Firms' Capital Structure and Profitability Performance: A Study of Selected Food Product Companies in Nigeria

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Abstract

The quest to determine the relationship between firms' capital structure and its strength in improving financial performance, especially profitability motivated the researcher to conduct this study. This study was carried out to determine whether there is any relationship between financial performance and profitability performance. In view of this, the study among others is carried out to investigate the effect of gearing on ROA, ROE and ROCE on selected food product companies in Nigeria. The methodology adopted was non probabilistic technique through the use of purposive sampling. The population of the study comprises of food product companies that have been quoted on the floor of Nigeria Stock Exchange over five (5) years between 2009 and 2013. The data have been collected through the published annual report of the firms selected. The findings revealed that gearing has no significant effect on ROA, ROE and ROCE. For instance, gearing will cause a negative -0.0411856 unit change in ROA of the companies. Also, the coefficients of gearing shows that one unit change in gearing will cause a negative -0.0099022 effect on ROE whereas, the coefficients of gearing for ROCE shows that one unit change in gearing will cause a positive 0.0049688 unit change in ROCE of sampled companies. The study established that capital structure has negative effect on Return on Assets and Return on Equity but positive effect on Return on Capital Employed. It is thereby recommended that the management should reduce the level of gearing in order to enhance profitability performance. Also, management should make efficient use of the resources available with a view to reduce expenses for the firm, embark on more promotion to make their product acceptable by consumer and observe production process with a view to reduce wastages, since gearing could only explain barely very small level of change in profitability index as measure by the study.

Keywords: Capital Structure, Profitability Performance, Gearing and Financial Mismatching.

INTRODUCTION

More than what can be overlooked is the source of fund of every organization because it serves as a major determinant of whether the business will run profitably or not. It is therefore apparent that the issue of capital structure, that is, the best combination of fund for efficient performance of organization is of paramount importance. Ajeigbe, Fasesin and Ajeigbe opines that the decision about the best source or best combination of fund for efficient operations of a

firm is a big concern that will actually assist firms to guide against financial mismatching. In addition, determining the best combination of fund for effective and efficient financial performance will go a long way to promote the growth and development of the firm (2013).

Capital structure refers to the combination of varieties of long term sources of funds and equity shares including reserves and surpluses of an enterprise (Olowe, 2011). The history of the theory of capital structure began with the presentation of a paper by Modigliani and Miller (MM) (1958), which unfolds the situations by wanting to know under what conditions the capital structure will become relevant or irrelevant to the financial performance of the listed companies. Most of the decision making processes related to the capital structure are deciding factors when determining the capital structure, a number of issues such as; cost, various taxes and rate, interest rate have been proposed to explain the variation in financial leverage across firms.

Ogebe, Ogebe and Alewi (2013) stated that an appropriate capital structure is a critical decision for a business organization. The study reiterates that this decision is important not only because of the need to maximize returns to various organizations' constituencies, but also because of the impact such decisions have on an organizations' ability to deal with its competitive environment. To appreciate the effects of capital structure on financial performance is capable of resolving potential problems that exist between performance and capital structure, that is, how leverage can influence Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE). Broad capital structure can be viewed as equity and debt. Debt implies borrowings, that is, any fund that is subject to the payment of fixed return, such as long term loan, preference shares and debentures, while equity on the other hand can be referred to as capital that is subject to variable return. It is also known as the proportion that belongs to the owners of the business. They are the decision makers, risk bearers and risk takers for the firm.

Debt financing exposes firm to the danger of liquidation, takeover and imposition of personnel on firms. Even though debt financing may be highly disadvantageous to firm, if not properly monitored, it equally has the advantage of tax reduction on the firm which could make it important for consideration. Brennan and Schwartz (1978) stated that even though tax is advantageous, it equally has disadvantage because of the following: 1.) decrease in the future tax rate, and 2.) lack of taxable income in future. Up till date, there is no evidence of the level of gearing that can foster profitability, that is, neither high level, low level nor zero level of gearing has been confirmed as the best level of gearing that can enhance the performance of a firm.

Nevertheless, how organization is levered goes a long way to determine its performance. Organization may do without debt financing but if there is any need for debt financing, the level must be determined in order to avert the circumstances where debt holders take over the control and determine how the business can operate, which could result to bankruptcy (Brennan & Schwartz, 1978).

Pratheepkanth (2011) suggests that to have the knowledge of how companies finance their operations is necessary in order to examine the determinants of their financing or capital structure decisions. Company financing decisions involve a wide range of policy issues. In corporate organizations, they have implications for capital market development, interest rate and security price determination, and regulation. In firms, such decisions affect capital structure, corporate governance and company development.

According to Tudose (2012), the notion of performance is a controversial issue in finance largely because of its multidimensional meanings. The study postulates that performance can be

explored from two points of view, namely, financial and organizational (the two being interconnected). A company's performance can be measured based on variables that involve productivity, returns, growth or even customer satisfaction, while financial performance can be reflected in profit maximization, maximization of return on assets (ROA) and maximization of shareholders' return (ROE). This usually determines the firm's efficiency. The financial performance can be viewed from the perspective of the level of gearing of a firm which indicates the extent at which the firm has ventured into financial risk. The higher the financial risk the higher the expected return of the firm.

Nirajini and Priya (2013) revealed that there is positive relationship between capital structure and financial performance. Whereas, Ogebe, Ogebe and Alewi (2013) strongly recommends that firms should use more of equity than debt in financing because a significant negative relationship was established between leverage and performance. Supporting Nirajini and Priya (2013), Kehinde (2014) recommends that firm should introduce debt finance to the capital structure of the firm to enjoy the tax advantage of debt finance. According to Ogebe, Ogebe and Alewi (2013), the difficulty facing corporate bodies in Nigeria is mix of financing (gearing level), whether to raise debt or equity capital. The issue of finance is so important that it has been identified as reason for business failing to take off or to experience growth.

