

Effects of Debt Financing on Financial Performance of 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. Therefore, this study seeks to examine the effects of debt financing on financial performance of listed consumer goods firms in Nigeria from 2011-2020. The dependent variable of this study is financial performance measured by net profit margin (NPM), while the independent variable is short term debt (STD) and two control variables were used- Firm size and firm age. Secondary data on financial performance as well as the short-term debt were obtained from the annual financial reports of 15 purposeful sampled consumer goods firms and the Nigerian Exchange Fact Book. The study adopted panel data regression approach for analysis which gives room for adoption between fixed effect and random effect through the help of hausman test of the relationship between the variables. The study concluded that there is a negative and significant relationship between short term debt and net profit margin. It is therefore recommended that management of listed firms should consider other performance indices rather than debt financing, which can ultimately enhance better performance.

Keywords: Net Profit Margin, Short term debt, Firm size, Firm Age

INTRODUCTION

Financing decision is majorly concerned with how organisations source for funds to carry-out its investment needs. This decision is usually made by the financial manager as to what is the appropriate mix of debt and equity that should make up an organisation's capital structure that helps to improve its performance thereby, ensuring the maximisation of shareholders wealth (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). Organisations that want to gain this competitive advantage need to secure sufficient funds needed to meet its need. However, securing more funding than is required might be counter-productive as it will not contribute to the productive base of an organisation, but increase its financing cost, which would impact on its financial performance negatively (Altahtamonui, 2005). The major financing options available to organisations are equity and debt. Debt is one of the major components in the capital structure of companies. It acts a means of obtaining funds for their business operations (Zietlow, Hankin, & Seidner, 2007). Despite the increase of the debt-financing structure, debate among academics and researchers in the field of corporate finance

over the past few decades, in finding an optimal capital structure remains an indefinable concern (Onyenwa & Glory, 2017). Many modern-day firms are yet to find the optimum debt levels that maximizes shareholder value. 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). However, these companies are faced with how to source for capital for expansion purposes. Firm needs capital to finance new and existing projects, this capital can be sourced by taking into consideration two major sources namely: the debt-versus-equity decision (capital structure) and is also the decision on debt structure (Singh & Bansal; 2016). Debt structure can comprise of short-term debt and long-term debt. Short-term debt is a type of debt, which has maturity tenure of one year or less, and is recorded as a current liability in a firm's statement of financial position while long-term debt is an obligation that has a maturity period of more than one year such as bonds. Debt capital is the capital that a business raises by taking out a loan. It is a loan made for a company, typically as growth capital, and is normally repaid at some future date. Debt capital differs from equity or share capital because subscribers to debt capital do not become part owners of the business but are merely creditors. Equity capital is invested funds that, in contrast to debt capital, are not repaid to the investors in the normal course of business. It represents the risk capital staked by the owners through purchase of a company's common stock (ordinary shares) (Pandey, 2010).

The financial mix of an organization has impact on the financial performance of such organization. Debt as one of the financial mixes can exert an influence on the financial performance of an organization. When an organization employs more debt than equity, it is expected to pay interest to debt holders and prompt payment of debt is dependent on the performance of such organization. When an organization responds slowly to interest payment, the debt holders may not be motivated to give more and if the company uses more of debt than equity the profitability of such organization may likely suffer because the source of finance is decreasing, and such there may be break-down in the overall performance of the organization (Kale, 2014). Financial leverage is a type of funding and not a source that measures how much firms use debt to finance its assets. The financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs, such that as debt increases, financial leverage increases. The primary motive of a company in using financial leverage is to magnify the shareholders' return under favourable economic conditions. The role of debt financing in magnifying the return of the shareholders' based on the assumptions that the fixed- charges funds (such as the loan from financial institutions and other sources or debentures) can be obtained at a cost lower than the firm's rate of Return on investment. Firm's performance on the other hand is the measurement of what has been attained by the firm, which is an indicator of the good conditions for a period (Kale 2014). The objectives of measuring performance are to obtain very useful information about flow of funds, the uses of firm finances, their efficiency and effectiveness. Besides, managers can make best decisions from the information on firm's performance (Almajali, Alamro & Al-Soub, 2012). The survival of the firm and its continuity often depends on its performance; most importantly its profitability which may be fueled by effective leveraging. Fund requirement (leverage) is not the same for all firms, the firm's asset, structure, and system is a determinant of leverage, which is why this study is focused on Consumer goods companies, in Nigeria, given that they are the biggest sector (Nifemi, 2018). Thus, it is important to know if the use of leverage affects the performance of Consumer Goods Companies and to what extent?

