
**CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF LISTED
CONSUMER GOODS FIRMS IN NIGERIA****ABDULLAHI**, Sadiq RabiDepartment Of Accounting, Faculty of Management Sciences
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karimdele5232@gmail.com**ABSTRACT**

This study evaluated effect of capital structure on financial performance of listed consumer goods companies in Nigeria within the period of 2017-2021. The population of the study comprised all consumer goods firms listed on the Nigerian Exchange Group (NGX) from 2017-2021. The study used secondary data extracted from the annual reports of the various firms surveyed in the study. The Ordinary Least Square (OLS) regression technique was used to analyze the data. The study found that LTDTA and STDTA have positive and negative significant effect on financial performance of consumer goods firms in Nigeria respectively. Based on the findings, the study recommends that listed consumer goods firms should increase their use of LTDTA as this will lead to increase in their level of performance. The firms should also employ the use of a reasonable level of short term debt in their capital structure to the level that will not affect their performance negatively.

Keywords: Capital structure, consumer goods firms, financial performance, return-on-asset

INTRODUCTION

Financial decisions are among the most important issues for business owners as they directly affect the capital structure and success of a company (Olusola et al., 2022). Capital structure is a combination of borrowed money and shareholders' equity, which make up the total capital of a corporate organizations, the perfect blend of internal and external sources of capital to accommodate is a careful choice of corporate management. When it comes to factors that affect a firm's performance, decision-making is very critical, managers need to be extra careful and pay adequate attention when making capital structure decisions. As far as the company's financial position is concerned, capital structure reflects overall health in all types of assets and liabilities held (Boshnak, 2022).

A company's financial structure also usually comprise common stock, preferred stock, and long-term debt. Corporate financing has over the years attracted public interest because it is a tool for socio-economic development and effective corporate management practice. Reduced corporate bankruptcy, satisfactory corporate structure management not only improve operations of firms, it also impact the capital market, and enable economic growth and development. No matter how robust a nation's macroeconomic policies are, if firms are poorly managed, macroeconomic goals may not be achieved (Nenu et al., 2018).

Several factors are considered when choosing the best capital structure. When different sources of funding are combined, it may be difficult for a company to achieve its goal of using funds wisely. Companies must organize their financial structure so as to optimize capital use in running operations (Pandy, 2014).

Nigeria's financial decision-making laws are always not accountable to stakeholders and lack deep-rooted mechanism, such as ownership concentration, institutional investors and board composition, which can be used to maintain a balance between key players in corporate governance, influencing the company's financial decisions and reducing its effectiveness. The key elements in the system are shareholders, institutional investors and board members. When implementing a capital structure, the market structure and the company's strengths and weaknesses together, determine the choice of debt (Yinusa et al., 2019).

Jensen and Meckling (1976) believe that the relationship between the board and management should be characterized by transparency and fairness to shareholders. Extensive review of prior literature show that many researcher in Nigeria focus mainly on the impact of corporate governance on financial performance or investigating the impact of firm attributes on corporate performance (Haruna et al., 2019; Shuaibu et al., 2019; Ogunsanwo, 2019; Olayiwola, 2018; Abubakar et al., 2018). With little focus on effect of capital structure on performance of manufacturing companies on the Nigerian Exchange (Ayange et al., 2021; Yinusa, et al., 2019; John, 2013).

Therefore, the current study aims to assess the dynamic effect of capital structure on financial performance of listed manufacturing companies in Nigeria. The specific objective of the study was to examine extent to which long term debt to total assets, long term debt to equity, and long term debt to capital employed influence financial performance of listed consumer goods firms in Nigeria.

LITERATURE REVIEW

Concept of Firm Performance

The word performance is a concept of two levels, such as efficiency and effectiveness. While efficiency is the proportion between input and output, effectiveness is the extent to which goals are achieved. According to motivation theory in management science, performance is interpreted as a extent of work completed by an employee (Usman, 2019).

Dahiru et al. (2016) aver that performance is the strategic outcome a company uses in achieving its objectives. Efficiency is the major concern of any corporate management or entrepreneur. A company's performance is the extent to which a firm is able to achieve its strategic objectives, as well as an indicator for the assessment of overall competitiveness. When properly evaluated, a company's performance give corporate management an idea of current financial and non-financial conditions (Usman, 2019).