The Problem

It has been observed overtime that some organizations perform better than the other despite the similarities in the resources available to them in term of assets, human capital and quantity of fund. It can thereby be inferred from the above that there is the need to determine whether high, low or zero leverage, will be the most adequate to enhance financial performance, predicting the level of gearing that can influence Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE). Therefore, the study was set up to ascertain relationship between firms' capital structure and profitability in the selected firms.
Specifically, the study will:
1) determine the relationship between leverage and Return on Assets;
2) access to what extent does leverage influence Returns on Equity; and
3) examine the relationship between leverages and Return on Capital Employed.
It is expected that the study will confirm the following hypothetical situations:
(a. There is no significant relationship between leverage and Return on Assets.
(b. There is no significant relationship between leverage and Returns on Equity.
(c. There is no significant relationship between leverage and enhancement of Return on Capital employed.

REVIEW OF RELATED LITERATURE

Capital is a critical tool for all firms, the supply of which is uncertain. This uncertainty enables the suppliers of finance to exert control over the firm (Stearns, 1986; Mazruch, 1993 & Rahul 1996, as cited in Nyanamba, Nyangweso and Omari (2013). Capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise. In the word of Omolehinwa (2006), capital structure is the actual mix of debt and equity financing chosen by a particular firm.
According to Tulsian (2009), capital structure, that is, financial structure, is referred to as

the composition of long term funds such as debentures, long term borrowings, preference shares, equity shares (including retained earnings) in the capitalization of a company. The study further stated that the essence of capital structure decision is to determine the relative proportion of equity and debt. Equity in broader sense means owner's funds which can be raised by issuing of equity shares, preference shares and retained earnings, while debt can be raised by issuing debentures/bonds or by taking long term borrowing. The capital structure decision is a significant financial decision because it affects the shareholders' return and risk, and consequently the market value of shares.

Tulsian (2009) also postulated that for an appropriate capital structure to be decided, the following features are suggested as a standard for measurement;

(i. The capital structure must be sufficient to influence the profit of the firm (Profitability).

(ii. The capital structure should involve minimum risk of financial insolvency because the use of excessive debt threatens the solvency of firms (Solvency).

(iii. The financial structure should be flexible to meet with the changes in financial conditions (Flexibility).

(iv. The capital structure should be conservative such that the debt limit is not exceeded (Conservatism).

(v. The capital structure should involve minimum risk of loss of control of the company (Control).

Pratheepkanth (2011) opined that capital structure referred to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise. The study tried to find out the relationship between capital structure and financial performance. It opined that capital structure receives considerable attention in the finance literature. The study intends to find out how important is the concentration of control for the company performance or the type of investors exerting that control. Pratheepkanth (2011) substantiated further that the study of the effects of capital structure on financial performance will help us to know the potential problems in performance and capital structure. Also, it will be of greater help in determining how firm's problem on performance is and the appropriate solution.

The capital structure of a company is a particular combination of debt, equity and other sources of finance that it uses to fund its long-term asset. The key division in capital structure is between debt and equity (Akintoye, 2007). In addition, Owolabi and Inyang (2012) stated that, capital structure can be described as the proportionate relationship between debt and equity. The study confirms that debt is majorly made up of long term loans such as debenture while equity includes paid up share capital, share premium, reserves, and surplus or retained earnings.

The performance of highly geared firm is dependent on the right usage of debt capital, because debt enables ownership and control retention, tax shield, increases in liquid asset and financial freedom (Olowolaju, 2013). There are different factors affecting a firm's capital structure, and a firm should attempt to determine what its optimal, or best, mix of financing. But determining the exact optimal capital structure is not a science, so after analyzing a number of factors, a firm establishes a target capital structure which it believes is optimal (Akintoye, 2008).

To further explain the concept, the following model has been used as the means to describe the flow of effect of capital structure on organizational financial performance in aggregate. It is important to draw attention to the paradigm below.

Conceptual Model for Firm's Financial Performance
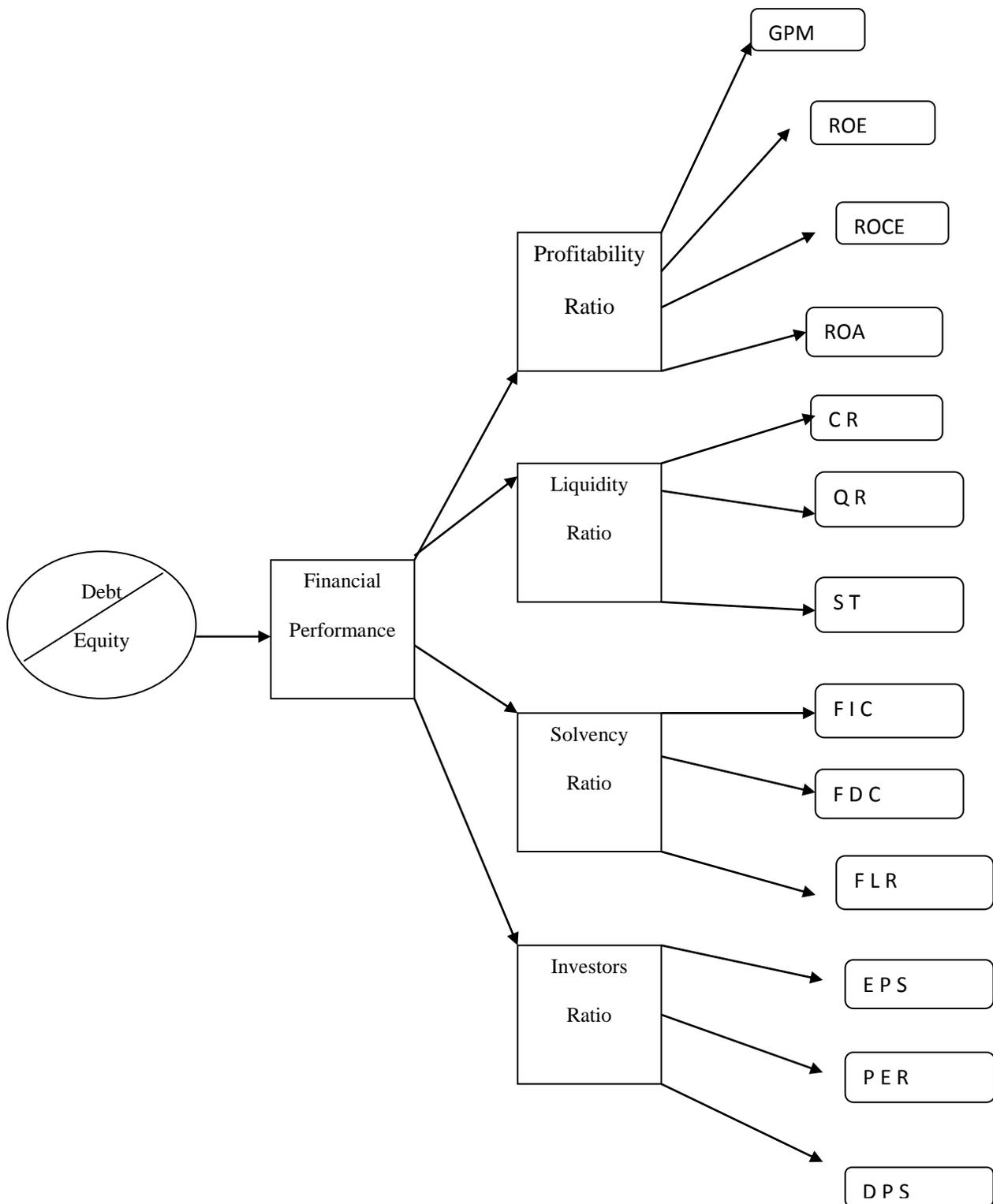
SOURCE: Researcher's Conceptual Model

