

EFFECT OF DEBT FINANCING ON FINANCIAL PERFORMANCE ON LISTED CONSUMER GOODS FIRMS IN NIGERIA

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Abstract: There has been yearning among academics, government, financial institutions regulators and global institutions as to whether debt influences the financial performance of an organization. Studies on the relationship between various financing decisions and performance have produced mixed results. This study examines the effect of Debt Financing on Performance of Consumer Goods Firms in Nigeria. The Trade-off theory was adopted. The study measured debt financing using the variables of long term debt financing (LTDF) and short term debt financing (STDF) while Firms Performance on the other hand was measured using Net Profit Margin (NPM). Consumer Goods Firms have a lot of assets. Net Profit Margin is the bellwether (leading indicator) of the overall financial well-being of a business. The firm size is important because the size of the firm will tell the ability to secure debt facility in the market. Two hypotheses were formulated to guide the investigation and the statistical test of parameter estimates was conducted using OLS Regression Model. The research design used is Ex Post Facto design and data for the study were obtained from the NSE Factbook, Annual Reports and Accounts. A descriptive design was used in the study and 15 listed Consumer Goods Firms were selected for a period of 10 years (2011 – 2020). A causal relationship between Short-term Debt and Long-term Debt ratio on financial performance was done. Subsequent findings obtained indicated that short-term debts and long-term debts were statistically significant determinants of financial performance, proxied by Net Profit Margin. Short-term debts were found to be weighing down performance in a way that is unsustainable, it is therefore, important that consumer goods firms look into ways of optimally utilizing short-term debt financing and channel them into viable and profitably investments. Additionally, consumer goods firms should increase their preference for long-term debts as a source of financing. This has been found to be beneficial for maintaining profitability.

Keywords: Net Profit Margin, Short term debt, Long term debt, financial performance, consumer goods.

Introduction

Financing choice is generally concerned with how companies use the mix of debt and equity for their funding needs (Zhang & Yu, 2016). This decision is concerned with the determination

of the optimal capital structure that an organisation should hold. The decision is important not only because of the need to maximize returns of the investor and owner equity, but also because of the impact such a decision has on an organization's ability to deal with its competitive environment (Alslehat, & Altahtamouni, 2014). The decision is important not only because of the need to maximize returns of the investor and owners' equity, but also the effect such a decision has on an organization's ability to deal with its competitive environment (Alslehat&Altahtamouni, 2014).Despitethe increaseof the debt-financing structure, there has been debate among academics and researchers, in the field of corporate finance, on optimal capital structures (Onyenwa& Glory, 2017).

The role played by consumer goods firms in the economy cannot be over emphasized. Their contribution to employment creation and poverty reduction has also been acknowledged by the Nigerian government at all levels (Otunba, 2019). Consumer goods firms occupy an important portion of the Nigerian manufacturing sector, making important contributions in the provision of products, as well as employment and increases in living standards (Otunba, 2019). However, to be able to meet business objectives and strategic targets, these firms may often need to rely on debt financing. Firms often seek external sources for funds they require for expansion, in financing new and existing projects. Debt capital is usually raised by a business enterprise by taking out loan. It, therefore refers to loan granted to an organization, regularly for increase capital, that is commonly repaid at a later date.In contrast to equity capital, debt owners cannot claim a stake in the business (Pandey, 2010) .In the use of debts for financing business activities, the specific structure of debt comes into play (Singh & Bansal, 2016). Here, debts can be short-term, having a maturity tenure of 12 months or less. Such debt is usually recorded as current liability in a firm's statement of financial position. However, debts can also be long-term, in which case a maturity periof of more than one year applies. Such form of debt includebonds and debentures.

The performance of business organizations, or the level of attainment of desired objectives, as an indicator of good health (Kale, 2014), emphasizes the importance of debt financing, especially in the midst of scarce resources and fierce competition. Almajaliet al. (2012) The business environment faced by most companies is usually chaotic, however, operating consumer good firms have exhibited ununiform behaviour, with some succeeding exceedingly, while several companiesexperiencing declining performance, and even being delisted from the Nigerian Exchange (NSE) market. A number of researchers such as Kibet et al. (2011) and Chebiit et al. (2011) have suggested that this phenomenon may not be unrelated to financing. The study, thus, carried out an empirical analysis of the effect of debt financing on financial performance of listed consumer goods firms in Nigeria.

Although a number of pertinent studies have been carried out, exploring the area of debt financing and performance, such as Oyakhire (2019), Nwude and Anyalechi (2018), Innocent et al. (2014), and Akingunolaet al. (2017), most of these studies use different performance proxies such as Return on Assets, Return on Equity and Tobin's Q. The current study digresses from this by measuring, as well as debt financing variables of short-term and long-term debts which other studies failed capture. Cosumer Goods Firms have a lot of assets. Net Profit Margin is

the bellwether of the overall financial well-being of a business. Net Profit Margin is a better yardstick for measuring the financial performance of a particular year. The firm size is important because the bigness of the firm will tell the ability to secure debt facility in the market. By doing this, the study provides a more specific analysis of the effect of debt financing on the financial performance of consumer goods firms in Nigeria, given that they are one of the biggest sector in Nigeria (Nifemi, 2018).

The main objective of this study is to examine the effect of debt financing on the financial performance of listed consumer goods firms in Nigeria .The specific objectives are to:

- i. examine the extent to which short-term debt affects the net profit margin of listed customer goods firms in Nigeria.
- ii. investigate the effect of long-term debt on the net profit margin of listed customer goods firms in Nigeria.

In solving the above research problem, the following questions are formulated for this study:

- i. To what extent does short-term debt affect the net profit margin of listed customer goods firms in Nigeria?
- ii. What is the effect of long-term debt on the net profit margin of listed customer goods firms in Nigeria?

To achieve the above objectives, the following hypotheses are formulated:

H₀₁: Short-time debt has no significant effect on the net profit margin of listed customer goods firms in Nigeria.

H₀₂: Long-term debt has no significant effect on the net profits margin of listed customer goods firms in Nigeria.