Olusola et al. (2022) defines financial performance as firms' ability to maximize earnings from available assets and resources. The term can also be used to mean the general measurement of an organization's overall financial strength over a given period of time. Financial performance examines how effective and efficient an organization can meet its profit maximization objective and manage its assets, liabilities and financial interests of shareholders. Accordingly profitability-based accounting indicators such as return on assets (ROA) and return on equity (ROE) have been used by several scholars measures of financial performance (Olusola et al., 2022).

Concept of Capital Structure

Capital structure is one of the most important decisions in the field of corporate finance and can be seen as the way an organization finances its assets by combining debts and equity (Dinh, & Pham, 2020). Capital structure is also defined as the way an organization finances its operations through debts, equity and hybrid securities (Dinh & Pham, 2020).

A company's operations and investments can be financed through the ever-increasing demand of internal and external investors. As organizations raise finance through the issuance of debt securities, the claims of creditors increase, while the claims of shareholders increase through the issuance of equity securities (Olusola, et al., 2022). Capital structure involves the proportion of various long-term sources of financing, as it deals with making the collection of the sources of finance properly in relation to its size and proportion.

The capital structure of a firm consists debt and equity capital used to finance its assets. It is also the capital source of an organization in the form of preference share, long-term debt, and retained earnings. Hence, it has to deal with the arrangement of capital and minus short term borrowings. In proprietary business unit, the capital employed is exclusively supplied by its owners (Nguyen, & Nguyen, 2020; Olusola, et al., 2022). In this study, capital structure refers to the total amount of funds supplied by both owners and long-term creditors. Hence, debt financing and equity financing are discussed as components of capital structure.

Debt financing

Debt is an important item in the financial structure of a company and it provides an avenue for corporate financing as companies borrow fund in order to obtain the capital they need for corporate investments. It involves any form of agreement or contract between a creditor and a debtor. The main attribute of long term financing is that the principal amount, including the interest, must be repaid to the creditors over a given period of time (Modugu, 2013).

Equity financing

Equity enables an organization to obtain capital without incurring debt. This suggests that the capital obtained through equity financing do not have to be repaid within a stipulate time frame. Investors purchase shares in an organization with the expectation of gaining future earnings in the form of wealth maximization. However, if the company makes a loss, the investors have limited liability, which suggests that they only loss the main amount that they had invested in the company (Modugu, 2013).

Review of Empirical Studies

Studies on capital structure and financial performance report mixed findings. This may be due difference in the country of study, domain in which the study were conducted and the methodology used. This study reviewed related literature on effect of capital structure and financial performance.

Olusola et al. (2022) assessed the effect of capital structure on firms' performance in Hong Kong. A panel data model was adopted by the study. ROA was used to measure performance, while capital structure was proxied by Total Debts Ratio (TDR). The study used 202 sample size covering the period of 2014 to 2018. The study established that TDR has positive significant influence on performance of listed firms in Hong Kong.

Usman (2019) on the other hand, evaluated effect of capital structure on financial performance of consumer goods firms in Nigeria. The study surveyed 6 listed consumer goods firms for the period of 2012-2016. The study used ROA to proxy financial performance while capital structure was represented by long term debt (LTD), short term debt (STD) and ROE. Multiple regression analysis technique was used for data analysis. The study found that STD LTD have no significant impact on financial performance of listed consumer goods firms in Nigeria. However, ROE was found to have significant impact on financial performance of the firms studied.

Nguyen and Nguyen, (2020) in their study assessed effect of capital structure on firm performance in state-owned and non-state owned companies listed on the Vietnamese stock market. A panel data was used, with a sample size of 488 non-financial firms covering the period from 2013 to 2018. ROE and earnings per share (EPS) were used to proxy performance; while ratios of short-term liabilities, long-term liabilities, and total liabilities to total assets were used to proxy capital structure. Firm sizes, growth rate, liquidity, and ratio of fixed assets to total assets are control variables in the study. The study used Generalized Least Square (GLS) analysis technique to analyze data. The results reveal that capital structure has significant negative effect on firm performance.