Financial performance is a function of various sectors as seen in the paradigm above, but for the purpose of this study, profitability sector has been chosen as the area to be considered appropriate for decision making. Hence, the below is used as the research conceptual model.

Research Conceptual Model:
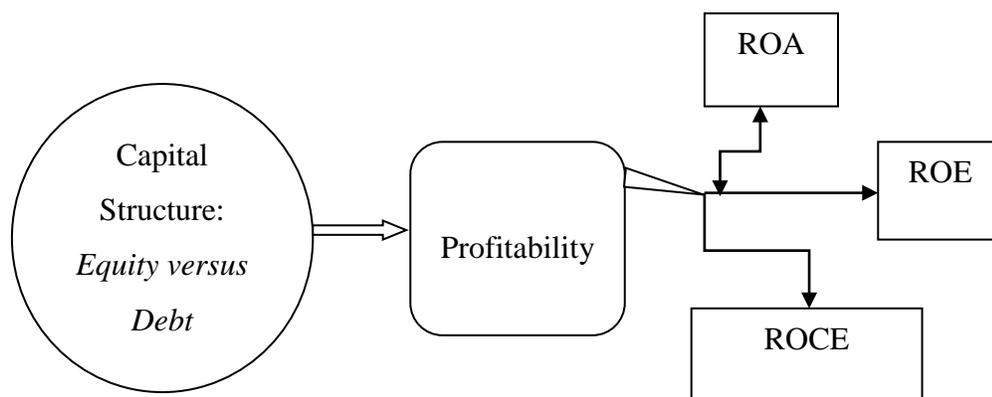
SOURCE: Adapted from Pratheepkanth (2011)

Pandey (2008), Olowe (2011) and Akinsulire (2002) described equity, debt, return on assets, return on equity and return on capital employed as follows:

i) Equity: Equity can be defined as right; this is basically the possession that gives the holder right of ownership, decision making, responsibility bearing and profit or benefit sharing. Olowe (2011), stated that equity shareholders are the real owners of the company and they are entitled to all residual earnings after all fixed obligations have been met. It stated further that the earning of equity holder is subject to variations. Equity holders are better explained through the following features due to their nature: 1) They are the decision makers of the firm 2) They are the risk bearers 3) They have varied return over years 4) Their return is subject to growth 5) Equity holders rank last in the order of settlement when firms liquidate 6) More of equity decentralize control in a firm.

ii) Debt: Debt can be defined as a class of source of fund which makes the holder a creditor of a firm but not a part owner. Debt can be divided into debenture and preference share. They are further substantiated with the following features: 1) Debt holders are mere creditors 2) They are expected to collect fix return 3) Return on debt is subject to tax at source except for dividend of preference shares 4) Debt holders are not decision makers in the firm 5) Debt holders settlement rank first in time of firms' liquidation. According to Akinsulire (2002), the following advantages have made debt essential in a firm; 1) It boosts earnings per share 2) It always show debt capacity of the firm and 3) It usually provides tax shield. In addition the study reveals some limiting factors, such as; level of interest charges, legal limit imposed by firm's articles of association, limitation imposed by existing lenders such as restricting covenant, previous level of gearing, perception of the management on optimum level of leverage and type and quality of assets available as security for borrowing.

vi) Return on Assets: This can be described as the ratio that measures profit before interest and tax as a percentage of the total assets invested in a firm.

v) Return on Equity: According to Pandey (2008), Return on Equity is defined as the net profit after tax divided by shareholder's equity, which is given by net worth. Olowe (2011) stated that the ratio shows earnings power on share holders' book value investment.

iv) Return on Capital Employed: This can be described as the ratio that shows the overall profitability of a firm. It is otherwise known as Return on Investment, Olowe (2011). Pandey (2008) described ROI as the measure of earnings before interest and tax as a ratio of Total Assets or Net Assets of a firm.

