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EQUITY FINANCING AND PROFITABILITY OF SELECTED MANUFACTURING COMPANIES IN NIGERIA

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Abstract

This paper investigates equity financing and profitability of selected quoted Nigeria manufacturing firms from 2009 to 2015. Secondary data obtained from Factbook published by Nigerian Stock Exchange (NSE) and audited financial statement were used to analyzed data. Ordinary least square technique was used to analyze twenty (20) sampled firms. The study concluded that equity and reserves have positive and significant impact on profitability of selected quoted manufacturing firms in Nigeria and there is an optimal capital structure for all firms. The study therefore recommends that management of Nigeria quoted manufacturing firms should work hard to optimize the capital structure of their firms in order to increase the value of the returns on equity, assets and investment.

***Keywords**: Cost of equity, cost of capital, capital structure, profitability, returns.*

1.0 Introduction

Capital is important factor to a firm for its survival and growth and it has a key role in the financial performance of the firm to achieve the long term goals and objectives of the firm.

A company can finance its investment by means of debt or equity. This is known as financing decision. How an organization is financed is of paramount importance to both the managers of the firms and providers of funds. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be adversely affected (Osuji and Odita, 2012). One of the many objectives of financial managers is to maximize the wealth of shareholders. Shareholders wealth maximization depends on some issues like managing lower cost of capital, generating tax shield benefits from debt financing, reducing the agency costs of debt and equity to mention but few. All these issues are determined and managed by reaching at a point of optimal capital structure. As a result, financial managers strive to ensure the optimal mix of debt and equity in the firm capital structure (Shehu, 2011). An optimal capital structure is usually defined as the one that will minimize a firm cost of capital while maximizing shareholders wealth (Ogbulu and Emeni, 2012).

Shareholders wealth maximization concept dictates that firms chose the optimal mix of debt and equity financing that best serves the ultimate objective of the firm. The determination of the capital structure of a firm is challenging in reality.

Pandey (1999) defined equity capital as including share capital, share premium, reserves and surpluses. Characteristics of equity capital include its uncertain or unspecified return and its lack of any repayment pattern. Equity capital contributes to a company's stability and solvency. It is usually characterized by a degree of performance, persistence's in times of adversity, and a lack of any mandatory dividend requirement. A company can confidently invest equity finance in long-term assets and expose them to business risks without threat of recall. When investors provide equity capital to a firm, they acquire a right to the future dividends of that firm given that they become partial owners of the company and that these dividends cannot be determined from the onset (Micheal, 1992).

Pandey (2010) noted that businesses have an option of raising capital internally by retaining earnings. This study seeks to provide answer to the question "will equity affect profitability of selected listed manufacturing firms in Nigeria"?

2.0 Literature Review

To be discussed in this section are: conceptual review, theoretical review and empirical review.

2.1 Conceptual Review

2.1.1 Concept of Maximization of Shareholders Wealth

The theory of financing a firm is based on the assumption that the objective of the firm is to create value for the shareholders. As a legal owner of the firm, all residual earnings of the business belong to the ordinary shareholders (equity owners), and any retained earnings are their distributed wealth. Therefore, if the objective of the finance is to maximize its value and maximizing the value of the firm means maximizing the wealth of the shareholders since any extra wealth created belong to them (Olowe, 2017).

2.1.2 Concept of Satisficing

The concept of satisficing is used to explain the objective of the firms aspiring for satisfactory instead of an optimal level of goal management.

According to Simon (1959), Cyent and March (1963), they see a business organization as a coalition of individuals (shareholders, loan creditors, managers, or the employees, suppliers, customers and others) viewed as not having prominent over one and other. The objective in their own view should reflect the interest of the coalition so that the firm should seek to give all participants in the coalition a satisfactory return for their participation rather than serve the interest of only one member of the coalition (McLaney, 1994).

2.1.3 Concept of Leverage

The term leverage called a gearing in United Kingdom could be described as a firm's use of assets and liabilities having fixed cost in an attempt to increase potential returns to shareholders. Pandey (2010) defined financial leverage as a company's practice of the acquisition of part assets of the company with fixed interest capital with the hope of increasing the end result of the common stock holders.