Literature Review

Debt Financing

Debt financing is the use of external funds to finance the activities of an organization in order to increase its profitability; it is the proportion of debt in the capital Structure (Racheal et al., 2017). External debt financing plays a crucial role to increase future productivity of firms and more importantly, for future growth (Gomis & Khatiwada, 2016). Debt financing is the use of fixed cost of assets or sources of fund to magnify returns accruing to the owners of a firm (Onyenwa & Glory, 2017). Companies must decide on whether debt should be in the form of leases, convertible loans, loan capital, financial organisation loans and overdraft, and notes and bills; should be short or long- term and whether debt should be secured, unsecured or subordinated. These debt characteristics are important dimensions of the capital. Cheong (2015) refers to debt financing as the borrowing of loans from other companies, banks, or financial institutions to support a business's operations. However, corporations that borrow large sums of money during a business recession are more likely to default to pay off their debts as they mature; they may end up with high leverage and are more likely to end up with a potential risk of (Onyenwa & Glory, 2017).

Attaining a satisfactory debt level is critical for any business, not only because of the need to achieve profitability and firm value, but also because it increases an organisation's ability to deal with its competitive environment and respond efficiently. Jay (2015) opines that the management of debt is very germane because the efficient use of debt in the capital structure of firm results in higher profitability.

Short-Term Debt

Short-term debt, also called current liabilities, is a firm's financial obligations that are expected to be paid off within a year. It is listed under the current liabilities portion of the total liabilities section of a company's statement of financial position. The traits of current debt determine its main use which is for daily operating expenses. Operating debt arises from the primary activities that are required to run a business, such as accounts payable, and is expected to be resolved within 365 days, or within the current operating cycle, of its accrual. This is in compliance with the matching concept of finance, that short-term or operating expenses be financed by short-term debts and vice-versa. This is referred to as short term debt and is usually made up of short-term bank loans, or commercial paper issued by a company. The value of the short-term debt account may, therefore, be very important when determining a company's performance.

The use of short-term debt financing is very common among businesses. This is because short-term debt tends to be less costly and increasing it with a relatively low interest rate will lead to an increase in profit levels and therefore, enhance overall performance (Muchugia, 2013). However, the continuous use of short-term debt financing can be problematic. Shubita and Alsawallah, (2012) argue that increase in short term debt finance is associated with lowering the firm profitability and they concluded that a significant negative relationship exists

Long Term Debt

Financing debt is normally considered to be long-term debt if it has a maturity date longer than one year. Such a debt type is usually listed after the current liabilities portion in the total liabilities section of the statement of financial position. It, however, becomes a short-term debt if it has a year or less for repayment. Long-term debt may appear from two perspectives: financial statement reporting by the issuer and financial investing. In financial statement reporting, companies must record long-term debt issuance and all its associated payment obligations on its financial statements. Contrary to current debt, the features of long-term debt determine its main use for investment purpose, so long-term debt can be transformed into profit through investment behaviour.

Long-term debt is typically used to finance business investments that have longer payback periods. Long term debt financing is advantageous as it is usually less prone to short term shocks as it is secured by formally established contractual terms. Hence, they are relatively more stable than short-term debt (Lancett, 2008). Long-term debt may allow firms to gain various benefits. It is likely to act as an effective mechanism in controlling managerial discretion.

Firms choose to issue long-term debt with various considerations, primarily focusing on the timeframe for repayment and interest to be paid. Investors invest in long-term debt for the benefits of interest payments and consider time to maturity as a liquidity risk. Overall, the lifetime obligations and valuations of long-term debt will be heavily dependent on market rate changes and whether a long-term debt issuance has fixed or floating rate interest terms.

Long term debt financing is directly linked to the growth of the company's operating capacity, it involves the purchase of capital assets such as machinery. Long-term debt financing is normally well structured and defined. Fosberg (2013) assert that one of the consequences of the disruption of the capital and lending markets caused by the financial crisis was to significantly increase the amount of long-term debt in firm capital structures.

Financial performance

Financial performance is the business outcomes and results achieved that help to depict the overall financial health of a business over a specific period of time. It is an indication of how well a business concern is using its resources to maximize the goal of its shareholders (Farah et al., 2016). Financial performance provides information to owners and other stakeholders to assist them make an informed decision about the organization. It suggests the ability to create profit or income for the owners. There are different ways to assessing the performance of a business concern in other to ascertain how they have fared as regards achieving the corporate's goals and objectives of the business. These measures could be qualitative or quantitative in nature.

However, the study used the quantitative approach, focusing on financial performance. Financial measures come in monetary terms, ratios or in percentages. Specifically, the Net Profit Margin was used to measure performance.

Net Profit Margin

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate profits relative to its sales, operating costs, statement of financial position assets, and shareholders' equity over time, using data from a specific point in time. They include gross profit margin, return on investment, return on assets, and net profit margin. The usefulness of these metrics is their general availability, since every profit-oriented organization produces these figures for their yearly financial reporting (Chenhall & Langfield-Smith, 2007). According to Pandey (2010) the best metric for measuring profitability is net profit margin, the ratio of profits to total revenues. It measures the overall profitability of the company, or how much is being brought to the bottom line. Strong gross profitability combined with weak net profitability may indicate a problem with indirect operating expenses or non-operating items, such as interest expense. It is crucial to consider the net margin ratio because a simple monetary (Naira) figure of profit is inadequate to assess the company's financial health. A larger net margin, especially as compared to industry peers, means a greater margin of financial safety, and indicates a company is in a better financial position to commit capital to growth and

expansion. The net profit margin is influenced by the efficiency of an organisation's management.

Empirical Review

Short-Term Debt and Financial Performance

Asian and Diette-Abayeh (2019) examined capital structure composition and financial performance of among listed Food and Beverage firms in Nigeria, through an analysis of primary data on the firms. Findings obtained indicated that short-term debt had negative, but significant effect on financial performance. In a similar study, Abeywardhana and Magoro (2017) analyzed panel data from 2011-2015 for listed companies operating in the wholesale and retail sectors of South Africa and Sri Lanka. The findings of the study revealed that short-term debt had significant negative effect on financial performance.

In another study, Akingunola et al. (2017), examining the effect of capital structure decisions on firm performance in Nigeria, analyzed panel data for 22 listed non-financial firms on the NSE for the period from 2011 to 2015. The findings revealed that short-term debt had significant negative on company performance.