Theories adopted

Theory of capital structure can be traced to Miller's and Modigliani's. According to Owolabi et.al (2012), the pioneering work of Franco Modigliani and Metron Miller (1958) commonly known as the MM theory, on capital structure led to the development of several other theories bent on explaining the basic determinants of the capital structure in firms. Both theoretical and empirical capital structure studies have generated many results that attempt to explain the determinants of capital structure. The major capital structure theories that will be adopted for the purpose of this research work are: 1.) **Trade off Theory,** and 2.) **Pecking Order Theory**.

Trade-Off Theory

The term Trade-off Theory is used by different authors to describe a family of related theories. Management running a firm evaluates the various costs and benefits of alternative leverage plans and strives to bring a trade-off between them. Often, it is assumed that an interior solution is obtained so that marginal costs and marginal benefits are balanced. Thus, Trade-off Theory implies that company's capital structure decision involves a trade-off between the tax benefits of debt financing and the costs of financial distress. When firms adjust their capital structure, they tend to move toward a target debt ratio that is consistent with theories based on tradeoffs between the costs and benefits of debt.

Kehinde, Oluitan, Agbodu (2013) stated that in the Trade-off Theory of capital Structure the bankruptcy cost is allowed to exist. The study maintains that there is an advantage to financing with debt (namely, the tax benefits of debt) and that there is a cost of financing with debt (the bankruptcy costs and the financial distress costs of debt). It opined that marginal benefit further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. According to the study the theory explains empirically the differences in D/E (debt to equity) ratios between industries, but it doesn't explain differences within the same industry.

Pecking Order Theory

Pecking Order Theory was developed by Myers (1984) in the quest to satisfy capital structure needs. The theory is a follow-up argument to the signaling theory. This theory does not take an optimal capital structure as a starting point rather engages the fact that firms show a distinct preference for using internal finance such as retained earnings and excess liquid assets

over external finance followed by the acquisition of external financing if the needs be or if so desired, probably, due to lack of closer alternatives. Even at the selection of the external fund, it must follow from the ranking of the cheapest to the dearest ones (Olowe, 2011).

Omolehinwa (2006) stated that Pecking Order follows preference of Retained Earnings, Straight Debt, Convertible Debt, Preference Shares and Equity. The study opined that Pecking Order is good because; it is easier to use Retained Earnings than external finance; there are no issue cost in Retained Earnings and issue cost of debt is lower; investors prefer safer securities and that some management believes that debt issue have a better signaling effect than equity issue. Although, with highlighted consequences, such as; it may not bring excessive change in dividend payout and establishing an ideal debt–equity structure will be problematic because internal equity fund would have been considered first.

Kehinde et.al (2013) argued that Pecking Order Theory tries to capture the costs of asymmetric information. It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence, internal financing is used first, when that is depleted, then debt is issued such that when it is no longer sensible to issue any more debt, equity is issued.

According to Ross, Weterfield and Jaffe (2006) as quoted by Olowe (2011), if a share is overvalued, there would be incentive by the company to issue shares so as to make the extra gains for the existing shareholders. However, if a share is overvalued the investor might not buy the share until the price has fallen to reduce or even to remove any advantage from issuing shares. The study reveals further that even if the equity of the firm is moderately overpriced, investors might still be of the opinion that such firm is among overpriced firm which will still resort into allowing the share to fall the more than expected. This will eventually hinder people at the end from issuing equity but prefer debt. The study opined that a firm may only issue debt to a point at which financial distress becomes a real possibility and only equity will be the bailout.

To avoid mispricing, Olowe (2011) suggested some rules as guidelines, and they are that: Company should use internal financing first when considering source of fund that is, retained earnings but if external financing is required debt should be issued before equity. In order words, equity should only be considered when the firm's debt capacity is reached. In addition, company should issue the safest security first. In order words firm should issue security or debt that has lesser risk than the order before it gets to the most risky assets. This implies Pecking Order suggest Order of convenience in issuing securities.

Babalola (2012) examined an optimal capital structure to maximize the performance of the selected firms under the same systematic risk. The study investigated the relationship between Return on Equity (ROE) and the capital structure for a sample of 10 firms from 2000 to 2009. The researcher explored the empirical implications that there exists an optimal capital structure under Trade-off Theory and the optimal capital structure of manufacturing firms. At the same time, the study finds the optimal capital structure and the expected maximum value of ROE. The target ratio may change over time as the firm's performance and environments change. The study confirms that firms adjust their capital structure; they tend to move toward an optimal debt ratio consistent with the historical financial behaviors of firms. It also states that the

firm's performance is a quadratic function of debt ratio. In the study, there is further evidence on the relation between the distribution of debt ratio and corporate performance. The study summarized the main conclusion that the manufacturing industry's capital structure in Nigeria is consistent with Trade-off Theory, and the results are consistent with the hypothesis that the corporate performance is a nonlinear function of the capital structure.

Owolabi and Inyang (2012) examined the determinants of capital structure decisions of firms in the manufacturing industry in Nigeria. The study asserts that capital structure of a firm consists of a particular combination of debt and equity issues to relieve potential pressures on its long-term financing. The study affirmed that to examine such issues, many theories have been developed in the literature and they generally focus upon what determinants are likely to influence the leverage decisions of the firms. The study examined detailed background information of manufacturing sector in Nigeria with the aim of discovering major determinants of its capital structure. The study equally affirmed that empirical studies reveal the basic determinants of capital structure in the firms such as tangibility, size, growth opportunities, profitability and non-debt tax shields. In addition to these, issues such as corruption, political atmosphere, nature of financial markets, have also been identified as influencing seriously the capital structure of firms in Nigeria. The paper also highlighted issues such as financial distress, bankruptcy threats, solvency problem, risk of default etc due to unstable economic and political situations as possible dangers that may plague firms whose capital structure may tilt more towards debt financing.