There has been yearning among academics, government, financial institutions regulators and global institutions to ascertain whether debt influences the financial performance of an organisation. Studies on the relationship between various financing decisions and performance have produced mixed, inconclusive, and inconsistent results. These studies include: Yazdanfar and Öhman (2015) and Prempeh, Sekyere and Asare (2016), these studies were all carried out outside of Nigeria. To the best of the researcher's knowledge, few researches have been conducted on the topic in Nigeria they include: Oyakhire (2019), Nwude and Anyalechi (2018), Innocent, Ikechukwu and Nnagbogu (2014) and Akingunola, Olawale, and Olaniyan (2017) focused on other debt variables of interest coverage, debt ratio and debt to equity, while the performance proxies used are return on assets, return on equity, Tobin's Q and gross profit margin. It is against this background that this study is to be carried out to examine the effects of debt financing on financial performance of listed consumer goods firms in Nigeria, focusing on debt finance variables of Short-term debts, while financial performance proxy is Net Profit Margin. The period of the study which is from 2011-2020 chosen reflects the time when companies were faced with financing due to global economic meltdown and the recent recession in which the country was plunged. Given the foregoing, the objective of this study is to examine the extent to which short-term debt

affect net profit margin of listed consumer goods firms in Nigeria. To achieve the above-mentioned objective, the under listed hypothesis will be tested.

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

LITERATURE REVIEW

Conceptual Framework

Debt Financing

The life blood of any business is said to be finance, without which businesses cannot carry out activities needed to achieve its objective. Debt financing is one of financing options available to companies for running and growing its business concern. Debt financing is the use of external funds to finance the activities of an organization to increase the profitability of the organisation; it is the proportion of debt in the capital Structure (Racheal, Chelichi & Raymond, 2017). External debt financing plays an important role to increase future productivity of firms and more important 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 (Onyenwe & Glory; 2017). Changes in leverage result in changes in level of return and associated risk or degree of obligations (Owualah, 2000). According to Burrasca, Susan, Anne and Jason (2015), debt financing is a means of financing a business through borrowing money and not giving up ownership. Financing a firm through debt provides it with an opportunity for growth through expansion when used appropriately without affecting the firm's ownership. This will be preferred by firms that do not want to dilute its shareholding in the firm by issuing of new shares.

Debt financing is the proportion of capital that was financed by debt as opposed to equity. Therefore, the higher the leverage, the higher the amount of debt in the capital structure of a firm. According to Champion (1999) leverage is the way to improve the performance of companies. The loan principal is repaid at a later point in time, with some interest expenses being paid before the debt's maturity. This is perceived as one of the advantages of debt financing as the interest element is tax deductible which helps in bringing down the overall cost of capital of the business (Galille, 2020). The large amount of leverage implies greater risks and tends to raise industry profit rates. Ross (1977) revealed that increasing leverage by taking up more debt enables the firm to have positive implications on firm performance. Furthermore, Graham (2000) stated that due to the tax benefits of debt, the firms with high marginal tax rates are more likely to issue debt than the firms with low tax rates. Watkins (2002) asserts that this is only possible if the rate of return on the investment is greater than the rate of return on debt.

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. There are usually two types of debt, or liabilities, that a company accrues financing and operating. The former is the result of actions undertaken to generate funding to grow the business, while the latter is the by-product of obligations arising from normal business operations. Financing debt is normally considered to be long-term debt in that it has a maturity date longer than 12 months. 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 12 months, or within the current operating cycle, of its accrual. Short term debt is usually made up of short-term bank loans taken out, or commercial paper issued, by a company, the value of the short-term debt account is very important when determining a company's performance. Simply put, the higher the debt-to-equity ratio, the greater the concern about company liquidity. The most common measure of short-term liquidity is the quick ratio which is integral in determining a company's credit rating that ultimately affects that company's ability to procure financing. The problem associated with the continuous use of short-term debt is the default risk which is associated with the lender not willing to grant more short-term debt to the borrower. Also, another potential risk in the use of short-term debt is volatility in interest rate which could spike the interest expense associated to those debts. When companies feel that the interest savings will more than compensate for the spike

in interest rate the firm could continue using short term debts as permanent means of financing or move to secure long-term debts to fund its operation on a permanent basis. Shubita and Alsawallah, (2012) argued that increase in short term debt finance is associated with decrease in firm profitability and they concluded that a significant negative relationship exists. This is because short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and therefore performance (Muchugia, 2013).