2.1.4 Capital Asset Pricing Model (CAPM)

One of the fundamental tenets in financial management is the Capital Asset Pricing Model (CAPM) as developed by Sharpe (1964), Lintner (1965) and Mossin (1966). The CAPM's impact over the decades on the financial community has led several authors inclusive of Fama

and French (2004) to suggest that the development of the CAPM marks "the birth of Asset Pricing Model".

CAPM is specifically employed in the applications like the estimation of the cost of capital for firms and the evaluation of the performance of managed portfolios. According to Fama and French (2004), the attraction of the CAPM is its offering of potent and intuitively satisfying prediction regarding the measurement of risk and the link between expected return and risk. CAPM is also known as cost of equity.

2.2 Theories

There are several major contributors to the theory of capital structure. The theories are:

2.2.1 The Free Cash Flow Theory

Jensen (1986) states that when free cash flows are available to stop managers, they tend invest in negative net present value (NPV) projects instead of paying out dividends to shareholders. he agrees that the compensation of managers with an increase in the firm's turnover. Hence the objective of the company is to increase the size of the firm by investing in all sorts of projects even if these projects have a negative NPV. Dorff (2007) argued that compensation of managers tend to increase when there is an increase in the firm's turnover.

Jensen (1986) defines free cash flow as the amount of money left after the firm has invested in all projects with a positive NPV and states that calculating the free cash flow of a firm is difficult since it is impossible to determine the exact number of possible investments of a firm.

2.2.2 The Static Trade-off Theory

The static trade-off theory of capital structure predicts that firms choose their mix of debt and equity financing to balance the cost and benefits of debt. It should however be realized that a company cannot continuously minimize its overall cost of capital by employing debt. A point or range is reached beyond which debt becomes more expensive because of the increased risk (financial distress) of excessive debt to creditors as well to shareholders. When the degree of leverage increases, the risk of creditor increases, the risk of creditors increases and they demand a higher interest rate and do not grant loan to the company at all, once it's debt has reached of debt makes the shareholders position very risky. This has the effort of increasing the cost of equity. Thus up to a point the overall cost of capital decreases with debt, but beyond that point the cost of capital would start increasing and, therefore it would not be advantageous to employ

debt further, so there is a combination of debt and equity which minimizes the market value per share.

2.2.3 The Agency Theory

Berle and Means (1932) initially developed the agency theory and they argued that there is an increase in the gap between ownership and control of large organizations arising from a decrease in equity ownership. This particular situation provides a platform for managers to pursue their own interest instead of maximizing returns to the shareholders.

In theory, shareholders of a company are the only owners and the duty of top management should be solely to ensure that shareholders interests' are met. In other words, the duty of top managers is to manage the company in such a way that returns to shareholders are maximized thereby increasing the profit figures and cash flows (Elliiot, 2002). However, Jensen and Meckling (1976) explained that managers do not always run the firm to maximize returns to the shareholders. The agency theory was developed from this explanation and the principal-agent problem was taken into consideration as a key factor to determine the performance of the firm. Jensen and Meckling (1976, p. 308) state that "An agency relationship is a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent".

2.2.4 Transaction Cost Perspective

Transaction cost economics is concerned with the governance of contractual relations in transactions between two parties (Coase, 1937: Williamson, 1975, 1985). Governance structures can be matched to transactions in a manner that leads to lowered costs of exchange (Williamson, 1979). Each structure is associated with a different level of transaction costs (Goldberg, 1985; Hennart, 1993)-costs not dependent on the competitive market price of the goods or services exchanged (Robins, 1987). These costs arise from structures, as well as other costs, such as those due to renegotiation, that arise from a shift in the alignment. Under competitive conditions, firms seek governance structures to economize on transaction costs. The cost of market exchange is high when the specificity of assets under exchange is high. Under these circumstances, other forms of governance, such as 'hierarchy', may prove efficient.

2.2.5 Information Asymmetry Theory

Stephen Ross developed the information asymmetry theory of capital structure by removing another assumption underlying Modigliani and Miller's value invariance theory, namely that 'the

market processes full information about the activities of firms' (Ross, 1977:23). If instead we assume that managers posses information about the firm's future prospects that the markets does not have, then managers' choice of a capital structure may signal some of this information to the market (Ross, 1977).