Long-Term Debt and Financial Performance

Omollo et al. (2018), examined the effects of debt financing options on financial performance of firms listed at the Nairobi Securities Exchange. Panel data was analyzed for 40 non-financial firms listed on the Nairobi Securities Exchange for the periods of 2009 to 2015, using a Random Walk Model. Findings showed that long-term debt had negative and statistically significant effect on financial performance, measured by Returns on Assets.

Omete and Isabwa (2017) analysed the long term debt on financial performance of state-owned Sugar Firms in Kenya. Pearson product moment correlation was employed as the method of data analysis. The results revealed significant negative relationship between long term debt and financial performance.

Similarly, Muzeya (2017) carried out a study in Zimbabwe to determine the effect of debt finance on financial performance, with specific focus on using a firm, Telone Private limited. A multiple regression model was estimated using data collected from 20 employees of the company. Findings arrived at revealed that long-term debt funding had significantly and statistically negatively effecting on financial performance.

Theoretical Framework

Trade-off Theory

According to the traditional (or static) trade-off theory (TOT), firms select optimal capital structure by comparing the tax benefits of the debt, the costs of bankruptcy and the costs of agency of debt and equity, the disciplinary role of debt and the fact that debt suffers less from

informational costs than outside equity (Modigliani & Miller, 1958; Stiglitz, 1972; Jensen & Meckling, 1976; Myers, 1977; Titman, 1984). So optimal leverage minimizes cost of capital and maximizes firm value. The trade-off models predict that firms will seek to maintain an optimal (target) capital structure by balancing the benefits and costs of debt. The benefits include the tax shield, the reduction of free-cash-flow problems and other potential conflicts between managers and shareholders, whereas the costs include expected financial distress, costs associated with underinvestment and asset substitution problems. The trade-off theory predicts that firms have optimal capital structure, and they adjust their leverage toward the optimum over time (Coteiet al., 2011).

The theory asserts that firms set a target debt to value ratio and gradually move towards it. According to this theory, any increase in the level of debt causes an increase in bankruptcy, financial distress and agency costs, and hence decreases firm value. Thus, an optimal capital structure may be reached by establishing equilibrium between advantages (tax advantages) and disadvantages (financial distress and bankruptcy costs) of debt. To establish this equilibrium firms should seek debt levels at which the costs of possible financial distress offset the tax advantages of additional debt i.e., Marginal costs and marginal benefits of taking up more debts (Karadenizet al., 2009).

Methodology

This study adopted an ex-post facto research design, based on the use of secondary data for 10 years (2011-2020) for 15 listed consumer goods firms, as at 31st Dec 2020 (see Appendix I). The firms selected for the study were Cadbury Nigeria Plc, Champion Breweries Plc, Flour Mills Nigeria Plc, Dangote Sugar Refinery Plc, Unilever Nigeria Plc, PZ Cussons Nigeria Plc, Nigeria Breweries Plc, Nestle Nigeria Plc, International Breweries Plc, Honeywell Flour Mill Plc Guinness Nig Plc, Nascon Allied Industries Plc, Nigeria Northern Flour, 7-up Bottling company plc, and Mcnichols Consolidated. The choice of the companies was dictated by the availability of full financial reports for the period under consideration. The data used was sourced from published annual financial statements of individual companies. The data used was a balanced panel.

Panel data analysis was employed in processing the collected data towards the evaluation of causal variable relationships. The specified model, presented in (1), established Net Profit Margin (NPM), as a function of Short-Term Debt (STD) and Long-term Debt (LTD), as well as Firm Size, included in the model as control variables.

$$NPM_{it} = \beta_1 + \beta_2 STD_{it} + \beta_3 LTD_{it} + \beta_4 TD_{it} + \beta_5 FRS_{it} + \beta_6 FRA_{it} + e$$

Where: NPM_{it} - Net Profit Margin - the ratio of profits to total revenues, used as a proxy for financial performance.
 STD_{it} - Short-term Debt – value of financial obligations that are expected to be paid off within a year.

LTD	-	Long-term Debt – value of debt obligations with maturity period longer than a year
FS	-	Firm Size – Value of total assets
β_0	-	Intercept
B_1 - B_5	-	Model parameters
i	-	Firm
t	-	Period

The *a priori* expectation: $\beta_0, \dots, \beta_1 > 0$ while $\beta_2 < 0$. This implies all the explanatory variables are positively related to the dependent variable except the ones that have negative relationship. The analysis was carried out using the E-views statistical software (version 10).

Discussion and Results

Table 1 shows the descriptive statistics for the variables applied in the study.

Table 1: Descriptive Statistics Result

	NPM	STD	LTD	FS
Mean	3.791295	0.448933	0.171333	7.588400
Median	4.267950	0.410000	0.140000	7.820000
Maximum	24.90980	1.500000	0.810000	8.740000
Minimum	-74.87010	0.070000	-0.240000	5.350000
Std. Dev.	13.49969	0.204556	0.145250	0.815641
Skewness	-3.122657	2.221688	1.350014	-0.893730
Kurtosis	16.38432	11.86602	6.602108	3.288291
Jarque-Bera	1363.400	614.6867	126.6583	20.48827
Probability	0.000000	0.000000	0.000000	0.000036
Sum	568.6942	67.34000	25.70000	1138.260
Sum Sq. Dev.	27154.00	6.234629	3.143533	99.12522
Observations	150	150	150	150

Source: E-View 10 Output.

From the information contained in table 1, it can be seen that NPM, used as the proxy for financial performance, had a mean value of 3.791295, with a standard deviation of 13.49969, as well as a minimum values of -74.87010 and maximum value of 24.90980. As observed, the range between the minimum and maximum is wide, which implies an unstable performance as the standard deviation indicated that there is a wide dispersion of the data from the mean value. For STD, a mean of value of 0.448933 was computed, with standard deviation of 0.204556 and the minimum and maximum values of 0.070000 and 1.500000 respectively. This implied that the short term debts, in terms of variation, witnessed some fluctuations during the study period, as the standard deviation was quite large compared to the mean, together with the minimal

range between the minimum and maximum values. Similarly, the table shows that Long-term Debts(LTD), during the period had an average value of 0.171333 with standard deviation of 0.145250 and the minimum and maximum values of -0.240000 and 0.810000 respectively. This implied a tremendous difference in the percentage of long term debt composition of the sampled firms in terms of financing, during the study period. Similarly the mean value for the control variables of firm size (FS) indicated 7.588400, while the standard deviation equally indicated 0.815641 and the minimum values for firm size (FS) was 5.350000, while the maximum value is 8.740000.