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 called wealth maximization (Farah, Farrukh & Faiz, 2016). Financial performance provides information to owners and other stakeholders to help them make an informed decision about the organization. It shows the ability to create profit for the owners. There are different ways to assessing the performance of a business concern in order to ascertain how they have fared as regards achieving the corporate goals and objectives of the business. These measures could be qualitative or quantitative in nature. The financial performance measures are quantitative in nature, and could be in monetary terms, ratios or in percentages. The purpose of financial statement analysis is to provide data for decision-making. The financial statements disclose the results of the activities of an entity and are prepared to help interested persons decide on questions such as whether to lend it money or invest in its shares. Financial statement analysis can be seen as part of the link between financial statements and the decision-making process. The financial statements prepared by companies are meant to provide its users with reliable information about the company's performance and its financial position.

Net Profit Margin

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings relative to its revenue, 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 advantage 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 evaluating profitability is net 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. 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. Therefore, in this study performance will be measured by the net profit margin of selected consumer goods companies listed on the Nigerian Stock Exchange.

Return on Equity

Return on equity measures the net income or profit after tax returned to shareholders' equity. It is a favourite and in most cases a widely used measure of organisation's financial performance (Monteiro, 2006). Return on equity is equally popular among investors who use it to compare the return on equity of the firms. It is widely watched in the financial ratio for equity investors (Afm, 2012). It is a measure of value created for shareholders by the management of the firm. ROE can be calculated as: $\text{Net Profit} / \text{Equity}$. Net profit is arrived at after all expenses (including interest to debt holders) have been deducted from revenue and after deduction of dividend to preference shareholders. It indicates how much of a profit a firm generates for every Naira of equity it owns. A ROE of 15% means that the company has generated 15kobo for every N1 of equity invested by the owners. The lower the equity value, the higher the return on equity of the firm holding the profit after tax constant.

Firm Size

Firm size means the size of the business unit. It is the volume of operation carried out by a single firm. One of the decisions of an organisation is how size affects the organisation operation and its profitability. Atif and Malik (2015) stated that firm size was an important factor affecting firms' profitability. Different studies provided different variables for measurement of firm size. Firm size could be measured by number of employees, turnover, and total assets. Shalit and Sanker (1977) measured firm size with economies of scale in production, advertising, capital market and cash balances.

Empirical Review

Ahmed (2020) examined the impact of Debt Financing on Performance: Evidence from Textile Sector of Pakistan. The objective was to examine the impact of capital structure primarily debt financing on firm performance in 70 textile companies in Pakistan. Panel data of 70 textile companies in Pakistan from year 2010-2015 were examined and the statement of Financial Position Analysis issued by State Bank of Pakistan was used for data collection. Fixed Effects Model was used to determine the relationship between firm performance (Return on Assets) and capital expenditure (Debt to Total Assets, Long Debt to Assets and Short Term Debt). The findings present a positive relationship between return on assets and debt-to-asset ratio. This suggests that firms mostly rely on financial leverage for their performance. As the debt-to-asset ratio increases, the return on assets increases. There is a negative relation between short term debt and firm performance measure (ROA) and this result to more short- term borrowing because of lower interest rate. The results also revealed positive relationship between Long-term debt to assets and ROA. The study concluded that the textile firms in Pakistan which are heavily trapped in debt must bear huge interest costs and firm's sales growth and interest rates have significant effect on ROA whereas the firm size has negative but significant impact on its ROA. It was recommended that capital structure has impact on firm performance, so owner and managers of firms take necessary cautious while taking decisions regarding capital structure. This study was carried out in Pakistan which has a different operating environment to that of Nigeria, and the time span of six years is not sufficient for a good judgment and this result might not be generalised to the Nigerian business environment.

