



## THE EFFECT OF CAPITAL STRUCTURE DECISIONS ON PROFITABILITY OF QUOTED CONSUMER GOODS IN NIGERIA

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### ABSTRACT

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The study examined the effect of capital structure decisions on profitability of quoted consumer good firms in Nigeria. Research method adopted is ex-post facto research design. The study employed secondary data obtained from the websites of the consumer goods sub-sectors of the manufacturing sector, published annual reports and statements of accounts of the sampled firms and the Nigerian Stock Exchange F-act-book. The study adopted judgmental sampling and multi-stage sampling techniques in data collection. Multiple Regression models were used in the analysis of the data. The estimation result also showed that the retained earnings to asset ratio (REA) had a direct relationship with return on asset of quoted consumer goods firms in Nigeria. The study concludes that, retained earnings to asset ratio positively influenced return on asset of quoted consumer goods firms in Nigeria at 5% level of significance. The study recommends firms' managers and financial advisors to advise the stakeholders of quoted consumer goods firms to use more of internal fund to finance a huge proportion of their assets if available. Again, the firms' managers are advised to continuously study the market and advice firms on the appropriateness of the proportions of long-term debt to be used during capital structure decisions to avoid the adverse effect of financial distress.

**Contribution/Originality:** This study originated a model in the research methodology to explain the effect of retained earnings on asset ratio to return on asset of Quoted Consumer Goods firms in Nigeria. This study contributes to existing knowledge by identifying gap in the literature and creating areas for future research.

### 1. INTRODUCTION

In recent times, firms undertake a capital restructuring, especially debt restructuring when faced with a financial deficit that affects their financial condition. This strategic decision requires expertise and analytic capabilities to take the proper decision. Financial managers have been faced with various complexities and difficulties in mixing the debt and equity in order to achieve an optimal capital structure that will enhance the firms' value. The inappropriate mix of debt and equity not only affect the financial performance of firms also affects their future survival (Kester, 1986).

In addition, Zhu (2014) defined Capital Structure as a balance between equity and debt that businesses use to finance its assets, day-to-day operations and future growth of their enterprise. Capital Structure is important and

serves numerous purposes. It shows the outline of all the claims that different stakeholders have on their businesses. The debt owners hold these claims in the form of the principal and accompanying interest payments. The equity owners hold these claims in the form of asset to a certain percentage that firms future profit. Again, capital structure is useful in determining the riskiness of a company's borrowing practices. Since capital markets are not perfect, wise decisions have to be taken under the imperfect situation to analyze the business environment and know when to invest to avoid the risk of failure.

Consequently, capital structure plays a crucial role in the cost of capital, profitability and the final value of a firm. Its decision influences the firm value, market shares, risk and cost of capital of consumers' good firms. External investors, shareholders and potential lenders are usually interested in the firm's capital structure considering the fact that it has an effect on the cost of obtaining capital, market share and the value of the Firm. Although, earlier studies by these researchers [Tharmila and Arulvel \(2013\)](#); [Asifa, Nazir, and Butt \(2014\)](#); [Lawal, Terer, Kiyanjui, and Kayode \(2014\)](#) have found that capital structure decision is influenced by firms' internal factors. However, recent studies by [Paseda \(2016\)](#); [Mwangi, Muturi, and Ngumi \(2016\)](#) have shown that capital structure decision or practice is influenced by firms' external factors. The adequate knowledge of capital structure drivers is inevitable in the proper understanding of financing efficiency and effectiveness of firms.

A study by [Zhu \(2014\)](#) noted that, a company that is heavily financed by debt has a more aggressive capital structure and greater risk to investors. The author observed that debt is one of the major sources of raising money in the capital markets. Companies benefit from debt due to its tax advantages and interest payments made as a result of borrowing funds may be tax-deductible. Debts allow a company to retain ownership, unlike equity. However, in terms of low-interest rate, debt is abundant and easy to access. Equity allows outside investors to take partial ownership in the company. Equity is more expensive than debt especially when interest rates are low. Unlike debt, equity does not need to be paid back. This is a benefit to the company in the case of declining earnings. Achieving the best financing mix or combination of varieties of long term sources of funds such as debts, equity including reserves and surpluses of an enterprise is the aim of Capital Structure ([Stewart, 2011](#)). The financial managers assume some level of risks in the course of performing these tasks such as; financial risk, credit risk, liquidity risk and market risk in order to earn optimal returns. High performing institutions manage and control their risk best by employing effective trade-off between risk and returns that minimize the cost of capital and maximise the firm's value. The ability of firms to generate high returns for the level of risk assumed leads to high performance which is more than high returns ([Kester, 1986](#)).

In recent time, Consumer Goods manufacturing sector has been characterized by a low level of productivity despite government initiatives put forward to promote, improve, strengthen and sustain its performance. Perhaps the reason for the above may be due to poor corporate financing strategies result to high leveraging, improper financing mix and capital structuring. Globally, Consumer Goods manufacturing sector provides means of foreign exchange earnings that is essential for economic development. [Kawode \(2015\)](#) and [Oteh \(2010\)](#) posit that manufacturing sector provides means of employment opportunities and improve industrialization of any economy.

Several studies have been conducted on this subject area by different academic scholars in efforts to determining the influence of Capital Structure on firms' profitability. Trade-off theory believes that debt level has a positive effect on the financial performance of most firms ([Karadeniz, Kandir, Balcilar, & Onal, 2009](#); [Myers 1984](#); [Myers & Majluf, 1984](#)). This implies that the higher the level of profits, the greater the level of leverage ratios to exploit the tax-deductibility of interest. However, empirical pieces of evidence have revealed some key variables capable of influencing capital structure decisions such as retained earnings, long-term debt, short-term debt, debt to equity ratio, asset growth and asset size which have survived in many tests. However, a set of empirical evidence identify the capital structure as one of the factors affecting a firm's profitability positively ([Muhammad, Zaighum, Saeed, & Muhammad, 2012](#); [Nirajini & Priya, 2013](#)). On the other hand, empirical studies contradict the views of the earlier studies and found that Capital Structure has a negative influence on the firm's profitability ([Asifa et al., 2014](#);

Lawal et al., 2014; Mohamad, 2015; Tharmila & Arulvel, 2013). Other researchers believe that there is no optimal capital structure (equity and debt) composition (Singapurwoko & El-Wahid, 2011).