Based on estimated Kurtosis statistics, FRA was determined to be platykurtic (fat or short-tailed), with a kurtosis value of 2.243605 during the study period. On the other hand, NPM, Short term Debt (STD), Long-term Debt (LTD) and Firm Size (FRS) were found to be leptokurtic (slim or long tailed). Generally, Kurtosis values of less than 3 indicates that the distribution of the variable is normal, but when it is more than 3, the distribution of the variable is said to be abnormal. The Jarque-Beratest for normality was carried out for study variables to determine the presence of normal distribution. FRA was estimated to have the lowest Jarque-Bera value of 14.43986. The Jarque-Bera statistics for NPM, STD, LTD and FS are 1363.400, 614.6867, 126.6583 and 20.48827 respectively.

Due to the study analysis being based on the use of panel data, there was the need to determine the most suitable estimation model to use for examining variable relationships. Accordingly, the Fixed Likelihood Ratio test was conducted (see table 2) to determine the most applicable model between estimated Pooled Model and The Fixed s Model

Table 2: Fixed s Likelihood Ratio Test

s Test	Statistic	d.f.	Prob.
Cross-section F	1.545644	(14,132)	0.1035
Cross-section Chi-square	22.770579	14	0.0441

Source: E-View 10 Output.

As can be seen, the obtained results of the Fixed Likelihood Ratio test indicated a Chi-square statistic of 22.770579 ($p < 0.05$), implying that the Fixed s regression model was most appropriate for the sampled data, because the likelihood ratio test statistics as represented by corresponding probability value is greater than 5%. It is most logical therefore to proceed to another test which is the hausman test, which will show the appropriateness of otherwise of using the fixed model versus the random model. Due to the panel nature of the data set utilized in this study, both fixed and random regressions analysis were run. The Hausman specification test result is presented in table 3.

Table 3: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
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Cross-section random	3.306759	3	0.3467
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Source: E-Views 10 Output.

The Result of Hausman test, as can be seen in table 3, provided a non-statistically significant value for cross-section Chi-square (3.306759, $p > 0.05$), suggesting that the most consistent and efficient estimation for the study was the Random s model. This was confirmed by the Langranger Multiplier test, the result of which is presented in table 4.

Table 4: Breusch-Pagan Langranger Multiplier Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	216.0839	105	0.0000

Source: E-View 10 Output.

The significance of the Breusch-Pagan Langranger Multiplier coefficient ($p < 0.05$) indicated that the Random s model was the most appropriate estimation approach for the study. The interpretation of variable relationships was therefore carried out based on results of the Random s Model. However, to validate the robustness of regression estimates, the a test of heteroskedasticity was carried out. Table 5 gives the obtained results therefrom.

Table 5: Heteroskedasticity Test

	Value	Df	Probability
Likelihood ratio	21.31444	15	0.1271
LR test summary:			
	Value	Df	
Restricted LogL	-565.8725	146	
Unrestricted	-555.2153	146	
LogL			

Source: E-Views 10 Output.

As can be seen from the information contained in table 5, a non-sginificant ratio value (21.31444, $p > 0.05$) was estimated, indicating the absence of heteroskedasticity in the estimated model.

Coefficients of the estimated Random Model are contained in table 6. From the analysis results obtained, only LTD was found to be positively signed. All other debt components and control variables were found to have negative effect on financial performance, as proxied by NPM. The estimated Coefficient of Multiple Determinations (R^2) for the model indicated that about 41% of the total variation in NPM was attributed to the independent variables (STD, LTD and FS), while the remaining 59% of the variation in the model was captured by the error term. This showed that the model did not have very high explanatory power. However, the estimated value of F-statistic was determined to be statistically significant (33.20526, $p < 0.05$). This confirmed the absence of misspecification errors.

Table 6: Panel Regression Result (Random s Model)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.23493	11.85589	1.622394	0.1069
STD	-37.63351	3.747985	-10.04100	0.0000
LTD	0.931149	7.667748	2.121437	0.0001
FRS	0.827643	1.638057	0.505259	0.6141
s Specification				
			S.D.	Rho
	Cross-section random		6.914753	0.4052
	Idiosyncratic random		8.377563	0.5948
Weighted Statistics				
R-squared	0.405576	Mean dependent var		1.356399
Adjusted R-squared	0.393361	S.D. dependent var		10.97288
S.E. of regression	8.546445	Sum squared resid		10664.09
F-statistic	33.20526	Durbin-Watson stat		1.656426
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.328963	Mean dependent var		3.791295
Sum squared resid	18221.35	Durbin-Watson stat		1.676801

Source: E-View 10 Output.

The estimated results revealed that STD had significant and positive effect on financial performance (-37.63351, $p < 0.05$). In light of this, the null hypothesis of STD not having significant effect on financial performance was therefore rejected. The positive effect of STD implied that increases in the level of short-term debts would lead to reducing levels of financial performance. This is supported by findings put forward by researchers such as Asian and Diette-Abayeh (2019), and Akingunola et al. (2017). Contrastingly, LTD was estimated to have significant and positive effect on financial performance (3.862836, $p < 0.05$), implying that increasing long-term debts by a unit will lead to a 3.86 unit increase in financial performance. This result provides sufficient evidence for the rejection of the second null hypothesis and the conclusion that long-term debts had significant effect on financial performance. This finding was contradicted by researchers such as Omollo et al. (2018), and Omete and Isabwa (2017).