Ogebe, Ogebe and Alewi (2013) in a study sought to investigate the impact of capital structure on firm performance in Nigeria from 2000 to 2010. The study considered the impact of some key macroeconomic variables (gross domestic product and inflation) on firm performance. The traditional theory of capital structure was employed to determine the significance of leverage and macroeconomic variables on firm's performance. The study made a comparative analysis of the selected firms which were classified into highly and lowly geared firms setting a leverage threshold of above 10% as being highly geared. A static panel analysis was used in the study to achieve desired objectives. Fixed effect regression estimation model was used; a relationship was established between performance (proxy by return on investment) and leverage of the firms over a period of ten years. The results provided strong evidence in support of the traditional theory of capital structure which asserted that leverage is a significant determinant of firms' performance. A significant negative relationship was established between leverage and performance. The study strongly recommended that firms should use more of equity than debt in financing their business activities. This is because in spite of the fact that the value of a business can be enhanced with debt capital, it gets to a point that it becomes detrimental. Each firm should establish with the aid of professional financial managers, that particular debt-equity mix that maximizes its value and minimizes its weighted average cost of capital.

Alawwad (2013) conducted a study to investigate the impact of capital structure on the performance of non-financial firms operating in Saudi Arabia for the period between 2008 and 2012. Sample data includes 67 companies from 13 different sectors. The study analyzes the relationship between capital structure proxies that include short-term debt (STD), long-term debt (LTD) and total debt (TD) with operating performance measured by earnings per share (EPS), net profit margin (NPM), return on assets (ROA) and return on equity (ROE). A firm's size that was found by the literature to have an influence on the performance of a firm is used as a control

variable. The study finds that only LTD and TD have significant impacts on ROE while ROA has a statistically significant relationship with each level of debt. Both EPS and NPM were found to have positive relations with STD whereas they have inverse relations with LTD and TD.

Nirajini and Priya (2013) postulated in their study that capital structure is a financial tool that helps to determine how firms choose their financial structure. It stated that firm capital structure is the composition or structure of its liabilities. The study made attempt to analyze the Capital structure and financial performance during 2006 to 2010 (Five years) financial year of listed trading companies in Sri Lanka. For the purpose of the study, data was extracted from the annual reports of sample companies. Correlation and multiple regression analysis were used for analysis. The study revealed that there is positive relationship between capital structure and financial performance. In addition, the capital structure has significant impact on financial performance of the firm as shown by debt asset ratio, debt equity ratio and long term debt correlated with gross profit margin (GPM), net profit margin (NPM), Return on Capital Employed (ROCE), Return on Asset (ROA) and Return on Equity (ROE) at significant level of 0.05 and 0.1.

Tudose (2012) carried out a study that examined the evolution of debates on capital structure and firm performance in order to assess the direction and intensity of research in the field. For these purposes, the study employed a three-pronged approach: conceptual, theoretical and empirical. The study pointed out that the conceptual aspect was seen as necessary step, given that both financial structure and performance present multi-dimensional meanings, which have triggered controversial debates in the sphere of finance. The study concluded that specialist literature has been enriched with wide-range of theoretical and empirical debates that led to the development of analytical diagrams serving as references, essential for assessing the relationship between capital structure and firm performance.

Chao (2012) conducted a study to verify the influence of capital structure on organizational performance at Taiwan-listed info-electronics companies, with corporate governance being the moderator. The researcher interviewed financial section chiefs or employees of higher levels at Taiwan-listed info-electronics companies, convenience sampling was used to yield knowledge from the population, and the linear Structural Equation Modeling (SEM) was adopted to verify the goodness-of-fit effects among the overall model, structural model and measurement model. Findings from the study show that, at Taiwan-listed info-electronics companies, the capital structure and corporate governance both have significant interactive influence on the organizational performance. The study concluded that Taiwan-listed-electronics companies should emphasize corporate governance in order to enhance capital structure.

Ajeigbe, Fasesin and Ajeigbe (2013), opined that it is necessary to identify factors that contribute to the firms' capital structure composition in its operation. The study was undertaken with the objective of finding out the relationship between capital structure determinants and ailing manufacturing firms of the listed companies in Nigeria. The study applies multiple regression analysis to examine ailing manufacturing companies in Nigeria stock exchange market for the period of 2005-2010. The final sample consists of 14 manufacturing companies. In the study, dependent variable, that is, leverage level of the companies, was measured by long-term debt ratio, short term debt ratio and total debt ratio. Capital structure determinants (independent variables) were measured by capital intensity, tangibility, profitability, firm size

and non- debt tax shield. The study unfold that the direction of the explanatory variables such as tangibility, profitability, firm size and non-debt tax shields with total debt largely was consistent with the explanations of trade-off theory and prove past empirical findings also.

Several empirical studies exist in literature on Capital Structure and Organizational Financial Performance which cut across different sectors of the economy (banking, insurance, and manufacturing) within and outside Africa. However, majority of these studies, to the best knowledge and accessibility of the researcher, did not look into food product companies (PASTA). Some of the close researches which also used the manufacturing companies for the study used a lesser duration than the 2009 to 2013 used in this study. Therefore, it is the intention of the researcher to conduct empirical research into the implication of capital structure on profitability of firms as prescribe in the study.

METHODOLOGY

Descriptive survey research design was employed for the study. The researchers engaged cross sectional data to obtain information because it involves the use of financial statement of different companies over five years. The population of this study was determined based on the number of food product companies that are available in Nigeria. The study involved firms that specialize on the production of food items such as pasta, which are Dangote Sugar Refinery Plc, Honeywell Flour Mills Plc, Flour Mills Nig. Plc, Nestle Nig. Plc, Dangote Flour Plc and Multi-Trex Integrated Food Plc. The reason for the selection of these companies is that they appear to gain patronage of consumers better than the others and this can be further supported by the volume of their share usually traded on the floor of Nigerian Stock Exchange. This is to infer that high demand can foster profitability and efficiency on which the performance of the organization can be measured.