However, works already done before were carried out in other countries and did not examine the effect of retained earnings on asset ratio to return on asset of Quoted Consumer Goods firms in Nigeria. This is the gap present study have identified and seek to fill. To achieve the study objective, secondary data were sourced from secondary sources for the period of eighteen (18) years covering 2000-2017. It is against the background of the above that the broad objective of this study is formulated which seek to investigate the effect of capital structure decisions on profitability of selected Consumer Goods firms listed in the Nigerian Stock Exchange. Drawn from the broad objective, specific objective is to ascertain the effect of retained earnings on asset ratio to return on asset of Quoted Consumer Goods firms in Nigeria.

## 2. REVIEW OF RELATED LITERATURE

Capital structure is defined as the process by which organizations financed their activities and operations through debts, equity and securities (Abor, 2005). According to the authors thinking, the capital structure simply means firms outstanding debt and equity. It allows the company to understand the amount of funding required to finance its overall activities and growth. In other words, it highlights the proportions of debt, equity and security in the funding. It explains the way firms finances their activities and growth with different sources of funds. These sources include; retained earnings, debentures, bond issues, long term notes payable and common stock. To achieve the study objective, retained earnings are adopted among other sources of capital structure.

Zhu (2014) defined capital structure decision as a balance between equity and debt that a business uses to finance its assets, day-day operations, and future growth. very crucial in any consumer goods firm because it is concerned with the ability of the firm to meet the stakeholders' needs and firms' long-term objective. According to the authors' perspective, capital structure decisions or practices influence everything that firms virtually does, with respect to the firm's risk profile, how it gets funding, how expensive that funding is, the return its investors and lenders expect, and its degree of insulation from both microeconomic business decisions and macroeconomic downturns. By design, the capital structure reflects all of the firm's equity and debt obligations. It shows each type of obligation as a slice of the stack. This stack is ranked by increasing risk, increasing cost and decreasing priority in liquidation events (bankruptcy).

Abor (2005) defined the capital structure as a combination of different securities. According to the author, a firm's capital structure lies in a mix of debt and equity financing. The search for the optimum capital structure by the researchers in the area of financial management has generated a lot of controversies that led to new discoveries of theories such as; trade-off, pecking order and agency theories. Despite these studies, there is no agreement among researchers in this field of study that identified the level of capital that maximizes profitability and shareholders' value. The author identified a negative relationship existing between profitability and long term debt. On the contrary, the researcher found that a positive relationship exists between profitability and short-term debt.

Capital structure comprises of debt and equity, the proportions of debt and equity usually vary in different firms. Nimalathasan and Brabete (2010) have identified capital structure proxies such as debt and equity. They have positive influence on firm's profitability ratios (such as, Gross Profit, Operating Profit and Net Profit Ratios). Decisions about capital structure play a very crucial role in enhancing the overall profitability of firms. The financing of the firm's assets through the combination of hybrid securities, equity and debt, is referred to as capital structure. The various components of capital structure are classified into equity capital, preference capital and long-term loan capital. The capital contributed by shareholders in exchange for shares and retained earnings from previous years profits used to keep the balance sheet strong and enhance the firm's growth through expansion of is known as equity. Preference capital combines the features of debentures and equity shares and it is also referred to as hybrid share. Debt capital refers to the long term fund that pays back the principal and interest to the

bondholders at the maturing period of the debt obligation. Optimum capital structure decision is a critical decision often taken by managers of firms in order to compete effectively in the competitive business environment and maximize the firm's performance.

### 2.1. The Concept of Capital Structure Decisions

This is one of the determinants of capital structure. The ratio of fixed assets to total assets is referred to as Asset Tangibility (Alkhatib, 2012). The attribute of assets that guide interest groups in their assessment about properties owned by firms such as plants and types of equipment which can be used as collateral during borrowing is called a tangible asset. Low tangible assets in firms cause low leverage ratio which would lower the capacity of the firm to collateralize such assets to raise debt capital to finance its operations. The empirical literature has revealed positive and negative result on assets owned by a firm in terms of capital structure choice. This is in support of trade-off and pecking order theories. Trade-off theory agreed that a positive relationship exists with the firm's capital structure, while the agency theory argued that a negative relationship exists with firms' capital structure.

The debt capacity increases when tangible assets are high, lenders experience low risk which diminishes the financial distress expectation. According to Alkhatib (2012) the more tangible assets a firm has in its total assets, the higher the ability of the firm to finance its investment using debt. Asset tangibility has a positive relationship with capital structure decisions based on past studies by scholars. In this case, the influence of tangibility on capital structure assumes a positive relationship.

A study on the large sample was undertaken by Fan, Titman, and Twite (2012) to assess the relationship asset tangibility and firm's leverage ratio using 5,344 firms covering a period 1991 – 2000. The firms were selected from 39 countries and asset tangibility was computed by dividing the fixed assets by total assets. The result showed that asset tangibility had a direct effect on the firm's leverage supported the theory of trade-off. A study of Asset tangibility by Nivorozhkin (2005) covering the period 1993 to 1997 using data collected from the Czech Republic. Asset tangibility indirectly affected leverage was shown in the study.

Daskalakis and Psillaki (2006) found an indirect effect of asset tangibility on leverage using data set obtained from France and Greece. The result supports the theory of pecking order. On the basis of Agency theory, the negative effect of the tangibility of asset on debt finance seems to be caused by the close monitoring function of bondholders. Tangible assets are less subject to informational asymmetries as well as moral hazard problems and they have a greater value than intangible assets. A Firm *with* more tangible assets can easily collateralize its assets to finance its operations with minimal risk which would result in low bankruptcy risk at the end (Alkhatib, 2012).

