Ostlund, S. P. (2006). Capital structure and ownership structure-the journal of online education, New York.
- Awunyo-Vitor, D. & Badu, J. (2012). Capital Structure and performance of listed banks in Ghana. *Global Journal of Human Social Science*, 12(5), 56-62.
- Barle, F. E. and Means, K. (1932). Efficient capital markets: a review of theory and empirical work. *The journal of finance*, 25 (2), 383-417.
- Bassey, N. E., Aniekan J. A., Ikpe, I. K. and Udo, U. J. (2013). Analysis of the

- determinants of capital structure: Evidence from Unlisted Agro-Based Firms in Nigeria 2005-2010. *Agricultural Science and Education Centre of North America*. 4 (1), 36-47
- Benito, M. (2003). A state-preference model of optimal financial leverage. *Journal of Finance*, 28, 911-922.
- Brealey, P. Y. & Myers, S. R. (2011). Structural Analysis of Vector Error Correction Models with Exogenous I (1) Variables. *Journal of Econometrics*, 97, 293-343.
- Bringham, C. K. (2004). *Financial management: theory and practices*-published by Dryden press (2004).
- Damodaran, D. (2011). The effects of capital structure on profitability of listed firms in Ghana. *European Journal of Business and Management*, 5(31), 215-229.
- Dave, C. O. & Sola, H. G. (2010). Capital structure and financing of SMEs evidence. *Journal of Accounting and Finance*, 43, 123-147.
- Dessai, A. and Robertson, L. (2003). Corporate tax avoidance and firm value. Harvard University and NBER. *Economic Review*, 53, 433-443.
- Dimitris, C. R. and Paittiki, S. (2008). Asset characteristics and corporate debt policy: *An empirical test-journal of Business Finance and Accounting* 20 (1), 23 - 30.
- Donaldson, F. (1961). Agency problem and theory of the firm. *Journal of Political Economy*. 88, 288-307.
- Efobi, B. P. (2008). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking and Finance*, 30(4), 1065-1102.
- Eugene, O., Gapenski, L. and Ehrhardt, F. (2001). The Impact of Capital Structure and Profitability of Listed Banks on the Ghana Stock Exchange. *Social and Basic Sciences Review*, 1(2), 74-91.
- Frank, A. P. & Goval, S. A. (2003). The insignificance of bankruptcy cost to the theory of optimal capital structure. *Journal of finance*. 33, (2), 383-393.
- Hampton, O. (2009). Capital structure and financial performance in Nigeria. *International Journal of Business and Social Research*, 5(2), 21-31.
- Harris, M. & Raviv, A. W. (2016). The impact of capital structure on financial performance of commercial banks in Ethiopia. *Global journal of management and business research: Finance*, 16, 42-53.
- Holz, E. J. (2002). Cointegration and error correction: Representation, estimation and testing. *Econometrica*, 55(2), 251-276.
- Hovakimian, H. & Tehranian, M. N. (2002). Influence of Capital Structure on Firm Performance: Evidence from Bangladesh. *International Journal of Business and Management*, 9(5), 184-194.
- Hovakimian, R. E., Hovakimian, M. & Tehranian, M. W. (2002). East and West. Differences in SMEs capital structure between soviet-bloc and none-soviet-bloc European countries.
- Inanga, F. E. and Ajayi, S. (2009). The behavior of stock market prices. *The journal of business*, 38 (1), 34-105.
- Jansen, H. A. (1991). The Theory of Capital Structure. *Journal of Finance*, 46, 297-355.
- Jensen, M. (1986). Agency Costs of Free Cash Flow, Corporate Finance and Takeovers. *American Economic Review*, 76, 332-329.

- Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behaviour, agency costs and capital structure. *Journal of Financial Economics*, 3, 11-25.
- Kamsvag, E. O. (2001). Capital structure and corporate performance of Nigerian quoted firms: A panel data approach, PhD thesis, Covenant University, Ota, Ogun State-Nigeria.
- Kennon, D. H. (2010). Industry structure, market rivalry and public policy. *Journal of Law and Economics*, 16(1), 1- 9.
- Magura, G. J. (1999). The incentives of herding. *The journal of finance*, 33 (9), 10 - 20.
- Margraves, I. and Psillaki, M. (2010). The impact of capital structure on firm performance: Evidence from Ukraine. An Unpublished MA Thesis, Department of Financial Economics, Kyiv School of Economics, Ukraine.
- Miller, M. (1977). Debt and taxes. *Journal of Finance*, 32(2), 261-275.
- Modigliani, F. & Miller, M. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48 (3), 261-297.
- Modigliani, F. & Miller, M. (1963). Corporate income taxes and the cost of capital: A Correction. *The American Economic Review*, 48 (3), 298-309.
- Mwangi, H. C. (2012). The theory and practice of corporate finance: evidence from the field. *Journal of Financial Economics*, 60, 187-243.
- Myers, S. & Majluf, N. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-221.
- Myers, S. (1984). The capital structure puzzle. *Journal of Finance*, 39, 575-592.
- Myers, S. (2001). Determinants of Corporate Borrowings. *Journal of Financial Economics*, 5, 147-175.
- Ong, C. and Thie, J. (2010). Bankruptcy, secured debt and optimal capital structure. *Journal of Finance*, 32, 1-19.
- Osuji, D. & Odita, A. (2012). Effects of capital structure on firm's performance: Empirical study of manufacturing companies in Nigeria. *Journal of Finance and Investment Analysis*, 3(4), 39-57.
- Pandey, I. (2009). Financial Management. Vikas Publishing house PVT LTD E-28, sector -8.Noida-201301 (UP) New Delhi-110014.
- Peterson, A. and Rajan, S. (1994). Corporate governance compliance and the effects to capital structure in Malaysia-international journal of humanities and social science. 2 (1), 32 - 42.
- Rajan, S. (1994). The economic theory of agency: The principal's problem. *American Economic Review*, 63(2), 134-39.
- Robert, M. J. (2009). A theory of takeover and disinvestment. *Journal of finance* 62, (2) 809-845.
- Roy, C. E. & Maifang, K. C. (2000). Impact of capital structure on performance of commercial banks in Nigeria. *International journal of Economics and Financial Issues*, 8 (2), 298-303.
- Schiantarelli, B. A. & Schiantarelli, F. D. (1997). The economics of small business finance: the roles of private equity and debt markets in the financial growth cycle. *Journal of banking and finance*, 8 (6), 613-673.
- Simon-Oke, O. O., & Afolabi, B. (2011). Capital Structure and Industrial performance

- in Nigeria (1999-2007). *International Business and Management*, 2(1), 100-106.
- Singh, H. A. and Hamid, L. H. (1992). Determinant of the capital structure of European SMEs. *Journal of finance*, 12 (12), 23 – 29.
- Sola, H. (2010). Capital structure and profitability of Nigerian quoted firms: The agency cost theory perspective. *American International Journal of Social Science*, 3(1), 139-158.
- Song, C. H. (2005). Equity ownership and the two faces of debt. *Journal of Financial Economics*, 39, 131-157.
- Tsai, K., Friend, F., & Lang, T. (2010). An empirical test on the impact of managerial self's interest on corporate capital structure. *The journal of finance*, 43(2):371-281.
- Uremandu, S. (2004). A mean-variance theory of optimal capital structure and corporate debt capacity. *Journal of Finance*, 33, 45-63.
- Zoppa, I. A. & Memahon, S. O. (2002). Influence of capital structure on profitability: Empirical Evidence from listed Nigerian banks. *IOSR Journal of Business and Management*, 16(11), 22-28.

#### APPENDIX

##### British American Tobacco Company in Nigeria

Year	DER (%)	LEV (%)	LR (%)	DPO (RM)	TA (RM)	PAT (RM)
2002	0.127	2100.4	0.554	38.8	6903	1095
2003	0.110	4439.1	0.541	41.9	8980	1445
2004	0.219	3930	0.586	35.2	9856	2005.8
2005	0.321	6554	0.659	47.0	10543	1986.6
2006	0.397	7002	0.547	55.9	12179	2212
2007	0.462	8013	0.591	66.2	18764	2289.8
2008	0.598	9891.2	0.485	83.7	27551	2659.8
2009	1.109	8842	0.378	99.5	26614	2956.2
2010	0.852	7842	0.679	114.2	27860	3140
2011	0.714	7928.5	0.463	126.5	27119	3375
2012	1.089	13259	0.624	198.5	27327	4122
2013	1.120	12343	0.601	224.5	30631	4097.1
2014	1.154	10041	0.554	271.3	31293	4998.5
2015	2.022	9213	0.617	311.4	33384	5012.2
2016	2.147	11045	0.598	326.5	35488	5197

Source: British American Tobacco Company Annual financial 2005 - 2016