In other studies, Zeitun and Tian (2007) examined effect of capital structure on firms' performance and found that firms' capital structure in terms of short-term debt to total assets (STDTA) has significant positive influence on performance. Igwe et al. (2017) reported that capital structure has significant effect on performance of agro-allied companies listed on the Nigerian Exchange Group (NGX); while Salim and Yadav (2012) showed that firm performance in terms of ROA, ROE, and EPS have negative

relationship with STD, LTD and total debt (TD).

Also, Mouna et al. (2017) studied effect of capital structure on performance of firms in Morocco; and debt ratio (DR) has negative but significant effect on ROA, debt equity ratio (DER) has negative significant impact on ROE, and that size has positive significant impact on performance. Akeem et al. (2014) assessed effect of capital structure on performance of manufacturing companies in Nigeria and reported that that total debt and debt to equity ratio have negative but significant effect on performance of listed manufacturing firms in Nigeria.

Theoretical Framework

Over the years, many theories have been developed and used by several researchers in the study of capital structure (Akeem, et al., 2014; Igwe, et al., 2017; Mouna et al., 2017; Nguyen, & Nguyen, 2020; Salim, & Yadav, 2012; Zeitun, R., & Tian, 2007). However, this study adopts pecking order theory, trade-off theory and agency theory.

Pecking order theory (Donaldson, 1961) and is among the most influential theories that seek to explain capital structure of firms. The theory opposes the idea of possessing unique combination of debt and equity finance reduces the firm's cost of capital. The theory propose that when an organization is seeking to finance its long-term assets or investments, it should have a well-defined order of preference with respect to the sources of capital it will use. It suggests that a company's first preference should be the utilization of internal source of funds (i.e. retained earnings), before debt and then external equity. It posits that the more profitable a company becomes, the less likely it borrows because it will have adequate internal earnings to fund investment plans (Akeem, et al.2014).

According to Nguyen and Nguyen (2020) pecking order theory explains financing decisions of corporate managers. Given the need for finance, corporations put an order of preference for their sources: they first use internal source before considering debts security, and then, equity source. This activities result to information asymmetry between firms' shareholders and external creditors. While shareholders are fully informed about the company's financial situation, external creditors are not fully aware, and this makes creditors doubtful about the transparency and fairness of information disclosed by the firm's management. Hence, firms usually incur higher costs for external sources of finance. The pecking order theory therefore, conclude that highly profitable companies with large earnings are most likely to employ lesser loan capital and more of internal funds than low profitable firms (Olusola, et al., 2022).

Trade-off theory argues that there is an optimal structure that maximizes firm's value. Hence, corporate executives will set a target leverage ratio and then gradually move towards it. According to Modugu (2013) organizations select a target leverage ratios based on a trade-off between benefits and costs of increased leverage. As stated by Nguyen and Nguyen (2020), in order to complete the theory of Modigliani and Miller (1963), a number of prior studies have included financial distress and agency costs.

Kraus and Litzenberger (1973) and Jensen and Meckling, (1976) address trade-off theory by adding that the market value of an organization with debt equal to the value of the organization without debt plus the value of tax shield minus the current value of bankruptcy costs. This suggests that the benefits of tax shield gained as a result of debts will be offset against losses in case of bankruptcy. In summary, the trade-off theory posits that there exists an optimal financial structure for organizations, in which the benefit of tax shield best pay off for the losses from debts, such as financial distress and agency costs.

The agency theory (Jensen & Meckling, 1976) was developed on the basis of conflict of interest between agents and owners of a firm. The use of debt equity in a firm's financial structure can also lead to agency costs as a result of conflict of interest between managers, shareholders and creditors. As stated by Jensen and Meckling, (1976), conflict of interest can occur either between principals and creditors (agency cost of debt) or between principals and corporate executives (agency cost of equity) (Modugu, 2013).

According to Iavorskyi, (2013) the agency cost of debt issue is developed from the difference that exist between principal and creditors. Principals take more risks and request for higher returns on investment, whereas creditors take lesser risk and accept lower returns on investment. Therefore, principals may want to take projects with higher risk than creditors would want to. In the event of success, corporate shareholders will gain more earnings, while in the event of failure all losses will be between creditors and shareholders (Jensen, & Meckling, 1976).