#### 2.1.1. Retained Earnings to Asset Ratio (REA)

Retained Earnings (RE) is the amount of net income left over for the business after it has paid out dividends to its shareholders. Small businesses operating under the capital structure can retain earnings. This can be either profit (positive) or loss (negative), the decision to retain the earnings is usually left to the company management. A growth-focused company may not pay dividends at all or pay very small amounts, as it may prefer to use the retained earnings for reinvestment or to finance expansion activities of the firm (Kenton & Johnson, 2020). The main advantage of having retained earnings is for small businesses to have financial resources to reinvest in their operations and make a profit. Retained earnings fund several projects such as; research and development, facility construction, renovation and expansion. Small corporations also use retained earnings to purchase equipment and other assets as well as pay off company debts and liabilities (Howell, 2020). Previous study in this area has generated positive and negative findings on retained earnings. Studies by Mwangi et al. (2016) found that a negative relationship exists between retained earnings to asset ratio and profitability. However, pecking order theory also found that a positive relationship exists between retained earnings to asset ratio and profitability.

### 2.1.2. Profitability (Return)

The aim of every business venture is profit maximization and no business will survive without profitability in a long run (Tufano, 2006). Profitability is the difference between revenue and expenses (Stierwald, 2010). Performance can also be measured using profitability (Ogbadu, 2009). Profitability is the ability of firms to benefit from their business activities (Tufano, 2006). Every business venture has a primary goal of profit making and profitability is the resultant effect of management's efficiency in carrying out the business operations (Kamau, Mogwambo, & Muya, 2018). Profitability is the prerequisite for successful business and future survival that attracts external investors to the firm.

The pecking order theory highlighted the nature of association that exists between. Profitability and leverage (Myers 1984). Firm's profit as it relates to internally generated earnings is essential to capital structure decisions. Pecking order theory supports profitability affecting leverage indirectly due to availability of internal funds. In the pecking order theory, available amount of internally generated funds is a firm's first preference when retained earnings are not adequate to finance firm's operations and borrowing is considered prior to issuing new equity. Equity financing is the least preferred choice because it attracts higher costs which may be due to asymmetric information and transaction costs (Myers & Majluf, 1984). Firms making low profits seem to use more of debt in their finances. On the contrary, some firms are less prone to selecting external funds and therefore have a lower level of debt in their capital structure due to the fact that they making more profits. They usually obtain funds via retained earnings because. The trade-off theory suggests the opposite of pecking order theory which states that profitability affects leverage positively. The static trade-off theory believes that profitable firms should be advised to use more debt due to the benefits derived from tax deductibility and this would also help in reducing the cost of financial distress.

According to Jensen (1986) the market control efficiency and effectiveness is very crucial in assessing the level of profitability. His study revealed that profitability has positive effect on leverage .Profitability could be calculated as the ratio of firm's profit after tax to total assets. This finding contradicted with the study by Tufano (2006) that profitability affects debt negatively supporting the theory of perking order. According to him, firms with high level of profits minimize their financing from external sources which signals low risk of bankruptcy to the public. The use of leverage is targeted at improving the firm's profitability at the end. High level of profitability tends to attract low asymmetric information (Myers 1984). However, recent study by Alkhatib (2012) identified negative relationship between profitability leverage. In addition, companies with high level of profitability tend to have low financial leverage than firms with low level of profitability.

### 2.1.3. Return on Asset (ROA)

Return on Asset is calculated as the net profit divided by the total assets of the firms. ROA measures the profitability core business operations of these firms. This study examined profitability of Quoted Consumer Goods firms using Return on Asset (ROA) as a dependent variable. Past studies also employed Return on Asset (ROA) as profitability measure. Studies by Salim and Yadav (2012); Ibrahim, Ahmad, and Muhammad (2016) defined ROA as net income per total asset.

## 2.2. Theoretical Review

This study is anchored on Capital Structure Irrelevant Theory (CSIT) propounded by Modigliani and Miller in 1958. The theory states that the values of firms depend on return and risks profile of their operation and not on the way firms are operated or financed using debt and equity. This implies that firms' profitability is not affected by the way it is financed irrespective of the proportion of debt and equity. According to this theory, firms who have the same risk and return profile, maintain the same market value and weighted cost of capital irrespective of the way the debt and equity are mixed (Modigliani & Miller, 1958). The theory is linked to the study because the firm's

value increases with an increase in debt level due to the increase in tax shield. However, when profitability is fluctuating and very low, it is expected that the bankruptcy cost should also increase in line with an increase in leverage ratio for higher tax shield increment.

However, this theory faced several criticisms by scholars because of the unrealistic nature of their assumptions. However, capital structure irrelevant theory was criticized by the scholars; Jensen and Meckling (1976) agency theory, Myers and Majluf (1984) idea of information asymmetry and Ross (1977) signaling theory. In spite of the criticisms made by scholars, Capital Structure Irrelevant theory still become relevant. It gained more ground in a bid to relaxing the ideal assumptions of Modigliani and Miller theory. Efforts were made to relax these assumptions particularly on the basis of 'no bankruptcy cost' and 'no taxation' which led to the 'trade-off theory of capital structure. Their arguments were made on the ground that the perfect market does not exist in the real world (Chandrasekharan, 2012).

### 2.3. Empirical Review

Several researchers have carried out a study on the Effect of Capital Structure Decision on Profitability of Quoted Consumer Goods Firms in both Nigeria and other parts of the world. These studies have generated different results and conclusions. Some of the empirical evidence on this subject is stated below.

Recent studies by Addae, Nyarko-Baasi, and Hughes (2013) empirically identified the Effects of Capital Structure on Profitability of listed firms in Ghana. Data was sourced from the Ghanaian stock exchange (GSE), Fact-Book 2010 edition. The study covered a five-year period from 2005-2019 respectively. Data were analyzed statistically using the regression method to obtain a result. The test result revealed positive and negative outcomes. The test result showed that there exists a positive relationship between short-term debt and profitability of firms. Another result showed that there exists a negative relationship between profitability and long-term debt.