Due to the nature of this study, secondary data was used. Necessary data were collected from financial statements of the selected companies over 5 year period, ranging from 2009 to 2013 for all the companies that are selected. Audited annual reports were selected for this work because it contains the verification of experts which makes it is valid for the study. The financial report was considered appropriate because they have been audited by recognized audit firms and information on the variables of interest were readily available. Therefore the annual statements of the listed companies were used to get information on both the following dependent and independent variables respectively: Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE); Equity and Debt (Gearing).

The method adopted to analyze the data for this study was basically technique of ratio analysis. This was done by evaluating the financial statement with respect to the Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE). STATA version 11 was used to analyze the research work. In addition, STATA was used to regress in order to determine the relationship between the dependent and the independent variables. This is necessary in order to find the extent to which the independent variable can explain the dependent variable. Regression was used because it will show the extent or degree of relationship between both the independent and the dependent variables.

In this study, the structure of equity and debt is the independent while the financial or organizational performance is the dependent variable. This is hereby operationalized as bellow;
$Pf = f(Eqt , Dbt)$ where:

Pf = organizational financial performance.
Eqt= equity value.
Dbt = debt value.
Where;
Pf = ROA, ROE & ROCE
This implies that performance is determined by dependent variables such as; Return on Assets, Return on Equity & Return on Capital Employed.
Hence;
ROA = f(Eqt, Dbt)
ROE = f(Eqt ,Dbt)
ROCE= f(Eqt, Dbt)
The model simply explains that all those dependent variables are subject to respective combination of equity and debt to determine performance.
Such that:
$Y= \alpha + b_1 X_1 + b_2 X_2 + \mu$

$y_1 = \alpha + b_1 x_1 + b_2 x_2 + \mu$

$y_2 = \alpha + b_1 x_1 + b_2 x_2 + \mu$

$y_3 = \alpha + b_1 x_1 + b_2 x_2 + \mu$

Where:
$Y = y_1, y_2, y_3,$
Y = Organizational performance
$y_1, y_2, \& y_3$ = ROA, ROE & ROCE.

The expectation on this study is that there should be positive relationship between ROA and gearing, this is as a result of the fact that PBIT is used as the ratio of total assets. Hence the increase in the debt even though leads to increase in the interest, but since it is not deducted before the calculation of ROA, ROA will increase. Also, ROCE is expected to follow the same trend except for ROE which is expected to have negative relationship with gearing. This means that as the gearing increases, the ROE decreases and this is due to the effect of increase in interest payable to debenture holder, although fixed, but increases as the debt increases. This will apparently affect the level of Profit after Tax (PAT).

RESULTS AND DISCUSSIONS

This section deals with the presentation, analysis, interpretation of data and discussion of findings, with the detailed analysis of the relationship between firms' capital structure and profitability performance of food product companies in manufacturing sector of Nigeria. The surveyed firms were selected using non-probabilistic statistical criteria and based on availability of time series data on key interested variables between 2009 and 2013.

The data below were generated in the course of the analysis.

Table 1: Companies' Variables Mean

Variables	Flour Mills Plc.	Unilever Nig Plc.	Dangote Sugar Plc.	Cadbury Nig. Plc.	Dangote Flour Plc.	Multi-Trex Int. Plc.	Nestle Nig Plc.	Honey Well Flour Plc.	Nat. Salt Plc.
ROA	0.216580	0.137060	0.241120	0.129625	0.035460	0.001340	0.297480	0.103140	0.327960
ROE	0.252060	0.185000	0.525820	0.136700	-0.001380	-0.236060	0.730220	0.128880	0.319560
ROCE	0.251060	0.238260	0.812040	0.244875	0.071080	0.010960	0.478940	0.217880	0.545680
GEARING	0.470460	1.167100	2.439820	0.848625	1.399140	1.439680	1.086600	1.281680	0.669100

Chart of the Companies' Variables Mean
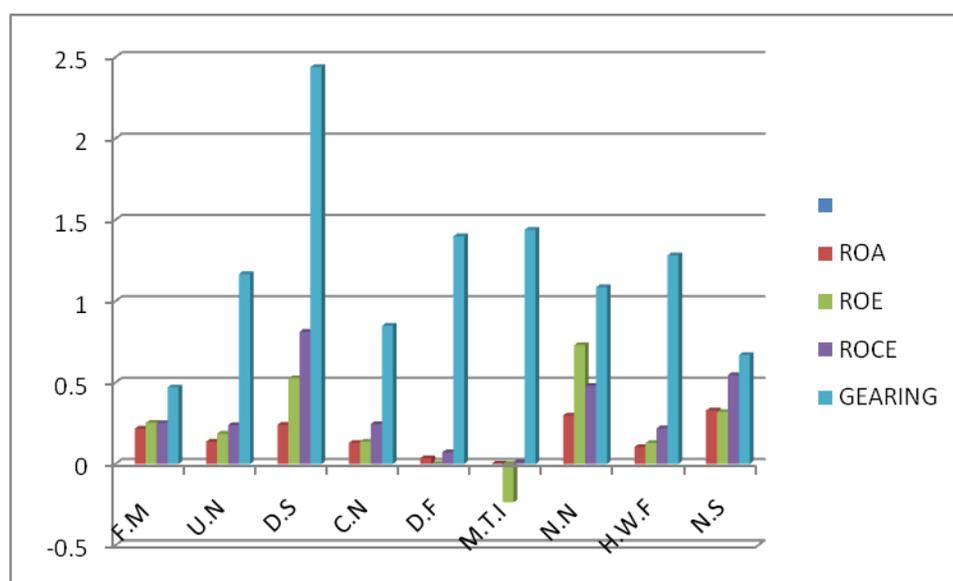
Figure 1

Fixed-effects (within) regression			Number of obs = 44	
Group variable: panelvar			Number of groups = 9	
R-sq: within = 0.0649			Obs per group: min = 4	
between = 0.0390			avg = 4.9	
overall = 0.0460			max = 5	
			F(1,34) = 2.36	
corr(u_i, Xb) = -0.0028			Prob > F = 0.1338	

roa	Coef.	Std. Err.	t	P>|t|
Gearing	-0.0411856	.0268159	-1.54	0.134
_cons	0.2161074	.0335417	6.44	0.000
rho	.78717028 (fraction of variance due to u_i)			
F test that all u_i=0:				Prob > F = 0.0000