Asian and Diette-Abayeh (2019), examined the capital structure composition and financial performance of food and beverage firms, using Secondary data obtained from the Nigeria Stock Exchange. The objective of the study was to examine how capital structure composition affects financial performance of Food and Beverage firms quoted on Nigeria Stock Exchange. Short term debt to total Asset, Long Term debt to total asset and debt-equity ratios were measured against market performance which were proxies by earnings yield, price/earnings ratio and Tobin Q. Findings of the study indicate that there is significant positive relationship between short- term debt over total asset ratio and Tobin Q, and revealed that Long- term debt to total asset relate significantly positively with Tobin Q and earnings yield. The Debt Equity ratio and Earnings yield also revealed a significant positive relationship. While there was a significant negative relationship between Short- term debt and Earnings yield, Long -term debt and P/E ratio, and between Debt Equity ratio and Tobin Q. The study found insignificant negative relationship between Short term debt and Price earnings ratio and between Debt equity ratio and P/E ratio. In addition, a capital structure composition from STD/TA to LTD/TA has a positive effect on TBQ which is significant and a Shift from LTD/TA to STD/TA still maintains an equally positive effect on TBQ. The study recommended that firms should use LTD optimally to increase its market valuation and, firms should examine the composition of its capital structure to enable it to determine which combination maximizes firm value.

Oyakhire (2019) examined the impact of capital structure and financial performance of oil and gas companies in Nigeria. The objective of the study was to examine how capital structure influences financial performance of oil and gas companies in Nigeria. The study covered all the listed oil and gas companies in NSE for a period of 2014-2018. The relationship between capital structure and the financial performance of in the oil and gas companies was tested using multiple regression analysis. The finding revealed that a significant relationship exists between capital structure and the financial performance in the oil and gas companies in Nigeria. The study concluded that there was a positive relationship between capital structure and financial performance of oil and gas companies in Nigeria. The study recommended that management of oil and gas companies in Nigeria should leverage on short-term debt to sustain their financial performance. Karuma, Ndambiri and Oluoch (2018), investigated the effect of short-term debt, long-term debt, interest

rates and corporation tax rates on the financial performance of manufacturing firms listed in Nairobi Securities Exchange for a period of five years from 2013-2017. The objective of study was to investigate the effect of debt financing on financial performance of manufacturing firms in Nairobi Securities Exchange. The study employed the use of multiple linear regression models in considering the relationship between one dependent variable and more than one independent variable. The study used descriptive statistics, correlation, and regression analysis to analyze the data. Also, Statistical Package for the Social Sciences (SPSS) software was used for the data analysis. Accounts payable, bank overdraft and debenture were found to be significant to Return on Assets (ROA). Bank loan together with interest payments were found not to be significant to ROA. While interest on tax was found to be significant to ROA, Expenses deductibles were found not to be significant to ROA. The study concluded that there was a significant relationship between account payables and ROA and listed manufacturing companies should be aware of this relationship. Listed manufacturing companies should rely more on issue of debenture as debt financing option to increase their ROA. The study recommended that manufacturing companies listed on the NSE should formulate policy that manage their accounts payables as this led to higher ROA and increase the use of debenture as a long-term source of financing option.

Abeywardhana and Magoro (2017), investigated how the debt capital of the listed companies operating in the wholesale and retail sectors of South Africa and Sri Lanka affect their financial performance. Objective of this study was to examine whether debt capital affects the financial performance of the wholesale and retail sector companies in South Africa and Sri Lanka companies. The period of the study was 2011-2015. Fixed-effects (within) regression model were deployed for data analysis. The findings of the study revealed that short-term debt and long-term debt, have a significant negative impact on the financial performance of wholesale and retail sector companies in the South Africa. In the case of Sri Lanka, debt financing, in terms of short-term debt has a significant negative impact on firm performance, while long-term debt has a positive impact. The results of the study revealed that short term debt and long -term debt have a negative impact on the financial performance of wholesale and retail companies in South Africa while in Sri Lanka, short term has a negative impact on firms' performance and long- term debt has a positive impact on firms' performance. The study recommended that the South African wholesale and retail sector should use equity capital and retained earnings efficiently, which will help to minimizing conflicts of agency or agency costs and remaining independent of external financiers. In Sri Lanka, the owners and managers of the retail companies should reduce the use of short-term debt and rather increase long-term debt capital as long-term debt seems to influence positively their financial performances. Although, this study examined the effect debt capital on financial performance it focused on companies South Africa and Sri Lanka which operate in different climate to that of Nigeria this study findings might not be generalised to the Nigerian environment.