Furthermore, Muhammad, Shah, and Islam (2014) examined the impact of Capital Structure on Firm Performance in Pakistan. The study was carried out using cement companies listed on the Karachi Stock Exchange covering the periods of four years from 2009 to 2013. Correlation analysis was used to test the effect of independent variables on the dependent variables. Findings revealed that a strong negative relationship exists between debt to equity and firm performance (gross profit margin, net profit margin, return on asset and return on equity). Further, there exists a positive relationship between debt to equity and firm performance variables (gross profit margin, net profit margin).

On the other hand, Zurigat (2009) studied the Capital Structure choice of firms under trade-off theory and pecking order. The study employed the Panel data analysis method that covered the period of eight years from 1997-2005. Secondary data set of 62 industrial firms and 52 services firms (114 non-financial firms) in Jordan were sourced to generate data. The findings supported the MM capital structure relevance theory and Agency theory which states that debt capacity has a positive relationship with the profitability of the firm. However, the finding contradicts the pecking order theory and concludes that leverage had a negative relationship with the firm's profitability.

Kakanda, Bello, and Abba (2016) empirically analyzed the Effect of Capital Structure on Performance of Listed Consumer Goods Companies in Nigeria. Secondary data was sourced from annual financial reports, the African Financial website and the official website of Nigerian Stock Exchange. The study used ex-post facto research design to examine the relationship between independent and dependent variables. Descriptive statistics, correlation, and hierarchical multiple regression analyzes were utilized to test the hypotheses and analyzed data to generate the result. Findings revealed that there exists a positive relationship between a firm's capital structure and corporate financial performance. The study specifically found that short-term debt (STD) has no significant positive effect on return on equity (ROE) while Long-term debt (LTD) has a positive relation and significant effect on ROE.

Ebaid (2009) conducted a study on the effect of Capital Structure Choice on Profitability in Egypt Quoted firms in Egypt. The study employed a multiple regression method to generate data. The profitability was measured using gross profit margin; return on assets and return on equity while capital structure choice was measured using total debt to total assets, long-term debt to asset ratio and short-term debt to asset ratio. The study also revealed that long term debt has a negative effect on the firm's profitability, while short-term debt and total debt has a negative effect on the firm's profitability.

Gharaibeh (2015) examined the effect of Capital Structure on the Financial Performance of Listed Companies in Bahrain Bourse. The study used secondary data obtained from secondary sources such as IMF data-based, websites and published annual reports of a sample of non-financial companies listed on the Bahrain Bourse. The study used data obtained from seventeen (17) non-financial companies (hotel and tourism, services, and industry). Multiple regression method was used to examine the effect of the independent variables on the dependent variables. Findings showed that capital structure variables (total liability to total asset) have positive effect on financial performance (return on equity, ROE). Findings also showed that capital structure variable (total liability to the total asset) has a negative effect on financial performance variables (return on asset, earnings per share and dividend yield) of listed companies in Bahrain.

### 3. RESEARCH METHODOLOGY

The study adopted a quantitative research method using Augmented Dicky-Fuller to determine the stationarity of the variables and the co-integration test. The justification for choosing this method is to know whether a long-term relationship exists between the variables. The study used three selected Quoted Consumer Goods Firms namely; PZ Cussons Nigeria Plc, Cadbury Nigeria Plc and Unilever Nigeria Plc. The target population consists of all the one hundred and forty-three (143) Manufacturing firms listed in the Nigerian Stock Exchange. Judgmental sampling (non-probability) and Multi-stage (probability) sampling techniques were adopted in the study. Judgmental sampling (non-probability) made use of researcher's judgment, experience and knowledge in identifying Quoted Consumer Goods firms in the manufacturing sector that have maintained their corporate identity that covered study periods. Multi-stage sampling technique was adopted in choosing the Quoted firms that are classified into Consumer Goods. The reasons for choosing the selected three firms was because they are listed in the Nigerian stock exchange market and have their complete annual report and have maintained their corporate identity within the period under study. Secondary data were obtained from the websites of the Consumer Goods sub-sectors of the manufacturing sector, published annual reports and statements of accounts of the sampled firms and the Nigerian Stock Exchange Fact-book. The study covered a period of eighteen (18) years from 2000-2017.

#### 3.1. Model Specification

This study used return on asset ratio (ROA) was used as proxies for profitability (dependent variable). The aim of this research work examined the effect of Retained earnings as a Capital Structure decision variable on the profitability of Quoted Consumer Goods firms in Nigeria; the model used by Ibrahim et al. (2016) was adopted with modifications made to include some relevant variables in capital structure decisions. The retained earnings to total asset ratio, asset growth rate and asset size were introduced in the independent variables of the model during the modifications. The general model is thus;

$$Y_{it} = \alpha + \beta_0 X_{it} + \mu_{it}$$

Where,

$Y_{it}$  = dependent variable.

$B_0$  = intercept.

$X_{it}$  = independent variables.

$\mu_{it}$  = error terms.

i = number of firms.

t = number of time periods.

The 'i' represents the cross-sectional dimension, while, the 't' represents time-series dimension.

The model is further specified as;

$$ROA_{it} = \beta_0_{it} + \beta_1 REA_{it} + \beta_2 LDA_{it} + \beta_3 SDA_{it} + \beta_4 DER_{it} + \beta_5 AGR_{it} + \beta_6 SIZ_{it} + \mu_{it}$$

Where,

$ROA_{it}$  = Return on Asset.

$REA_{it}$  = Retained Earnings to Asset Ratio.

$LDA_{it}$  = Long-term Debt to Asset ratio for firm i in year t.

$SDA_{it}$  = Short-term Debt to Asset ratio for firm i in year t.

$DER_{it}$  = Total Debt to Equity ratio for firm i in year t.

$AGR_{it}$  = Asset Growth for firm i in year t.

$SIZ_{it}$  = of Asset Size (Natural Logarithm of Total Asset) for firm i in year t.

Data was analyzed using Ordinary Least Square Regression method to analyze the effect of capital structure decisions on profitability of selected consumer goods firms listed in the Nigerian Stock Exchange.