The “me-first syndrome” of corporate shareholders calls for monitoring of actions of shareholders by creditors. Agency theory among other things, has revealed that notwithstanding who undertakes the monitoring, the cost is borne by shareholders (Akintoye, 2008). Akintoye, (2008) further states that agency costs can also be incurred from the conflicts of interest between creditors and shareholders. These conflicts of interests occur when there is a risk of default, which may result to “under investment” or “debt overhang” issues. Whereas the agency costs of outside equity support a positive relationship between firm performance and leverage, the agency costs of outside debt leads to a negative effect; as leverage companies are more likely to pass up profitable investment opportunities or shift riskier operating strategies.

METHODOLOGY

This study used the correlational research design to evaluate the relationship between the capital structure and financial performance. The correlational research design is adopted because of its strength to allow for examination of variables without manipulation. The population of the study consist consumer goods firms listed on the Nigerian Exchange (NGX) from the period of 2017-2021 and are still on the Exchange as at 1st of December 2021. The adjusted population comprised of 19 companies listed on the floor of the NGX while other firms in this sector were filtered out due to inability of the researchers to access their financial reports. Also, as at the time of the study, secondary data were obtained from the annual reports of the companies under investigation within the period of the study were used.

Table 1: Variable Measurement

Variable	Measurement	Source
ROA	Return on assets is measured using net income divided by total assets.	(Orbaningsih, 2022).
Independent Variables		
short-term debt to total assets	Short-term debt to total assets is measured by short term debts/total assets	(Zeitun, & Tian, 2007).
Long term debt to total assets	Long term debt to total assets is measured using long term debt / total assets	(Olusola, et al. 2022).
Total debt to total equity	Total debt to equity is measured using total debt/ Equity	(Al-Taani, 2013)
Control Variable		
Firm Size	Firm size is measured as the natural log of total assets	(Salim, & Yadav, 2012; Terkende, & Karim, 2022).

Source: Researchers’ Compilation, 2023

Model Specification

The variables incorporated into the model of the study include: Long term debt to total assets, total debt to equity and short-term debts to total assets on firm performance of listed consumer goods firms in Nigeria. Therefore, the multiple linear regression function is built for the model as follows:

$$CS = f (LTDTA, STDTA \text{ and } TDE)$$

$$FP = F (ROA)$$

Using multiple regression analysis, this is expressed further as:

$$ROA_{it} = \beta_0 + \beta_1LTDTA_{it} + \beta_2TDE_{it} + \beta_3STDTA_{it} + \beta_4FSIZE_{it} + \epsilon_{it}.....(i)$$

Where: ROA = Return on Assets

LTDTA = Long term debt to total assets

TDE = Total debt to total equity

STDTA = Short term debt to total assets

FSIZE = Firm size

β_0 = Intercept

β_1 to β_4 = Coefficients of the Independent variable

i = Industries

t = Time

e = Error term.

RESULT AND DISCUSSION

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev	Min	Max
ROA	90	0.038	0.811	-4.206	6.174
LTDTA	90	0.244	0.466	0.001	2.696
TDE	90	2.265	5.177	0.002	47.923
STDTA	90	1.427	4.457	0.006	34.243
FSIZE	90	10.468	0.990	7.758	11.684

Source: Stata output, 2023

Table 2 shows the descriptive statistics of the dependent variable and all the explanatory variables of the study. The number of observations for the study is 90. Performance which is proxy by ROA reflect a mean value of N0.038 with a standard deviation of N0.811. This means that on average ROA which measures the level of performance by listed consumer goods firms stood at N0.038. This indicates that for every naira investment made by listed consumer goods companies, there is an average of N0.038 returns on the investment during the period under study. The results indicate a high level dispersion from the mean value of ROA recorded within the period under review. And also the minimum and maximum values stood at -N4.206 and N6.174 respectively.

Additionally, the mean value in respect to the long term debt to total assets (LTDTA) of listed consumer goods firms in Nigeria stood at N0.244 with a standard deviation of N0.466. This result indicates a high level of deviation from the mean value of LTDTA recorded within the period of the study as the value of the standard deviation is greater than the mean value of LTDTA of the firms, while the minimum and maximum values stood at N0.001 and N2.696 respectively.