Akingunola, Olawale and Olaniya (2017), investigated the effect of capital structure decisions on firms' performance in Nigeria. Twenty –two (22) listed non-financial firms on the NSE were selected for the study for a period of 2011-2015. The independent variables were short-term debt, long –term debt and total debt, while the dependent variables were ROA and ROE. The data were analysed using pooled, fixed effect and random effects model. The findings revealed that short-term debt to total assets and total debt to total equity have significant negative effect on company performance while the same independent variables have significant negative effect on company performance. The study concluded that both short-term and long- term debt affect firms positively in area of their performance while having negative effect on debt holders. The study recommended that companies should include debts in their capital structure to boost the firms' performance for equity shareholders. This study was carried out in Nigeria, but the time span of five years is not sufficient for a good judgment.

Prempeh, Sekyere and Asare (2016), empirically investigated the effect of Debt Policy (Short-Term Debt, Long-Term Debt, and Total Debt) on firms' performance: empirical evidence from listed manufacturing companies on the Ghana Stock Exchange. The objective of this study was to investigate the effect of debt policy on firms, performance. Annual data were collected from five (5) manufacturing companies listed on the Ghana Stock Exchange (GSE) between years 2005 to 2015. The study employed panel data regression model to test if there was a significant relationship between the debt ratios and the performance indicators. The financial performance was proxies by Gross Margin Profit, Return on Assets (ROA), Tobin's Q Ratio, and Debt Ratios employed are (Short-Term Debt, Long- Term Debt and Total Debt) while Firm size and growth opportunity were considered as control variables. The results revealed that listed manufacturing firms in Ghana use less of equity of 14% and 86% of debt capital to finance their operations. The debt

structure is made up of 49% and 37% for long-term debt and short-term debt respectively. It was also found that debts (Short-Term Debt, Long Term Debt and Total Debt) have a negative effect on firms' performance. It is, therefore, recommended that listed manufacturing firms should increase the level of equity finance and exploit the advantages of leverage to increase their financial performance.

Theoretical Framework

Trade-off Theory

The propounded of this theory was Myers in 1984. 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). So optimal leverage minimises cost of capital and maximises 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 (Cotei, Farhat & Aburgi, 2011).

Pecking Order Theory

The theory of Pecking order was first suggested by Donaldson (1961) and was modified by Myers and Majluf (1984). The theory explains the implications that are brought about by information asymmetries that exist between outsiders and insiders of the firm (Bitok & Scholes 2011). According to the theory, due to asymmetry in terms of information between the managers of a given firm and the general investors, the investors are likely to under value the firm's new stock issued to the market. Asymmetric information affects the choice between internal and external financing and between the issue of debt or equity. Thus, the best way firms use to avoid this kind of problem is to utilize its own internal financial resources to finance its investments and operations of the firm. If the internal sources of finance are not enough to finance the firm's investments, then the firm can turn to debt financing. In cases where debt financing is not useful to the firm anymore (that is when the cost associated with debt financing is more that the benefits of debt financing), the firm can issue equity in form of stocks (Raza, 2014). Basically, this theory suggest that firms will prefer utilize debt rather than equity to finance its investments (Nyamita & Dorasamy, 2014).

The theory that underpinned this study is the theory of Pecking order which was first suggested by Donaldson (1961) and was modified by Myers and Majluf (1984). This theory explains the information asymmetries that affect the choice between internal and external financing and between the issue of debt or equity. Thus, recommended the best way for firms was the use of its own internal financial resources to finance its investments and operations, and when the internal sources of finance are not enough to finance the firm's investments, then the firm can turn to debt financing to enhance firms' performance.

METHODOLOGY

This study adopted the use of longitudinal survey. The longitudinal survey or panel study was chosen by the researcher as it aims at describing patterns of change in order to establish relationship between independent and dependent variables. The population of the study comprise of all the twenty-seven (27) consumer goods companies listed on the Nigeria Exchange as at 31st December 2020. A purposeful technique is used to select 15 of the companies as a sample for this study (This is attached in the appendix). This study used secondary sources of data. The data of the selected fifteen (15) consumer goods companies for the period of ten years from (2011-2020) were collected from secondary sources as contained in the published annual reports of the firms and Nigerian Exchange Fact Book. The data collected were analyzed using panel data regression analysis with the aid of STATA 14 package. This technique is in line with that adopted by Oyakhire (2019), and Prempeh, Sekyere & Asare (2016). The following multiple regression model is used to test the research propositions of the study:

$$NPM_{it} = \beta_0 + \beta_1 STD_{it} + \beta_4 FS_{it} + \beta_5 FA_{it} + \epsilon_{it}$$

Where:

NPM = Net Profit Margin

STD = Short-Term Debt

FS = Firm Size.