## 4. PRESENTATION OF DATA AND DISCUSSION

### 4.1. Data Presentation

Table 1, 2 and 3 below contains the data of Unilever Nigeria Plc, Cadbury Nigeria Plc and PZ Cussons Nigeria Plc respectively. These tables contain Return on assets ratio (ROA) as the dependent variable and retained earnings to asset ratio (REA) independent variable for the period, 2000-2017, as generated from the NSE publications.

Table-1. Data for Unilever Nigeria Plc (2000-2017).

YEAR	ROA	REA	LDA	SDA	DER	AGR	SIZ
2000	0.1716	0.5786	0.1343	0.1655	0.4280	0.0240	6.6969
2001	0.3192	0.5168	0.1453	0.2487	0.6500	0.3625	6.8312
2002	0.0932	0.1574	0.0725	0.6804	3.0463	1.4873	7.2269
2003	0.1184	0.1515	0.1085	0.7831	3.6052	-0.0634	7.1985
2004	0.1007	0.2098	0.0971	0.6206	2.5425	0.3621	7.3327
2005	0.0776	0.1925	0.1214	0.6113	2.7415	-0.0311	7.3190
2006	-0.0738	0.1083	0.1724	0.6503	3.8757	-0.1065	7.2700
2007	0.0637	0.1520	0.1268	0.6260	3.0456	0.0929	7.3086
2008	0.1105	0.2019	0.1306	0.5850	2.5160	0.1543	7.3709
2009	0.1729	0.2646	0.1297	0.5239	1.8870	0.0079	7.3744
2010	0.1612	0.2467	0.1235	0.5551	2.1111	0.0951	7.4138
2011	0.1710	0.2387	0.1154	0.5858	1.6930	0.2436	7.5085
2012	0.1534	0.2164	0.1129	0.6119	1.8676	0.1317	7.5623
2013	0.1099	0.1694	0.1361	0.6436	3.5390	0.1988	7.6410
2014	0.0527	0.1212	0.1399	0.6965	3.1154	0.0453	7.6603
2015	0.0238	0.1209	0.1489	0.6916	5.2690	0.0970	7.7005
2016	0.0424	0.1345	0.1005	0.7382	5.2012	0.4448	7.8603
2017	0.0615	0.1340	0.0700	0.3031	0.5951	0.6703	8.0831

The profitability of Unilever Nigeria Plc was proxy using the return on asset. The Table 1 above revealed that the firm at the beginning of the period earned 0.1716 or 17.16% as its return on assets in the year 2000. This later increased to 31.92% in 2001 while recording the highest increase during the period in the same year. The return on asset of the firm declined such that in 2006, the return on asset of the firm stood at -0.0738 or -7.38% while increasing again to 0.1729 or 17.29% in 2009. The ending period return on an asset in 2017 stood at 0.0615 or 6.15%. The retained earnings to asset ratio of the firm recorded varying degrees of increment and declines during the period under study. The highest value of retained earnings to asset ratio of 0.5786 or 57.86% was recorded at



the beginning of the period, the year 2000 while recording the lowest retained earnings to asset ratio of 0.1083 or 10.83% in 2006. However, the retained earnings to asset ratio of Unilever Nigeria Plc increased afterwards to 0.2646 or 26.46% in 2009 while ending the period at 0.1340 or 13.4% in 2017.

**Table-2.** Data for Cadbury Nigeria Plc (2000-2017).

YEAR	ROA	REA	LDA	SDA	DER	AGR	SIZ
2000	0.1578	0.3376	0.0638	0.5473	1.5712	0.3067	6.8288
2001	0.1633	0.2770	0.2804	0.3918	2.0508	0.4972	7.0040
2002	0.1793	0.3134	0.0403	0.4125	0.8274	0.2430	7.0985
2003	0.1495	0.2894	0.0331	0.5079	1.1790	0.4317	7.2543
2004	0.1348	0.3072	0.0521	0.4947	1.2064	0.1620	7.3196
2005	0.0845	0.2437	0.2162	0.4449	1.9504	0.5363	7.5060
2006	-0.1573	-0.3893	0.1140	0.8123	12.5652	-0.0749	7.4722
2007	-0.0299	-0.5052	0.1255	0.8731	696.3355	-0.1814	7.3853
2008	-0.1076	-0.6293	0.1562	0.9698	-8.9333	-0.0157	7.3784
2009	-0.0490	-0.3584	0.1414	0.3570	0.9934	0.0563	7.4022
2010	0.0412	-0.1252	0.1569	0.3862	1.1883	0.1220	7.4522
2011	0.1091	0.0039	0.0948	0.4123	1.0288	0.1882	7.5271
2012	0.0860	0.0875	0.0800	0.4210	1.0039	0.1931	7.6038
2013	0.1395	0.1717	0.1110	0.3332	0.7992	0.0751	7.6352
2014	0.0525	0.2377	0.1123	0.4872	1.4970	-0.3324	7.4597
2015	0.0406	0.2677	0.1577	0.4100	1.3131	-0.0140	7.4536
2016	-0.0104	0.2241	0.1590	0.4518	1.5694	-0.0003	7.4535
2017	0.0106	0.2479	0.1460	0.4408	1.4205	0.0005	7.4537

Table 2 above indicated that Cadbury Nigeria Plc had a negative return on asset ratio from the year 2006 to year 2009 implying that the firm did not do well during this period. The firm at the beginning of the period earned 0.1578 or 15.78% return on the asset in the year 2000. This increased to 17.93% in 2002 while recording the highest decline of -0.0104 during the period in the year 2016. Cadbury Plc had negative retained earnings to asset ratio from the year 2006 -2010. This implied that the firm did not do well in those years. The firm at the beginning of the period had retained earnings to asset ratio of 0.3376 or 33.76% in the year 2000 while at the end of the period in 2017, the retained earnings to asset ratio of the firm stood at 0.2479 or 24.79%.