Research Question 1

Research question 1 intended to determine the relationship between Leverage and Return on Assets. Regression analysis was conducted in order to determine the relationship. The output of the regression exercise is represented in the table below:

Table 2: Result Output for Leverage and Return on Assets

Model 1 & A- priori expectation

$y_1 = \alpha_{0+ eqt 1} + _{dbt2} + \mu_1 \rightarrow$ Model 1
ROA=0.2161-0.0412

The panel regression of the above estimates showed that there exists a negative relationship between ROA and gearing. This is indicated by the sign and size of the coefficients, that is $\alpha_1 + \alpha_2 = -0.0411856 < 0$. This implies that the result is not consistent with apriori expectation. The overall R-squared shows that about 0.0460 variations in ROA can be attributed to gearing and the remaining 0.954 variations in ROA were caused by other factors not included in this model. This implies that gearing can only explain the variation occurring to ROA only to the level of 4.6% while the remaining 95.4% can be explained by other factors not captured in the model used.

The F-statistic p-value shows 13.38% for the sampled companies. This shows that the panel regression result is not statistically significant because it is greater than 5%. The coefficients showed that one unit change in gearing will cause a negative -.0411856 unit changes in ROA of the companies. This implies that gearing has a negative effect on ROA. This effect is however not statistically significant for the period in this study.

The rho statistics indicates that 78.72% of changes in ROA were caused by individual-specific variations of the firms studied. The f-test below the rho statistics is highly significant at the 1% level, showing that we reject the null hypothesis that, heterogeneity bias as a result of the individual-specific effect equals zero (not present). Therefore the fixed effect estimation method is more appropriate than the pooled ordinary least square estimation technique which would have produced inconsistent estimates (results). Therefore, from the panel regression estimate, gearing has no significant effect on ROA. Thus, the null hypothesis is accepted, research question one answered, and research objective one achieved.

Research Question 2

Research question 2 was designed to ascertain the extent to which Leverage influences Return on Equity. Regression analysis was conducted in order to determine the influence. The output of the regression exercise is represented in the table below:

Table 3: Result Output for Leverage and Return on Equity

Fixed-effects (within) regression   Number of obs =   44
Group variable: panelvar   Number of groups =   9

R-sq: within = 0.0004   Obs per group: min =   4
     between = 0.0079   avg = 4.9
      overall = 0.0033   max =   5

                            $F(1,34)$ =   0.01
corr(u_i, Xb) = -0.0895   Prob > F   = 0.9061

Roe	Coef.	Std. Err.	t	P>|t|
Gearing	-0.0099022	.0832849	-0.12	0.906
_cons	0.2407665	.1041739	2.31	0.027

rho | 0 .71469598(fraction of variance due to u_i)
F test that all u_i=0:   Prob > F = 0.0000

Model 2 & A- prior expectation

$y_2 = \beta_0 + eqt_1 + dbt_2 + \mu_2 \rightarrow$ Model 2
ROE = 0.2407665 - 0.0099022

The panel regression estimate shows that there exists a negative relationship between gearing and ROE. This is indicated by the sign and size of the coefficients, that is $\beta_1 + \beta_2 = -0.0099022 < 0$. This result is consistent with apriori expectation. The overall R-squared shows that about 0.33% variations in ROE can be attributed to gearing and the remaining 99.67%

variation in ROE are caused by other factors not included in this model. This implies that 99.67% is not explainable by gearing hence by other factors.

The F-statistic p-value shows 90.61%. This shows that the panel regression result is not statistically significant because it is greater than 5%. The coefficient shows that one unit change in gearing will cause a negative -0.0099022. Although, gearing has a negative effect on ROE, this effect is however not statistically significant for the period studied.

The rho statistics indicates that 71.47% of changes in ROE are caused by individual-specific variations of the firms studied in Nigeria. The f-test below the rho statistics is highly significant at the 1% level, showing that we reject the null hypothesis that, heterogeneity bias as a result of the individual-specific effect equals zero (not present). Therefore the fixed effect estimation method is more appropriate than the pooled ordinary least square estimation technique which would have produced inconsistent estimates (results). Therefore, from the foregoing panel regression estimates, gearing have no significant effect on ROE. Thus, the null hypothesis is accepted, research question two answered, and research objective two achieved.

Research Questions 3

The purpose for research question 3 was to determine at what level of Leverage is Return on Capital Employed enhanced. Regression analysis was conducted in order to determine the level of optimism. The output of the regression exercise is represented in the table below:

Table 4: Result Output for Leverage and Return on Capital Employed

Fixed-effects (within) regression   Number of obs   =   44
Group variable: panelvar   Number of groups   =   9

R-sq: within = 0.0002   Obs per group: min =   4
       between = 0.1350   avg =   4.9
       overall = 0.0840   max =   5

                             $F(1,34)$ =   0.01
corr(u_i, Xb)   = 0.3046   Prob > F   =   0.9293

Roce	Coef.	Std. Err.	t	P>|t|
Gearing	0.0049688	.0555492	0.09	0.929
_cons	0.3146556	.0694817	4.53	0.000

rho | 0.81444698(fraction of variance due to u_i)
F test that all u_i=0:   Prob > F = 0.0000

Model 3 & A- prior expectation

$y_3 = \Lambda_0 + eqt_1 + dbt_2 + \mu_3 \rightarrow$ Model
ROCE $= 0.3146556 + 0.0049688$

The panel regression of the foregoing estimates shows that there exists a positive relationship between gearing and ROCE of the companies. This is indicated by the sign and size of the coefficients, that is $\Lambda_1 + \Lambda_2 = 0.0049688 > 0$. The result for sampled companies is consistent with apriori expectation which states that positive relationship should exist, that is, as gearing increases ROCE must also increase. The overall R-squared shows that about 8.4% variations in ROCE can be attributed to gearing and the remaining 91.6% variations in ROCE of sampled companies in Nigeria are caused by other factors not included in the models. This implies that only 8.4% effect on ROCE can be explained by gearing.