Also, the mean in respect to total debt to equity (TDE) of listed consumer goods firms stood at N2.265 with a standard deviation of N5.177. This result also indicates that there is a high deviation from the mean value recorded within the period of the study. The high level of deviation is further revealed by the minimum and maximum values which stood at N0.002 and N47.923 respectively.

Furthermore, the mean in respect to short term debt to total assets (STDTA) of listed consumer goods firms stood at N1.427 with a standard deviation of N4.457. This result indicates that there is a high deviation from the mean value recorded within the period of the study. The high level of deviation is further revealed by the minimum and maximum values which stood at N0.006 and N34.243 respectively.

Finally, the mean in respect to size of listed consumer goods firm stood at N10.468 and a deviation of N0.990. This means that on average, the total size of the firm under study during the period is N29,376,496,519. (i.e. taking the natural anti log of 10.468). From this figure it could be inferred that the firms under study are large once. This result also indicates is a low deviation from the mean value recorded within the period of the study. And the minimum and maximum values stood at N7.758 and N11.684 respectively.

Table 3: Correlation Matrix

Variables	ROA	STDTA	LTDTA	TDE	FSIZE
ROA	1.000				
STDTA	-0.286	1.000			
LTDTA	-0.064	0.798	1.000		
TDE	-0.009	-0.043	0.046	1.000	
FSIZE	0.0330	-0.554	-0.495	0.159	1.000

Source: Stata Output, 2023

The correlation matrix in Table 3 indicates that ROA has a negative relationship with STDTA, LTDTA and TDE of firms, with coefficients of -0.286, -0.064 and -0.009 respectively. This implies that the variables move in opposite direction with ROA, as increase in STDTA, LTDTA and TDE of firms under consideration, lead to decrease in their performance. However, ROA has a positive relationship with firm size as this variable move in the same direction with ROA. This further implies that with coefficient of 0.0330, increase in size will lead to a corresponding increase in performance of firms under study.

Table 3 also depicts the association of among the independent variables themselves. As stated by Gujarati (2004) correlation coefficient within two independent variables must not be above 0.80 which is considered excessive. Thus, from the table above, it could be seen that the correlation coefficients between the explanatory variables are all below 0.80 which shows that there is no multicollinearity between the independent variables.

Table 4: Multicollinearity Test

Variables	VIF	1/VIF
LTDTA	2.85	0.351
STDTA	3.04	0.328
TDE	1.05	0.949
FSIZE	1.51	0.664
Mean VIF	2.11	

Source: Stata Output, 2023

From Table 4, the tolerance and VIF were used as an advance measure to confirm the possible presence of multicollinearity among the independent variables of a study, in this study the variables were found to be concurrently less than 1 and 10 respectively which by implication signifies absence of harmful multicollinearity among the independent variables used (Gujarati, 2004).

Fixed and random effect tests were carried out and the result is shown in the appendix. Hausman test was carried out to find out the differences between the individual units. P-value that is significant which is an evidence that at the desire significance level, the models are different enough to allow rejection of null hypothesis and hence reject the random effect model so as to pick the fixed effect model. In this study, the hausman test result was insignificant which give room for the use of random effect instead of the fixed effect model.

Table 5: Summary of Random Effect Estimation

ROA	Coefficient	Z	P>Z
LTDTA	0.765	2.64	0.010
STDTA	-0.130	-4.16	0.000
TDE	-0.006	-0.37	0.715
FSIZE	-0.115	-1.16	0.250
CONS	1.253	1.18	0.240
R ²	0.173		
F-Stat	4.44		
P-Value>F-Stat.	0.003		
Hausman chi2	3.742		
P-Value>Chi2.	0.273		
LMTRE			
Chibar2	0.27		
P-value>Chibar2	0.000		

Source: STATA Output, 2023

***P<0.01, **P<0.05 and *P<0.1

Table 5 illustrates the coefficients, z-statistics and probability values of random effects Ordinary Least Square (OLS) regression outcome. The outcome reflects a value of 0.173 in respect to the coefficient of determination otherwise known as the R². The R² measures the total percentage change in the dependent variable (ROA) which will only be explained by the independent variables (LTDTA, STDTA and TDE). Thus, an R² value of 17.30% indicates that the independent variables of the study accounts for 17.30% of total variation in the dependent variable while the remaining 82.70% (i.e. 100-17.30) of variation could be explained by other factors not considered in the model.