**Table-3.** Data for PZ Cussons Nigeria Plc (2000-2017).

Year	ROA	LDA	SDA	REA	DER	AGR	SIZ
2000	0.0586	0.0969	0.2196	0.6484	0.4632	0.6937	7.2018
2001	0.0834	0.1132	0.2335	0.7177	0.3928	-0.0426	7.1829
2002	0.0884	0.1083	0.1395	0.6203	0.3294	0.2519	7.2805
2003	0.0875	0.0985	0.2395	0.5461	0.5107	0.2046	7.3613
2004	0.1096	0.0953	0.2846	0.5319	0.6124	0.3122	7.4794
2005	0.0980	0.0952	0.2408	0.5768	0.5059	0.0950	7.5188
2006	0.0853	0.0904	0.2216	0.4934	0.4535	0.2682	7.6219
2007	0.0844	0.0635	0.2616	0.4950	0.4815	0.0816	7.6560
2008	0.0869	0.0708	0.2800	0.4811	0.5405	0.1128	7.7024
2009	0.0971	0.0799	0.2722	0.4936	0.5435	0.0893	7.7395
2010	0.0947	0.0847	0.2589	0.5128	0.5234	0.0742	7.7706
2011	0.0827	0.0860	0.3163	0.4748	0.6732	0.1689	7.8384
2012	0.0394	0.0665	0.2679	0.4979	0.5262	-0.0656	7.8089
2013	0.0736	0.0617	0.2960	0.4876	0.5862	0.1225	7.8591
2014	0.0716	0.0631	0.3375	0.4469	0.6373	-0.0184	7.8510
2015	0.0678	0.0948	0.2903	0.4834	0.6263	-0.0504	7.8286
2016	0.0286	0.0528	0.3640	0.4304	0.7149	0.1045	7.8717
2017	0.0409	0.0287	0.4703	0.3709	0.9958	0.2104	7.9547

From Table 3 above, the firm at the beginning of the period earned 0.0586 or 5.86% return on an asset in the year 2000. This increased to 8.84% in 2002 while recording the highest increment of 0.1096 or 10.96% during the period in the year 2004. The firm ended the period in 2017 with return on asset of 0.0409 or 4.09%. The firm recorded the highest retained earnings to asset ratio of 0.7177 or 71.77% in the year 2001 and the lowest retained earnings to asset ratio of 0.3709 or 37.09% at the end of the period, 2017.

**Table-4.** Regression results of the model statistics on the effect retained earnings as a capital structure decision variable on ROA of Unilever Nigeria Plc.

Dependent Variable: ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.293716	0.548537	-2.358485	0.0379
REA	0.994231	0.216907	4.583665	0.0008
LDA	0.300096	0.709112	0.423200	0.6803
SDA	0.574662	0.167294	3.435036	0.0056
DER	-0.045515	0.015921	-2.858743	0.0156
AGR	0.042339	0.042808	0.989042	0.3439
SIZ	0.125460	0.057467	2.183175	0.0516
R-squared	0.833123	Mean dependent var		0.107217
Adjusted R-squared	0.742100	S.D. dependent var		0.082124
S.E. of regression	0.041706	Akaike info criterion		-3.231059
Sum squared resid	0.019133	Schwarz criterion		-2.884804
Log likelihood	36.07954	Hannan-Quinn criter.		-3.183315
F-statistic	9.152826	Durbin-Watson stat		2.790572
Prob.(F-statistic)	0.000951			

The estimated regression result is presented thus;

$$ROA = -1.29 + 0.99*REA + 0.30*LDA + 0.57*SDA - 0.05*DER + 0.04*AGR + 0.13*SIZ \dots \dots \text{Equation (4.1)}$$

Table 4 revealed that the explanatory variable (Retained earnings to asset ratio) proved to be a significant predictor of the Return on Asset of Unilever Nigeria Plc since their t-ratios calculated (4.5836) > t-ratios critical (2.201) at 5% level of significance. The estimation result also showed that the Retained earnings to asset ratio (REA) had a direct relationship with Return on Asset of Unilever Nigeria Plc which is in line with Perking Order theory. The positive coefficient of Retained earnings to asset ratio is 0.99. These suggest that 1 unit increase in Retained earnings to asset ratio will lead to an increase in Return on Asset of Unilever Nigeria Plc by 0.99, all things being equal.

Finally, by having positively signed constant value, the result revealed that at zero performance of the explanatory variables in equation 4.1, Return on Asset of Unilever Nigeria Plc recorded a value of -1.29 units.

#### 4.2. Test of Hypothesis for Unilever PIC

H<sub>01</sub>: Retained earnings to asset ratio do not affect significantly return of an asset of Quoted Consumer Goods firms of Unilever PIC, Nigeria.

In order to confirm the specification status of our model 4.2, we employed the analysis of variance (ANOVA).

##### 4.2.1. Decision Rule

The F – ratio calculated (9.15) > F – ratio critical (3.10), at 5% level of significance, we reject H<sub>01</sub> and conclude that equation 4.1 is significant at 5% level of significance (See table 4 above).

4.2.2. Coefficient of Determinations (R<sup>2</sup>) for the Model on the Effect of Retained Earnings as a Capital Structure Decision Variable on ROA of Unilever Nigeria Plc.

The values of the coefficient of determination and adjusted coefficient of determination for equation 4.1 above (Retained Earnings to Asset Ratio as a Capital Structure decision variable and ROA of Unilever) are 0.833 and 0.742 respectively Table 4 above. From the results, the variation in explanatory variables in the equation 4.1 explained about 83.3% of the total variation or changes in Return on Asset of Unilever Nigeria Plc Also, the adjusted coefficient of determination (Adjusted R<sup>2</sup>), 0.742 indicated that explanatory variables in equation 4.1 explained about 74.2% of the total variation or changes in Return on Asset of Unilever Nigeria Plc for the period 2000 to 2017 after taking cognizance of the degrees of freedom.

**Table-5.** Regression Results of the Model Statistics on the effect Retained Earnings as a Capital Structure Decision Variable on ROA of Cadbury Nigeria PIC.