The F-statistic p-value shows 92.93% for Nigeria sampled companies. This shows that the panel regression result is not statistically significant because it's greater than 5%. The coefficient shows that one unit change in gearing will cause a positive 0.0049688 unit change in ROCE of sampled companies. This indicates that gearing has a positive effect on ROCE of Nigerian food product companies sampled. These effects are however not statistically significant for the period in this study.

The rho statistics indicates that 81.44% of changes in ROCE are caused by individual-specific variations of the firms studied in Nigeria food product companies. The f-test below the rho statistics is highly significant at the 1% level, showing that we reject the null hypothesis that, heterogeneity bias as a result of the individual-specific effect equals zero (not present). Therefore the fixed effect estimation method is more appropriate than the pooled ordinary least square estimation technique which would have produced inconsistent estimates (results). Therefore, from the panel regression estimate, gearing has a significant positive effect on ROCE for sampled food product companies in Nigeria. Thus, the null hypothesis is rejected. Research question one answered, and research objective one achieved.

Discussion of Findings

Question one try to find out the relationship between leverage and Return on Assets. From table 4.2, the skewness of the Gearing at 1.221 and its kurtosis at 1.470 indicate negative relationship against -0.322 and -0.388 for the skewness and kurtosis of ROA respectively. This implies that as the gearing increases the ROA decreases. This is supported by Pratheepkanth (2011), Ana, Dragan and Monica (2012) and Ogebe, Ogebe and Alewi (2013).

Whereas, question two that finds out about the extent at which leverage influences Return on Equity is resolved from table 4.2: the skewness of gearing at 1.221 as against -0.789 of ROE indicates negative relationship while the 1.470 kurtosis of gearing has positive relationship 3.576 kurtosis of ROE. This implies that as gearing increases ROE increases equally. This is supported by Alawwad (2013), Nirajini and Priya (2013) and Kehinde (2014).

Moreover, the third question which tends to find out the level of leverage at which Return on Capital Employed is enhanced is resolved from the skewness of ROCE at 0.331 that indicates positive relationship while the -0.002 kurtosis of ROCE shows negative relationship. It

can be inferred that this is in line with the findings of Pratheepkanth (2011) and Ogebe, Ogebe and Alewi (2013) opined that negative relationship exist between capital structure and organizational financial performance.

Implications of the Study to the Food Product Companies

1. This study shows that the panel regression result is not statistically significant because it is greater than 5%. The coefficients showed that one unit change in gearing will cause a negative -0.0411856 unit changes in ROA of the companies.
2. This study reveals that the panel regression result is not statistically significant because it is greater than 5%. The coefficients of gearing showed that one unit change in gearing will cause a negative -0.0099022 unit change in ROE of the companies. Although, gearing has a negative effect on ROE, this effect is however not statistically significant for the period studied.
3. This study shows that the panel regression result is not statistically significant because it is greater than 5%. The coefficients of gearing showed that one unit change in gearing will cause a positive 0.0049688 unit change in ROCE of sampled companies. This indicates that gearing has a positive effect on ROCE of Nigerian food product companies sampled. These effects are however not statistically significant for the period in this study.

Conclusion

The study examined the effect of capital structure on organizational financial performance of food product companies in Nigeria. The study viewed dependent variables like ROA, ROE and ROCE as against the independent variable, which is gearing. The study established that capital structure has negative effect on Return on Assets, also on Return on Equity but positive effect on Return on Capital Employed. Findings of this study therefore provide insight into the effect of capital structure as it influences ROA, ROE and ROCE. The study concludes that on the overall, capital structure does not affect ROA, ROE and ROCE significantly, however, firm specific factors may cause some combined capital structure effect to significantly affect ROA, ROE and ROCE.

Recommendations

From the apriori expectation which states that ROA and ROCE should have positive relationship with gearing, various deviations may be as result of inefficient use and control of debt of the organization including organizational expenses, lack of product promotion to enhance adequate sales, wastages in production process and others. It is thereby recommended that the management should make efficient use of the resources available with a view to reducing expenses for the firm. Also, it is recommended that they should embark on more promotion to make their products acceptable by consumer. In addition, the management of firms are advised to observe their production process with a view to reducing wastages.

Limitation of the Study

Due to the difficulty in accessing the published financial statements of companies and none supply of required information by some published financial statements accessed, the sample used in this study reduced to nine (9) rather than the ten (10) companies intended. An enhanced sample size may have enhanced the robustness of the results. Again, the inadequacy of the information content of the financial statements of the sampled companies imposed another limitation to the study. The disclosure level of some of the financial statements is not sufficiently good. However, companies with major information content deficiency were dropped from the sample. Finally, there is the possibility that the data structure (one of which was a dummy variable) could have affected processing efficiency and the explanatory power of the gearing variables and thus the final results of the study. These notwithstanding, the results are regarded good enough to use in generalizing on the effect of firms' capital structure and profitability performance of food product companies in Nigeria.

Study Contributions to Knowledge

This study, although serves as one of the studies in manufacturing company but verifies performance of companies that are food product. Moreover, it serves as one of the researches that view financial performance by using statistical package known as STATA for its evaluation. Moreover, based on the companies involved in the study, the finding depicts that capital structure of firms does not necessarily influence organizational financial performance vis-a-vis profitability as measured by ROA, ROE and ROCE. Hence, it was discovered that management should endeavor to implement adequate expenditure control technique which will help to boost the profit before interest and tax and in effect stabilized the firm's financial performance. Also, the study has been able to unfold that management's inefficiency can affect financial performance of the firm as revealed by the relationship between ROE and gearing of the firm.

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