Increasing leverage, he reasoned, would signal to the market that the firm's managers are confident about being able to pay interest in future, and hence are confident about future earnings prospects. Increasing leverage, would therefore, increase the value of the firm by signaling to investors the size and stability of future cash flows (Ross, 1977). Fama and French (1988), on the other hand, countered by pointing to the fact that more profitable firms tend to have lower levels of debt.

2.3 Empirical Review

Previous studies carried out relating to this study are reviewed below:

According to the pecking order theory, equity is used as a last resort since the under-pricing which occurs when the level of information asymmetry between managers and investors is high and does not allow firms to raise capital. March (1982) examined the debt-equity choice in a sample of listed United Kingdom firms from 1959 to 1974. The study discovered that increase in stock prices persuades firms to issue equity. Hovakiman, Opler and Titman (2001), reported a positive relationship between stock prices and equity issuance. Bauer (2004) submitted that from the agency cost theory view point, stated that firms with a more profit should have higher leverage for income they shield from taxes. It holds the view that more profit firms should make use of more debts purportedly to serve as a disciplinary measure for the managers. In addition, Graham and Harvey (2001) in their study, submitted that stock price appreciations and the stock undervaluation are the most important factors influencing equity issuance.

Bougatef and Chichti (2010) in a study of equity marked timing and capital structure. Evidence from Tunisia and France concluded that Tunisia and French firms tend to issue equity when their market values are high. Their results is consistent with the market timing theory which stated that managers take advantage from temporary over valuation by issuing equity. Yoon and Jang (2005) studied the relationship between profitability, financial leverage and size of the firm in restaurant industry from 1998 to 2003 by using ordinary least square regression method and for this purpose they take 62 restaurant firms in United States. Result of the study showed high relationship between financial leverage and firm's profitability.

3.0 Methodology

Research design adopted in this study is *ex-post facto.* This is because the event has already taken place.

Secondary data obtained from Factbook published by Nigerian Stock Exchange and various companies audited accounts will be used for this study. The period of the study will be from 2009 to 2015. Out of the seventy (70) manufacturing companies listed on the Nigerian Stock Exchange in 2015, twenty (20) of them will be used for this study.

Method of data analysis adopted for this study is Ordinary Least Square (OLS). This method is adopted to determine impact of equity financing on profitability of selected quoted Nigeria manufacturing firms.

The model to capture equity financing in profitability is stated below:

Functional Relationship

NPBT = f(ke)
Where:
NPBT = Net Profit Before Tax
ke = Cost of Equity
$NPBT = \alpha_o + \alpha_1 ke + \mu$
N$PBT = \alpha_o + \alpha_1 ke + \mu$

4.0 Data Analysis, Result and Discussion of Findings

Collected or generated data sets have no appreciable value until they are analyzed, interpreted and convincingly discussed. Data obtained were analyzed in two folds namely:

i) Descriptive analysis which described the obtained data and
ii) Empirical analysis where the regression analysis estimates are shown

Descriptive Analysis

This section of the analysis provides an overview on the data set and describes the main attributes of the data. The descriptive analysis of the panel data obtained are based on the mean, median maximum, minimum and standard deviation of the variables of cost of equity and profit before tax.

Table 1 Descriptive Statistics

	ke	PBT
Mean	0.149455	13.28905
Median	0.031720	14.71611
Maximum	3.694580	19.46849
Minimum	0.002290	-14.86202
Standard Deviation	0.483270	5.429022
Observation	140	140

Source: Researchers Computation, 2019

Table 1 shows the descriptive statistics of the variable with cost of equity having mean value of 0.149455 while profit before tax has mean of 13.28905 median for cost of equity is 0.031720 while that of profit before tax is 14.71611. Standard deviation for cost of equity is 0.483270 while that of profit before tax is 5.429022.

Profit before tax has a minimum value of -14.86202 implying that some of the companies made loss in the period under review.