Conclusion and Recommendations

The study generally found that debt financing was essential in determining the financial performance of listed consumer goods firms in Nigeria. Therefore, issues relating to financing components of both short-term and long-term attributes are focal in meeting organizational objectives in the consumer goods sector, given that the effect of the debt ratio was found not to be statistically significant on financial performance. However, the effect of short-term financing was found to have strong negative effect on financial performance, emphasizing the fact that short-term debts may be leading to a situation where investment funds are not properly channelled into strategic initiatives, hindering the company's ability to innovate, expand or make necessary investment for sustained growth. It is therefore, crucial that consumer goods companies critically examine the use of short-term debts and ensure that they are optimally directed towards viable and profitably investments.

Furthermore, the effect of long-term financing was found to be positive on financial performance, suggesting that firms should focus more on long-term strategic investments. This has been proven to be the most wise use of debt funds. In order to have increased levels of financial performance, managers of consumer goods in Nigeria should carefully plan and forecast their activities by taken into consideration the of debt financing in their capital structure, especially short-term debts.

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APPENDICES

Appendix 1 – Population of the study

S/NO	Consumer Goods Firms	Year Listed
1.	7-up Bottling company plc	1986
2.	Cadbury Nigeria plc	1976
3.	Champion Breweries plc	1974
4.	Dangote Flour Mills	2008
5.	Dangote Sugar Refinery	2007
6.	DN Tyre and Rubber plc	1961
7.	Flour Mills of Nigeria plc	1978
8.	Golden Guinea Breweries	1979
9.	Guinness Nigeria plc	1965
10.	Honeywell Flour Mills	2009
11.	International Breweries	1994
12.	McNichols	2009
13.	Multi-Trex Integrated Food	2010
14.	Nascon Allied Industry	1991
15.	National Salt Company of Nigeria plc	1993
16.	Nestle Nigeria plc	1979
17.	Nigeria Breweries plc	1973
18.	Nigeria Enamelware	1979
19.	Northern Nigeria Flour Mill plc	1978
20.	P.S. Mandrides Plc	1978
21.	Premier Breweries	1958
22.	PZ Cusson Nigeria plc	1972
23.	Unilever Nigeria plc	1973
24.	Union Dicon salt plc	1973
25.	UTC Nigeria plc	1972
26.	Vitaform Nigeria plc	1978
27.	Vono Product Plc	1974

Source: Nigerian Exchange (NGX), 2020

Appendix 2 – Raw Data Set

Companies	Code	Fiscal Year	Net Profit Margin	Return on Sales	Short Term Debt	Long Term Debt		Firm Size		
			NPM	ROE	STD	LTD		FS		
Cadbury Nig	1	2011	10.7608	22.1262	0.46	0.37		7.53		
Cadbury Nig	1	2012	10.2979	17.241	0.37	0.44		7.60		
Cadbury Nig	1	2013	16.8431	25.102	0.35	0.41		7.64		
Cadbury Nig	1	2014	4.9566	13.1059	0.33	0.39		7.46		
Cadbury Nig	1	2015	4.1448	9.3876	0.26	0.45		7.45		
Cadbury Nig	1	2016	-0.9887	-2.6807	0.31	0.35		7.45		
Cadbury Nig	1	2017	0.9069	2.5547	0.38	0.26		7.45		
Cadbury Nig	1	2018	2.288	6.4932	0.27	0.25		7.44		
Cadbury Nig	1	2019	2.7229	7.8993	0.24	0.31		7.65		
Cadbury Nig	1	2020	2.6317	1.504	0.43	0.38	59.20	7.52	45.00	
Champion Breweries	2	2011	-	66.6503	57.0506	1.26	0.04	130.07	6.84	29.00
Champion Breweries	2	2012	-	74.8701	38.9706	1.50	0.01	150.45	6.83	30.00
Champion Breweries	2	2013	-	52.7491	25.5626	1.50	0.01	150.43	6.96	31.00
Champion Breweries	2	2014	-	22.8478	-12.8529	0.37	0.01	38.80	6.98	32.00
Champion Breweries	2	2015	2.2028	1.0832	0.30	0.01	31.05	7.01	33.00	
Champion Breweries	2	2016	13.7231	6.9143	0.22	0.01	22.99	7.00	34.00	
Champion Breweries	2	2017	10.8337	6.3618	0.16	0.03	19.36	7.00	35.00	
Champion Breweries	2	2018	-5.5378	-3.3244	0.22	0.02	24.33	7.02	36.00	
Champion Breweries	2	2019	0.2432	2.098	0.58	0.04	25.31	7.91	37.00	
Champion Breweries	2	2020	2.2518	5.0604	0.27	0.13	29.25	7.06	38.00	
Flour Mills Of Nigeria	3	2011	3.9574	18.9021	0.34	0.35	69.38	8.21	33.00	
Flour Mills Of Nigeria	3	2012	3.2434	10.1732	0.32	0.33	64.64	8.37	34.00	
Flour Mills Of Nigeria	3	2013	2.559	9.2101	0.41	0.29	70.06	8.45	35.00	