Dependent Variable: ROA				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.647704	0.535828	1.208790	0.2521
REA	0.140559	0.060137	2.337318	0.0394
LDA	-0.359717	0.195630	-1.838757	0.0931
SDA	-0.173512	0.102731	-1.688992	0.1193
DER	0.000156	8.34E-05	1.868929	0.0885
AGR	0.151365	0.064790	2.336232	0.0394
SIZ	-0.066734	0.068945	-0.967926	0.3539
R-squared	0.844872	Mean dependent var		0.055250
Adjusted R-squared	0.760257	S.D. dependent var		0.097356
S.E. of regression	0.047669	Akaike info criterion		-2.963770
Sum squared resid	0.024996	Schwarz criterion		-2.617515
Log likelihood	33.67393	Hannan-Quinn criter.		-2.916026
F-statistic	9.984874	Durbin-Watson stat		1.577496
Prob. (F-statistic)	0.000651			

The estimated regression result is presented thus;

$$ROA = 0.65 + 0.14*REA - 0.36*LDA - 0.17*SDA + 0.00*DER + 0.15*AGR - 0.07*SIZ \dots \text{Equation (4.2)}$$

Table 5 above revealed that the explanatory variable (Retained earnings to asset ratio) proved to be a significant predictor of the Return on Asset of Cadbury Nigeria Plc since their t-ratios calculated (2.3373) > t-ratios critical (2.201) at 5% level of significance. The estimation result also showed that the Retained earnings to asset ratio (REA) had a direct relationship with Return on Asset of Cadbury Nigeria Plc which is in line with Perking Order theory. The positive coefficient of Retained earnings to asset ratio is 0.14. These suggest that 1 unit increase in Retained earnings to asset ratio will lead to an increase in Return on Asset of Cadbury Nigeria Plc by 0.14, all things being equal.

Finally, by having positively signed constant value, the result revealed that at zero performance of the explanatory variables in equation 4.2, Return on Asset of Cadbury Nigeria Plc recorded a value of 0.65 units.

#### 4.3. Test of Hypothesis for Cadbury Nigeria PIC

H<sub>01</sub>: Retained earnings to asset ratio do not affect significantly return of an asset of Quoted Consumer Goods firms of Cadbury PIC, Nigeria.

In order to confirm the specification status of our model 4.2, we employed the analysis of variance (ANOVA).

##### 4.3.1. Decision Rule

The F – ratio calculated (9.98) > F – ratio critical (3.10), at 5% level of significance, we reject H<sub>0</sub> and conclude that equation 4.2 is significant at 5% level of significant. (See table 5).

4.3.2. Coefficient of Determinations (R<sup>2</sup>) for the Model on the Effect of Retained Earnings as a Capital Structure Decision Variable on ROA of Cadbury Nigeria Plc.

The values of the coefficient of determination and adjusted coefficient of determination for equation 4.2 above (Retained Earnings to Asset Ratio as a Capital Structure decision variable and ROA of Cadbury Nigeria Plc.) are 0.845 and 0.760 respectively (Table 5 above). From the results, the variation in explanatory variables in equation 4.2 explained about 84.5% of the total variation or changes in Return on The asset of Cadbury Nigeria Plc Also, adjusted coefficient of determination (Adjusted R<sup>2</sup>), 0.760 indicated that the explanatory variables in equation 4.2 explained about 76.0% of the total variation or changes in Return on Asset of Cadbury Nigeria Plc for the period 2000 to 2017 after taking cognizance of the degrees of freedom.

**Table-6.** Regression Results of the Model Statistics on the effect Retained Earnings as a Capital Structure Decision Variable on ROA of PZ Cussons Nigeria Plc.

Dependent Variable: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.342889	0.580929	0.590243	0.5670
REA	-0.245357	0.204761	-1.198258	0.2560
LDA	1.032732	0.592849	1.741982	0.1094
SDA	0.191199	0.451504	0.423472	0.6801
DER	-0.121878	0.203031	-0.600294	0.5605
AGR	0.000933	0.044039	0.021182	0.9835
SIZ	-0.027133	0.064419	-0.421195	0.6817
R-squared	0.468136	Mean dependent var		0.076583
Adjusted R-squared	0.178028	S.D. dependent var		0.022065
S.E. of regression	0.020005	Akaike info criterion		-4.700394
Sum squared resid.	0.004402	Schwarz criterion		-4.354138
Log likelihood	49.30355	Hannan-Quinn criter.		-4.652650
F-statistic	1.613661	Durbin-Watson stat		1.646124
Prob. (F-statistic)	0.232545			

The estimated regression result is presented thus;

$$\text{ROA} = 0.34 - 0.25*\text{REA} + 1.03*\text{LDA} + 0.19*\text{SDA} - 0.12*\text{DER} + 0.00*\text{AGR} - 0.03*\text{SIZ} \dots \dots \text{Equation (4.3)}$$

Table 6 revealed that the explanatory variable (Retained earnings to asset ratio) proved to be an insignificant predictor of the Return on Asset of PZ Cussons Nigeria Plc since their t-ratios calculated (1.198) < t-ratios critical (2.201) at 5% level of significance. The estimation the result also showed that the Retained earnings to asset ratio (REA) had an indirect relationship with Return on Asset of PZ Cussons Nigeria Plc which contradicts with Perking Order theory. The negative coefficient of Retained earnings to asset ratio is -0.25. These suggest that 1unit increase in Retained earnings to asset ratio will lead to a decrease in Return on Asset of PZ Cussons Nigeria Plc by 0.25, all things being equal.

Finally, by having positively signed constant value, the result revealed that at zero performance of the explanatory variables in equation 4.3, Return on Asset of PZ Cussons Nigeria Plc recorded a value of = 0.34 unit.

#### 4.4. Test of Hypothesis for PZ Cussons Nigeria Plc

H<sub>01</sub>: Retained earnings to asset ratio do not affect significantly return of an asset of Quoted Consumer Goods firms of PZ Cussons Plc, Nigeria.

In order to confirm the specification status of our model 4.3, we employed the analysis of variance (ANOVA).

##### 4.4.1. Decision Rule

The F – ratio calculated (1.61) < F – ratio critical (3.10), at 5% level of significance, we accept H<sub>0</sub> and conclude that equation 4.3 is insignificant at 5% level of significance (See table 6 above).