FA = Firm Age
 β_0 = Intercept
 B_1 - B_3 = Coefficients of independent variables,
 B_4 - B_5 = Coefficients of control variables
 ϵ = Residual or error term
 it = Firm I at time t

RESULT AND DISCUSSION

The results and analyses of the study are presented and precisely, the result of descriptive statistics is reported in Table 1.

Table 1: Descriptive Results

Variables	Mean	SD	Min	Max	Skewness	Kurtosis	N
NPTM	3.7912	13.499	-74.870	24.909	-3.122	16.384	150
STDA	0.4489	0.2045	0.07	1.5	2.221	11.886	150
FSIZE	7.5884	0.8156	5.35	8.74	-0.893	3.288	150
FAGE	31.766	14.0914	3	56	0.659	3.2436	150

Source: STATA 14 OUTPUT

Table 1 shows the descriptive of the panel data for all the variables involved in the study. There are 165 observations in the pane for the variable of six (4) for the fifteen selected consumer goods in Nigeria. The researcher covers a period of 10years (2011-2020). The average value of dependent variable (net profit margin) is 3.79%, the standard deviation which measure the dispersion shows that net profit margin (NPTM) of the consumer goods companies in the panel deviates from its mean around 13.49%. The minimum value for net profit margin is -74.87% while the maximum is 24.91%. Also for independent variables, the mean value for term short debt (STDA) is approximately 0.45 while the standard deviation is 0.20, this shows that is not great difference in the ratio of short term debts among the consumer goods companies in Nigeria. Also, this was supported by the minimum value of 0.07 and maximum value of 1.5 for short term debt as shown in the table above. The result of the normality test is shown in Table 2.

Table 2: Normality Test

Variables	W	V	Z	P-Values	N
NPTM	0.6965	35.316	0.081	0.0000	150
STDA	0.8320	19.543	6.739	0.0000	150
FSIZE	0.9264	8.555	4.866	0.0000	150
FAGE	0.9052	11.022	5.441	0.0000	150

Source: STATA 14 OUTPUT

The Shapiro-Wilk (W) test was conducted to check the normality of the data. Table 2 revealed that data the variables of the models are not normally distributed because the P-values of all the variables are significant at the level of 1% (p-values of 0.0000). Hence, spearman’s rank correlation will be adopted.

Table 3: Correlation Matrix

	NPTM	STDA	FSIZE	FAGE
NPTM	1.0000			
STDA	-0.1759	1.0000		
FSIZE	0.1958	0.0157	1.0000	
FAGE	-0.1259	0.0533	0.3513	1.0000

Source: STATA 14 OUTPUT

The above table shows the correlation between the dependent variable proxies by net profit margin, independent variable (short term debt) and the two control variables (firm size and firm age). The table shows that the independent variables are both positively and negatively associated with net profit margin of consumer goods companies in Nigeria. It shows

that short-term debt and firm age are negatively (-0.1759 & -0.1259 respectively) associated with net profit margin while firm age is positively associated with net profit margin.

Hypotheses Testing

Decision rule: Accept null hypothesis if the p-value of less than 0.05 and reject the null hypothesis when the p-value is greater than 0.05

The hypotheses formulated for the study are tested and analyzed from the results in table 4.

Table 4

<i>Variable</i>	Aprori Sign	Random Effects	Fixed Effects
<i>C</i>		19.2349 (12.0948) {0.112}	40.0890*** (14.1773) {0.005}
<i>STDA</i>	+	-37.6335*** (3.8235) {0.000}	-38.1120*** (3.8153) (0.0000)
<i>FSIZE</i>	+	0.8276 (1.6710) {0.620}	-0.2346 (2.1874) {0.915}
<i>FAGE</i>	+	-0.1520 (0.1329) {0.253}	-0.5479* (0.2836) {0.055}
<i>Model Parameters</i>			
<i>Wald Chi2</i>		99.62	-
<i>Prob. Chi2</i>		0.0000	-
<i>F-statistic</i>		-	34.78
<i>Prob(F-stat)</i>		-	0.0000
<i>R square</i>			0.3883
<i>Adjusted R²</i>			0.3758
<i>F statistics</i>			30.90
<i>Prob.</i>			0.0000
<i>Hausman</i>			0.0257

Source: STATA 14 OUTPUT

*** Sig @1%, ** Sig @5%, * sig @10%) standard error () p-value { }

Table 4 shows the regression results of the Random effects (RE) and fixed effects (FE) models. To determine which model is better, this research carried out the Hausman test for choosing the FE model versus the RE model. Meanwhile, the Hausman p-value is 0.0257 which indicates that the RE method may give bias and inconsistent estimators when compared to FE model and hence the FE is the preferred model. Hence the FE estimation results forms the basis for the analysis of the results for the study. As shown in the result at under model parameters both the probability for value for Wald test and F test was significant at 1%, this shows that the model is of a good fit and suggests that the hypothesis of a significant linear relationship between the dependent and independent variable cannot be rejected. It is also indicative of the joint statistical significance of the model.