Flour Mills Of Nigeria	3	2014	1.6161	6.424	0.43	0.29	71.89	8.47	36.00
Flour Mills Of Nigeria	3	2015	2.741	10.033	0.52	0.23	75.40	8.54	37.00
Flour Mills Of Nigeria	3	2016	4.2092	15.0579	0.53	0.19	72.27	8.54	38.00
Flour Mills Of Nigeria	3	2017	1.6849	8.6172	0.64	0.15	78.75	8.68	39.00
Flour Mills Of Nigeria	3	2018	2.509	9.04	0.49	0.14	63.12	8.61	40.00
Flour Mills Of Nigeria	3	2019	0.7585	2.6496	0.52	0.35	66.18	8.74	41.00
Flour Mills Of Nigeria	3	2020	1.982	12.3652	0.34	0.29	63.97	8.63	42.00
Dangote Sugar	4	2011	6.9051	18.7476	0.41	0.05	45.77	7.86	5.00
Dangote Sugar	4	2012	10.1026	23.3339	0.39	0.05	44.22	7.92	6.00
Dangote Sugar	4	2013	10.5143	23.0873	0.36	0.08	43.51	7.92	7.00
Dangote Sugar	4	2014	12.2669	22.6317	0.38	0.07	44.60	7.97	8.00
Dangote Sugar	4	2015	11.4143	19.8372	0.38	0.05	43.34	8.01	9.00
Dangote Sugar	4	2016	8.4819	21.7619	0.56	0.06	62.92	8.25	10.00
Dangote Sugar	4	2017	19.4615	42.9	0.49	0.03	52.46	8.29	11.00
Dangote Sugar	4	2018	14.6146	22.204	0.40	0.04	43.48	8.24	12.00
Dangote Sugar	4	2019	13.8816	20.6788	0.57	0.03	47.21	8.54	13.00
Dangote Sugar	4	2020	13.8943	32.6776	0.51	0.04	55.14	7.44	14.00
Unilever Nig	5	2011	10.0781	41.2885	0.59	0.12	70.13	7.51	39.00
Unilever Nig	5	2012	10.0771	39.5171	0.61	0.11	72.48	7.56	40.00
Unilever Nig	5	2013	8.011	49.8658	0.64	0.14	77.97	7.64	41.00
Unilever Nig	5	2014	4.3267	32.2557	0.70	0.14	83.65	7.66	42.00
Unilever Nig	5	2015	2.0134	14.8985	0.69	0.15	84.05	7.70	43.00
Unilever Nig	5	2016	4.4024	26.278	0.74	0.10	83.87	7.86	44.00
Unilever Nig	5	2017	8.2075	9.8146	0.30	0.07	37.31	8.08	45.00
Unilever Nig	5	2018	9.8301	11.0306	0.33	0.04	37.21	8.12	46.00
Unilever Nig	5	2019	12.2666	-11.1526	0.36	0.05	38.11	8.72	47.00
Unilever Nig	5	2020	-0.06	-9.5265	0.30	0.17	32.11	7.96	48.00
Pz Cussons	6	2011	8.6479	13.8301	0.32	0.09	40.24	7.84	38.00
Pz Cussons	6	2012	3.5186	6.203	0.27	0.07	33.44	7.81	39.00
Pz Cussons	6	2013	7.4586	12.0618	0.30	0.06	35.77	7.86	40.00
Pz Cussons	6	2014	6.9717	12.5269	0.30	0.06	36.44	7.85	41.00
Pz Cussons	6	2015	6.2506	11.0308	0.29	0.09	38.51	7.83	42.00
Pz Cussons	6	2016	3.0631	4.9068	0.36	0.05	41.69	7.87	43.00

Pz Cussons	6	2017	4.6297	8.1674	0.47	0.03	49.90	7.95	44.00
Pz Cussons	6	2018	2.3924	4.2722	0.46	0.03	49.10	7.95	45.00
Pz Cussons	6	2019	1.5549	2.5263	0.45	0.06	50.11	7.99	46.00
Pz Cussons	6	2020	0.1081	-17.5164	0.48	0.07	55.95	7.89	47.00
Nigeria Breweries	7	2011	18.0274	48.9217	0.39	0.28	67.00	8.37	39.00
Nigeria Breweries	7	2012	15.056	40.7101	0.34	0.29	63.16	8.40	40.00
Nigeria Breweries	7	2013	16.038	38.3416	0.40	0.16	55.55	8.40	41.00
Nigeria Breweries	7	2014	15.9627	24.7262	0.33	0.18	50.76	8.54	42.00
Nigeria Breweries	7	2015	12.9484	22.0844	0.39	0.12	51.62	8.55	43.00
Nigeria Breweries	7	2016	9.0574	17.1276	0.39	0.16	54.81	8.56	44.00
Nigeria Breweries	7	2017	9.5915	18.5355	0.41	0.13	53.35	8.58	45.00
Nigeria Breweries	7	2018	5.5501	11.6515	0.36	0.21	57.03	8.59	46.00
Nigeria Breweries	7	2019	4.9862	9.6011	0.33	0.31	59.21	8.66	47.00
Nigeria Breweries	7	2020	2.1862	50.4233	0.47	0.17	63.84	8.64	48.00
Nestle Nig	8	2011	16.8398	71.0748	0.32	0.38	70.14	7.89	33.00
Nestle Nig	8	2012	18.1113	61.831	0.28	0.33	61.57	7.95	34.00
Nestle Nig	8	2013	16.725	54.8304	0.31	0.32	62.48	8.03	35.00
Nestle Nig	8	2014	15.5137	61.8694	0.42	0.25	66.11	8.03	36.00
Nestle Nig	8	2015	15.6915	62.4536	0.50	0.18	68.12	8.08	37.00
Nestle Nig	8	2016	4.3565	25.6654	0.71	0.10	81.79	8.23	38.00
Nestle Nig	8	2017	13.8126	75.1451	0.52	0.17	69.43	8.17	39.00
Nestle Nig	8	2018	16.1518	85.6384	0.57	0.12	69.06	8.21	40.00
Nestle Nig	8	2019	16.0836	100.2754	0.55	0.14	69.57	8.32	41.00
Nestle Nig	8	2020	13.6587	80.3678	0.67	0.21	88.09	8.39	42.00
International Breweries	9	2011	1.4871	11.3113	0.70	0.21	90.99	7.16	17.00
International Breweries	9	2012	1.4871	11.3113	0.70	0.21	90.99	7.16	18.00
International Breweries	9	2013	14.4145	26.7211	0.34	0.25	59.28	7.36	19.00
International Breweries	9	2014	11.3848	18.6825	0.27	0.27	53.76	7.39	20.00