Empirical Analysis

Table 2 Regression Estimate

Variable				
	Coefficient	**Std. Error**	**t-statistic**	**P-Value**
Constant	13.2060	0.07454	17.1700	0.0000*
KE	0.4876	0.16639	2.9300	0.0030*
Hausman Test	0.24			0.6224
Heteroskedasticity: Breusch-Pagan/Cook-Weisberg	3.38			0.0662
Wooldridge test for autocorrelation	4.337			0.0510

Source: Regression Analysis Results

*significance at 5%

$$NPBT_{i,t} = \alpha_0 + \alpha_1 Ke_{i,t} + \mu_1$$

$$NPBT = 13.2060 + 0.4876Ke + \varepsilon_1$$

Diagnostics Test Result

From Table 2, the Hausman test was used to determine whether fixed or random effect is suitable for the model. The probability of this test showed 0.622 which is higher than the acceptable 5%, therefore, the null hypothesis to estimate random effect was accepted. Thus, random effect was estimated for the model. However, Breusch-pagan Heteroskedasticity test showed a p-value of 0.066, implying that the null hypothesis of constant variance was accepted and this indicates the absence of Heteroskedasticity. In addition, the probability value of Wooldridge Test for autocorrelation stood at 0.051, indicating that the null hypothesis of no serial correlation was accepted. Since there is absence of Heteroscedasticity and no serial correlation, the random effect was estimated for this model. Thus, the model has no specification biasness.

Interpretation

From Table 2, the size of the coefficient of the independent variable (β_1) shows that a 1 unit increase in cost of equity (KE) would lead to a 48.7% increase in profitability (LNPBT) of the sampled manufacturing firms in Nigeria. Also, the overall R-square of the model showed that 41% variations in profitability can be attributed to cost of equity, while the remaining 59% variations in profitability (LNPBT) were caused by other factors not included in this model. Although the overall R-square showed a moderate explanatory power of the model, the Z-test showed a probability value of 0.0034 which indicates that the explanatory variable is statistically significant because this is less than 5% - the level of significance adopted for this study. Therefore, the model is statistically significant.

Based on the above analysis, and at level of significance 0.05, the t-statistics is 2.930 while the P-value was 0.0030 which was less than 0.05. The null statistics were rejected while alternate was accepted which means that equity capital had significant effect on net profit before tax in Nigerian quoted manufacturing firms.

5.0 Conclusion

The study evaluated equity financing and profitability of selected quoted Nigeria manufacturing firms. It was discovered from the study that equity and reserves have positive and significant impact on profitability. The study further revealed that there is an optimal capital structure for all firms in the economy and managers of each firm will determine the optimal capital structure for their firm.

Investors and stake holders of quoted manufacturing firms in Nigeria should also consider the leverage level of any firm before committing their hard earned money as the financing mix of any company determines the quantum of returns to the shareholders. The study also discovered that every source of fund had its own cost, therefore, firm should take time to analyze their cost of capital before incorporating the fund into its capital structure.

Recommendations

In line with the findings from this study, the following recommendations are offered:

The management of Nigeria quoted manufacturing firms should work hard to optimize the capital structure of their firms in order to increase the value of the returns on equity, assets and investment. Every manager should strive to attain an optimal capital structure, this is in agreement with Agoola and Salawu (2008) that management should strive to identify and maintain an optimal capital structure since it represents the point where their market value are maximized.

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Appendix

List of Nigerian firms used in the study

S/N	NAME OF FIRM	SECTOR
1	Nestle Nigeria Plc	Food/beverages and tobacco
2	Cadbury Nigeria Plc	Food/beverages and tobacco
3	7-up Bottling Company Plc	Food/beverages and tobacco
4	Honeywell Flour Mills Plc	Food/beverages and tobacco
5	Nigeria Bottling Company Plc	Food/beverages and tobacco
6	Portland Paints & Product Plc	Chemical and Paints
7	Vitafoam Nigeria Plc	Industrial and domestic product
8	BOC Gases Plc	Chemicals
9	Studio Press Nigeria Plc	Printing and Publishing
10	GSK Nigeria Plc	Healthcare
11	May & Baker Nigeria Plc	Pharmaceutical
12	Livestock Feeds Plc	Livestock/Animal specialist
13	Nigeria Wire Industry Plc	Construction
14	Lafarge Wapco Plc	Building materials
15	Nigerian Breweries Plc	Breweries
16	Presco Plc	Crop production
17	PZ Nigeria Plc	Conglomerates
18	Unilever Nigeria Plc	Conglomerates
19	Guinness Nigeria Plc	Breweries
20	Berger Paints Plc	Chemical and Paints