As shown in the results, the R² for the model is 0.3883 which implies that the model explains about 38.8% of the systematic variations in the dependent variable with a degree of freedom adjusted the R² of 37.6%. The F-stat is 30.9 (p-value = 0.00) is significant at 5% and suggests that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

Table 5: Standard Error corrected for Fixed Effect Model

Variables	Model		
	Coefficients	P-Value	standard error
STDA	-38.1120	0.012	13.1583
FSIZE	-0.234	0.923	2.3973
FAGE	-0.5479	0.282	0.4892
CONS	40.08090	0.038	17.5308

Sources: STATA 14 OUTPUT

The Robust Standard error for fixed effect was employed to correct for potential heteroskedasticity in the estimation and hence the estimation results are free from heteroskedasticity. The above table shows the result after correction of heteroskedasticity in the model. The analysis of coefficients reveals that short term debt have a negative (-38.1120) and significant ($p= 0.012$) at 5% level of significance. Based on the decision rule stated above the p-value is less than 0.05 therefore, the null hypothesis is rejected that short-term debt has no significant effect on net profit margin of listed consumer goods firms in Nigeria and accept the alternative hypothesis is accepted that, short-term debt has significant effect on net profit margin of listed consumer goods firms in Nigeria Although the control variable does not have any significant, FIZE (-0.2346) and FAGE have (-0.5479).

Table 6: Panel Regression Diagnostics (Post estimation test)

Multicollonriarity: VIF <i>Vif</i>	1.09
Serial Correlation: Wooldridge test <i>F stat</i> <i>Prob.</i>	2.509 0.1355
Heteroskedasticity Test: Breush-Pagan <i>Chi2</i> <i>Prob. Chi-Square</i>	56.12 0.000

Source: STATA 14 OUTPUT

The panel regression diagnostics is presented in the table above. Variance inflation factor was employed to test for multicollonriarity, the result shows that there is no multicollonriarity because the value (1.09) is less than 10. Also, Wooldridge test was used to test for serial correlation, the value for p was not significant (0.1355) this confirm that there is absence of serial correlation. Finally, the Breush-Pagan test was employed for heteroskedasticity, the probability value of chi (0.0000) confirms that there was heteroskedasticity in which the standard error corrected model has been used to correct this.

Discussion of Findings

From the above result, it was discovered that short time debt has a negative and significant relationship on net profit margin, this means that short term debt can reduced the net profit margin of companies and this call for proper management of this type of debt financing because it may not be possible to avoid it totally because of some other benefit among others are easy accessible, avoidable requirement of getting them and so on. It also mean that other debt financing can be considered better for the companies. Therefore, company’s management should make sure there is proper monitoring of their debt financing and use appropriate ones that will enhance better net profit margin. The negative and significant relationship that exist between shorter debt and net profit margin was supported by the work of Prempeh et al 2016 and Ahmed (2020) but contradict that of Oyakhile (2019).

CONCLUSION AND RECOMMENDATIONS

In Conclusions were established that short term debt has a negative and significant effect on net profit margin. This means that capital structure has a significant effect on performance of consumer goods companies in Nigeria. The study

concludes that the ratio of short-term debt should not be too much so as to avoid reduction in the value of net profit margin. This means that if the short-term debt is not well managed, it will increase the interest to be paid during the accounting years and automatically reduce the net profit for the periods. Given the foregoing, the following recommendations were proffered from the findings of this study:

- i. The management of listed consumer goods firms in Nigeria should take the issues on capital structure with great concern, with particular attention on short term debt as a very serious matter that needs professional attention to increase their profit margin and achieve a better performance that can keep the going concern concept of the company.
- ii. The management of listed consumer goods firms in Nigeria should work assiduously to have optimal capital structure of their companies to increase their return on net profit margin.

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