##### 4.4.2. Coefficient of Determinations (R<sup>2</sup>) for the Model on the Effect of Retained Earnings as a Capital Structure Decision Variable on ROA of PZ Cussons Nigeria Plc

The values of the coefficient of determination and adjusted coefficient of determination for equation 4.3 above (Retained Earnings to Asset Ratio as a Capital Structure decision variable and ROA of Cadbury) are 0.468 and 0.178 respectively (Table 6 above). From the results, the variation in explanatory variables in equation 4.3 explained about 46.8% of the total variation or changes in Return on Asset of PZ Cussons Nigeria Plc Also, adjusted coefficient of determination (Adjusted R<sup>2</sup>), 0.178 indicated that the explanatory variables in equation 4.3 explained about 17.8% of the total variation or changes in Return on Asset of Cadbury Nigeria Plc for the period 2000 to 2017 after taking cognizance of the degrees of freedom.

#### 4.5. Interpretation and Discussion of Results

The Retained earnings to asset ratio proved to be a significant predictor of the Return on Asset of Unilever Nigeria Plc at a 5% level of significance. The estimation result also showed that the Retained earnings to asset ratio (REA) had a positive relationship with Return on Asset of Unilever Nigeria Plc which supports with Perking Order theory. This finding also contradicts the study of Mwangi et al. (2016) that supported an insignificant negative relationship between retained earnings to asset ratio and profitability. The F-test showed that equation 4.1 is significant at 5% level of significance (see Table 4). The adjusted coefficient of determination (Adjusted R<sup>2</sup> = 0.742) indicated that the explanatory variables in equation 4.1 explained about 74.2% of the total variation or changes in Return on Asset of Unilever Nigeria Plc for the period 2000 to 2017 after taking cognizance of the degrees of freedom.

Table regression results in table 5 revealed that Retained earnings to asset ratio proved to be a significant predictor of the Return on Asset of Cadbury Nigeria Plc. The estimation result also showed that the Retained earnings to asset ratio (REA) had a direct relationship with Return on Asset of Cadbury Nigeria Plc which is in line with Perking Order theory. The F-test revealed that at a 5% level of significance, equation 4.2 is significant at 5% level of significance. (See Table 5). The adjusted coefficient of determination (Adjusted R<sup>2</sup> = 0.760) for equation 4.2 revealed the variation in explanatory in equation 4.2 explained about 76.0% of the total variation or changes in Return on Asset of Cadbury Nigeria Plc. This result revealed that Cadbury Nigerian Plc is basically using its Retained Earning to finance its.

Also, the regression result revealed that Retained earnings to asset ratio proved to be an insignificant predictor of the Return on Asset of PZ Cussons Nigeria Plc at 5% level of significance. The estimation result also showed that the Retained earnings to asset ratio (REA) had an indirect relationship with Return on Asset of PZ Cussons Nigeria Plc which contradicts Perking Order theory. This showed that the capital structure decision adopted by Unilever Nigeria Plc and Cadbury Nigeria Plc is Perking order theory.

## 5. CONCLUSION RECOMMENDATIONS AND FUTURE RESEARCH

### 5.1. Conclusion

As mention earlier, the aim of the study is to examine the effect of Capital Structure decisions variable (retained earnings to asset ratio) on profitability variable (return on asset) of Quoted Consumer Goods firms in Nigeria. Multi-stage sampling technique was adopted in choosing the Quoted firms that are classified into Consumer Goods. Secondary data sourced from the (websites of the Consumer Goods sub-sectors of the manufacturing sector, published annual reports) was analyzed using Ordinary Least Square Regression method to analyze the effect of capital structure decisions on profitability of selected consumer goods firms listed in the Nigerian Stock Exchange.

On the basis of the findings, the study concluded that the retained earnings to asset ratio exerts significant positive influence on return on asset of Unilever Nigeria Plc and Cadbury Nigeria Plc at a 5% level of significance. The estimation result also showed that the retained earnings to asset ratio (REA) had direct influence on return on asset of quoted consumer goods firms in Nigeria. The finding of this study is in conformity with the findings of Muhammad et al. (2014) which showed that capital structure variable (debt to equity) exerts positive

influence on firm performance (gross profit margin, net profit margin) in Pakistan. The result differ slightly with the findings of Ebaid (2009) which revealed that Capital Structure Choice (short-term, long-term and total debt) exerts strong negative influence on firm Profitability (gross profit margin, return on asset, return on equity) in Quoted firms in Egypt.

### 5.2. Recommendations

Following these findings and conclusions, the study, therefore, offers some recommendations thus:

- i. For the real growth of the company, financial managers and firms' stakeholders of quoted consumer goods are advised to use more of internal funds (retained earnings) to finance operations.
- ii. The firms' managers should continuously study the market trend and advice stakeholders on the appropriateness of the proportions of long-term debt to be used during capital structure decisions to avoid the adverse effect financial distress.
- iii. The debt-equity ratio of quoted consumer goods firms in Nigeria should be mixed in the right proportion by the managers to strike a balance between tax benefits and bankruptcy cost.
- iv. The capital structure should be planned by keeping in mind the interest of the equity shareholders and financial requirements of the company.

### 5.3. Future Research

This research work was limited to the effect of capital structure decisions on profitability of three selected Quoted Consumer Goods firms (Unilever Nigeria Plc, Cadbury Nigeria Plc and PZ Cussons Nigeria Plc) in Nigeria using key variables capable of influencing capital structure decisions such as retained earnings to asset ratio, long-term debt to asset ratio, short-term debt to asset ratio, debt to equity ratio, asset growth and asset size as explanatory and moderating variables covering the period 2000 to 2017. The study covers the period of eighteen (18) years from 2000 to 2017 respectively; the period is adequate to produce reliable empirical results. The theoretical scope of the work is built on Trade-off Theory and Pecking order theory. This study is limited to only three (3) Consumer Goods firms listed in the Nigerian Stock Exchange that has maintained their corporate identity and had complete financial records for the period 2000-2017. Financial statements data from three (3) firms (Unilever Nigeria Plc, Cadbury Nigeria Plc and PZ Cussons Nigeria Plc) was used for the analysis and models development. Researchers are advised to explore study from another angle to generate new insight as well as contributing to existing knowledge.

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