Moreover, Wald chi² is 4.440 and its associated p-value is 0.003 and by implication is statistically significant at 1%. This small p-value less than 0.05 is small enough and also confirmed the fitness of the model for this study. It was also revealed from the table that the heteroskedasticity problem in the panel random model and the autocorrelation are corrected with OLS estimates.

$$ROA_{it} = 1.253 + 0.765LTDTA_{it} - 0.130STDTA_{it} - 0.006TDE_{it} - 0.115FSIZE_{it}$$

The regression result shows that LTDTA has a coefficient of 0.765, z value of 2.64 and a p-value of 0.010 which is statistically significant at 5%. This implies that there is a sufficient evidence that LTDTA has a relationship with ROA of consumer goods firms in Nigeria. This further means that a unit increase in LTDTA will lead to increase in ROA of consumer goods firms in Nigeria by approximately N0.77. This result is in line with the study of Akeem et al. (2014) and Nguyen and Nguyen, (2020) as these studies revealed that LTDTA has a significant relationship with performance of firms.

However, the findings of this study contradicts the work of Usman (2019) who discovered no relationship between LTDTA and performance of listed companies. Hence, on the basis of the above regression result the study reject the null hypothesis which states that LTDTA has no significant relationship with the performance of listed consumer goods firms in Nigeria. Also, the regression result revealed that STDTA has a negative but significant relationship with the performance of consumer goods firms as shown by the coefficient of -0.130, z value of -4.16 and a p-value of 0.000 which is statistically significant at 1%. By implication this means that there is enough evidence that STDTA has a relationship with financial performance (ROA) of consumer goods firms in Nigeria.

The results obtained further means a unit increase in STDTA it will lead to a corresponding decrease in performance (ROA) of consumer goods firms in Nigeria by approximately -N4.16 every other thing being equal. The results are in line with the findings of Nguyen and Nguyen (2020) and Zeitun and Tian (2007) that STDTA has significant relationship with performance of listed firms. Thus, on the basis of the above OLS result, the study reject the null hypothesis which states that there is no significant relationship between STDTA and performance of listed consumer goods firms in Nigeria.

Furthermore, the regression result shows that TDE has a coefficient of -0.006, a z value of -0.37 and p-value of 0.715 which is statistically insignificant. This shows that TDE is not a determinant of

performance of listed consumer goods firms in Nigeria. The finding is in line with the study of Akeem, et al., (2014) who found no significant relationship between TDE and firm performance. To this end, the study fails to reject the null hypothesis which states that TDE has no significant relationship with the performance of consumer goods firms in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study focused on the effect of capital structure on the performance of listed consumer goods firms in Nigeria. Therefore, the study used data extracted from the annual reports of the studied companies. The data collected were analyzed using the Ordinary Least Square (OLS) regression technique. The study used performance which is proxy by ROA as the dependent variable and LTDTA, STDTA and TDE as the independent variables of the study while firm size was used as a control variable.

Based on the findings, the study concluded that LTDTA and STDTA respectively have positive and negative significant effect on the performance of listed consumer goods firms in Nigeria. Which means that increase in LTDTA will lead to an increase in the performance of consumer goods firms in Nigeria while increase in STDTA will lead to a corresponding decrease in the level of performance by listed consumer goods companies in Nigeria. Also, TDE has a negative and insignificant effect on the performance of listed consumer goods firms in Nigeria.

Based on the above conclusion, the study recommends that listed consumer goods firms should increase their use of LTDTA as this will help increase their performance which will in turn enhance stakeholders' confidence in the management of the companies. Although, STDTA has a negative but significant effect on the performance of listed consumer goods firms, however listed consumer goods firms should employ a reasonable level of short term debt to their capital structure such that will not affect their performance negatively.

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