International Breweries	9	2015	9.4264	15.9965	0.33	0.27	59.67	7.48	21.00
International Breweries	9	2016	11.4002	18.9517	0.48	0.11	58.19	7.52	22.00
International Breweries	9	2017	3.1621	7.4528	0.58	0.11	69.13	7.65	23.00
International Breweries	9	2018	-3.2056	-10.996	0.38	0.50	88.67	8.49	24.00
International Breweries	9	2019	-	-	0.48	0.21	78.23	8.23	25.00
International Breweries	9	2020	-9.1439	-14.9919	0.58	0.01	59.28	8.57	26.00
Honywell Flour Mill	10	2011	7.3182	16.4724	0.38	0.10	48.07	7.46	3.00
Honywell Flour Mill	10	2012	7.0983	16.0838	0.44	0.19	62.61	7.65	4.00
Honywell Flour Mill	10	2013	6.2209	15.3264	0.50	0.17	66.53	7.74	5.00
Honywell Flour Mill	10	2014	6.0844	16.2656	0.44	0.24	67.72	7.81	6.00
Honywell Flour Mill	10	2015	2.2836	5.5143	0.47	0.23	70.10	7.83	7.00
Honywell Flour Mill	10	2016	-5.9427	-18.4803	0.58	0.20	78.48	7.88	8.00
Honywell Flour Mill	10	2017	8.0878	8.2258	0.23	0.30	53.75	8.05	9.00
Honywell Flour Mill	10	2018	6.1936	7.8504	0.23	0.32	54.83	8.10	10.00
Honywell Flour Mill	10	2019	0.0919	0.1206	0.54	0.39	58.21	8.39	11.00
Honywell Flour Mill	10	2020	0.8086	6.1947	0.38	0.22	59.73	8.15	12.00
Guinness Nig	11	2011	14.4974	44.5044	0.40	0.17	56.32	7.96	47.00
Guinness Nig	11	2012	12.2054	36.8145	0.43	0.21	63.58	8.03	48.00
Guinness Nig	11	2013	9.6876	25.7688	0.42	0.20	61.97	8.08	49.00
Guinness Nig	11	2014	8.7668	21.2453	0.33	0.33	65.95	8.12	50.00
Guinness Nig	11	2015	6.5782	16.1247	0.38	0.23	60.46	8.09	51.00
Guinness Nig	11	2016	-1.9769	-4.8388	0.49	0.21	69.59	8.14	52.00
Guinness Nig	11	2017	1.5277	4.4797	0.44	0.27	70.59	8.16	53.00
Guinness Nig	11	2018	4.6984	7.6695	0.28	-0.24	4.28	8.19	54.00
Guinness Nig	11	2019	4.1702	6.1573	0.07	0.58	16.45	8.18	55.00
Guinness Nig	11	2020	-1.2051	15.3592	0.42	0.07	49.33	8.15	56.00

Nascon Allied	12	2011	21.3807	38.9032	0.35	0.08	43.62	7.00	20.00	
Nascon Allied	12	2012	20.6223	42.0566	0.32	0.07	38.47	7.03	21.00	
Nascon Allied	12	2013	24.9098	39.1657	0.33	0.06	39.70	7.06	22.00	
Nascon Allied	12	2014	16.5951	29.6012	0.43	0.07	49.77	7.10	23.00	
Nascon Allied	12	2015	13.0153	29.7062	0.49	0.08	56.50	7.21	24.00	
Nascon Allied	12	2016	13.2036	30.0163	0.61	0.06	67.30	7.39	25.00	
Nascon Allied	12	2017	19.744	46.3242	0.55	0.07	61.71	7.48	26.00	
Nascon Allied	12	2018	17.153	37.165	0.53	0.08	60.71	7.48	27.00	
Nascon Allied	12	2019	6.713	16.6399	0.55	0.09	63.21	7.58	28.00	
Nascon Allied	12	2020	9.6047	21.4375	0.58	0.14	71.29	7.65	29.00	
Nigerian Northen Flour Mill	13	2011	3.9795	29.3409	0.49	0.13	62.44	6.62	34.00	
Nigerian Northen Flour Mill	13	2012	0.0398	0.3704	0.49	0.10	59.46	6.53	35.00	
Nigerian Northen Flour Mill	13	2013	1.924	14.0215	0.45	0.11	55.69	6.56	36.00	
Nigerian Northen Flour Mill	13	2014	2.0501	13.1655	0.36	0.09	45.70	6.51	37.00	
Nigerian Northen Flour Mill	13	2015	-1.8953	989.3803	0.76	0.24	99.51	6.61	38.00	
Nigerian Northen Flour Mill	13	2016	-	20.1463	-6.6615	0.10	0.03	12.42	6.59	39.00
Nigerian Northen Flour Mill	13	2017	-1.7261	-1.3096	0.69	0.03	71.42	6.64	40.00	
Nigerian Northen Flour Mill	13	2018	-2.1311	-5.1937	0.57	0.23	80.16	6.77	41.00	
Nigerian Northen Flour Mill	13	2019	0.7584	1.235	0.67	0.31	89.17	6.77	42.00	
Nigerian Northen Flour Mill	13	2020	0.1983	1.0453	0.34	0.29	63.97	8.64	43.00	
7-up Bottling company plc	14	2011	3.7262	29.6445	0.69	0.02	70.84	6.01	33.00	

7-up Bottling company plc	14	2012	3.5312	24.5225	0.31	0.52	83.45	6.34	34.00	
7-up Bottling company plc	14	2013	2.9399	6.2478	0.31	0.15	46.27	6.34	35.00	
7-up Bottling company plc	14	2014	3.3527	6.9391	0.49	0.10	59.74	6.49	36.00	
7-up Bottling company plc	14	2015	2.8509	5.6955	0.68	0.06	74.01	6.70	37.00	
7-up Bottling company plc	14	2016	4.7752	9.4625	0.62	0.07	68.93	6.66	38.00	
7-up Bottling company plc	14	2017	1.7821	3.1573	0.71	0.05	75.51	6.77	39.00	
7-up Bottling company plc	14	2018	-0.2019	-0.2341	0.63	0.05	68.89	6.66	40.00	
7-up Bottling company plc	14	2019	-32.643	-20.4403	0.84	0.06	71.21	6.87	41.00	
7-up Bottling company plc	14	2020	-	31.3612	-19.432	0.77	0.00	0.77	6.70	42.00
McNichols Consolidated	15	2011	3.7262	29.6445	0.20	0.19	39.31	5.35	3.00	
McNichols Consolidated	15	2012	3.5312	24.5225	0.13	0.21	33.94	5.42	4.00	
McNichols Consolidated	15	2013	2.9399	6.2478	0.18	0.23	40.98	5.51	5.00	
McNichols Consolidated	15	2014	3.3527	6.9391	0.29	0.12	41.33	5.58	6.00	
McNichols Consolidated	15	2015	2.8509	5.6955	0.31	0.07	38.01	5.62	7.00	
McNichols Consolidated	15	2016	4.7752	9.4625	0.31	0.06	36.54	5.68	8.00	
McNichols Consolidated	15	2017	1.7821	3.1573	0.26	0.13	39.59	5.73	9.00	
McNichols Consolidated	15	2018	-0.2019	-0.2341	0.35	0.78	113.49	5.64	10.00	
McNichols Consolidated	15	2019	-32.643	-20.4403	0.39	0.81	102.21	5.36	11.00	
McNichols Consolidated	15	2020	3.7018	2.432	0.13	0.18	32.13	8.72	12.00	

Source: Financial Statements of the Various Companies (2021)

Appendix 3: Descriptive Statistics Result

	NPM	STD	LTD	FS
Mean	3.791295	0.448933	0.171333	7.588400
Median	4.267950	0.410000	0.140000	7.820000
Maximum	24.90980	1.500000	0.810000	8.740000
Minimum	-74.87010	0.070000	-0.240000	5.350000
Std. Dev.	13.49969	0.204556	0.145250	0.815641
Skewness	-3.122657	2.221688	1.350014	-0.893730
Kurtosis	16.38432	11.86602	6.602108	3.288291
Jarque-Bera	1363.400	614.6867	126.6583	20.48827
Probability	0.000000	0.000000	0.000000	0.000036
Sum	568.6942	67.34000	25.70000	1138.260
Sum Sq. Dev.	27154.00	6.234629	3.143533	99.12522
Observations	150	150	150	150

Source: E-View 10 Output (2021)

Appendix 4: Pooled Regression Analysis

Pooled Regression Model

Dependent Variable: NPM

Method: Panel Least Squares

Date: 10/05/21 Time: 06:46

Sample: 2011 2020

Periods included: 10

Cross-sections included: 15

Total panel (balanced) observations: 150

Variable	Coefficie			
	nt	Std. Error	t-Statistic	Prob.
C	-9.996708	8.555717	-1.168424	0.2445
STD	-36.51611	4.295815	-8.500393	0.0000
LTD	3.862836	7.351642	0.525439	0.6001
FS	4.344452	1.140763	3.808374	0.0002

		Mean dependent	3.79129
R-squared	0.388325	var	5
Adjusted R-squared			13.4996
	0.375757	S.D. dependent var	9
		Akaike info	7.59830
S.E. of regression	10.66598	criterion	0
			7.67858
Sum squared resid	16609.42	Schwarz criterion	4
		Hannan-Quinn	7.63091
Log likelihood	-565.8725	criter.	7
			0.71232
F-statistic	30.89633	Durbin-Watson stat	7
Prob(F-statistic)	0.000000		

Source: E-View 10 Output (2021)

Appendix 5: Fixed Regression Analysis

Fixed s Model

Dependent Variable: NPM

Method: Panel Least Squares

Date: 10/05/21 Time: 06:53

Sample: 2011 2020

Periods included: 10

Cross-sections included: 15

Total panel (balanced) observations: 150

Variable	Coefficie	nt	Std. Error	t-Statistic	Prob.
C	40.08906		14.17732	2.827690	0.0054
STD	-38.11204		3.815317	-9.989220	0.0000
LTD	-3.142062		8.150452	-0.385508	0.7005
FS	-0.234674		2.187448	-0.107282	0.9147

s Specification

Cross-section fixed (dummy variables)

		Mean dependent	3.79129
R-squared	0.658826	var	5
Adjusted R-squared			13.4996
	0.614887	S.D. dependent var	9

		Akaike info	7.20115
S.E. of regression	8.377563	criterion	8
			7.56243
Sum squared resid	9264.230	Schwarz criterion	4
		Hannan-Quinn	7.34793
Log likelihood	-522.0868	criter.	3
			1.36077
F-statistic	14.99410	Durbin-Watson stat	6
Prob(F-statistic)	0.000000		

Source: E-View 10 Output (2021)

Appendix 6: Random Regression Analysis

Random s Model

Dependent Variable: NPM

Method: Panel EGLS (Cross-section random s)

Date: 10/05/21 Time: 06:58

Sample: 2011 2020

Periods included: 10

Cross-sections included: 15

Total panel (balanced) observations: 150

Swamy and Arora estimator of component variances

Variable	Coefficie nt	Std. Error	t-Statistic	Prob.
C	19.23493	11.85589	1.622394	0.1069
STD	-37.63351	3.747985	-10.04100	0.0000
LTD	0.931149	7.667748	2.121437	0.0001
FS	0.827643	1.638057	0.505259	0.6141

s Specification		S.D.	Rho
Cross-section random		6.914753	0.4052
Idiosyncratic random		8.377563	0.5948

Weighted Statistics		
	Mean dependent	1.35639
R-squared	0.405576	var
Adjusted R-		10.9728
squared	0.393361	S.D. dependent var
		8

S.E. of regression	8.546445	Sum squared resid	10664.0
F-statistic	33.20526	Durbin-Watson stat	1.65642
Prob(F-statistic)	0.000000		6

Unweighted Statistics

R-squared	0.328963	Mean dependent var	3.79129
Sum squared resid	18221.35	Durbin-Watson stat	1.67680

Source: E-View 10 Output (2021)

Hypothesis Two (Random)

Appendix 7: Breusch-Pagan Multiplier Test (Test between Random and Pooled)

Residual Breusch-Pagan LM

Null hypothesis: No cross-section dependence (correlation) in

Residuals

Equation: Untitled

Periods included: 10

Cross-sections included: 15

Total panel observations: 150

Note: non-zero cross-section means detected in data

Cross-section means were removed during computation of Correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	216.0839	105	0.0000

Source: E-View 10 Output (2021)

Appendix 8: Residual Test (Heteroskedasticity Test)

Panel Period Heteroskedasticity LR Test

Null hypothesis: Residuals are homoskedastic

Equation: UNTITLED

Specification: NPM, STD, LTD, FS

	Value	Df	Probabilit y
Likelihood ratio	21.31444	15	0.1271

LR test summary:

	Value	Df
	-	
Restricted LogL	565.8725	146
	-	
Unrestricted LogL	555.2153	146

Source: E-View 10 Output (2021)