



Capital Structure, Accounting And Market Performance Of Consumer Goods Firms In Nigeria

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ABSTRACT

The objective of the study was to determine the nature of relationship between capital structure and accounting and market performance of consumer goods firms listed on Nigeria Stock exchange between 2017 and 2022. Ex-post facto and cross sectional research design and census sampling method were used in the study because of reliance on secondary data and a cross section of consumer goods firm were being studied. Total Debt–Total asset ratio, Long term debt–Total asset ratio and Total debt–Total Equity ratio were proxies for Leverage while Return on assets, Return on Equity were accounting measures. Market performance measures were enterprise value and market capitalization. Hausman test was used to determine model appropriate for the study. Multiple Regression Generalized least square method was used to determine nature of relationship. Various classic assumption test were carried out on data. Result revealed different spectrum of leverage relates differently with performance measures used in the study. LTD/TA type-2 leverage and Debt to equity –Type 3 leverage significantly and positively impact Returns on Assets and market capitalization while TD/TA Type-1 Leverage significantly impact Returns on equity and enterprise value and insignificantly impact Returns on Assets and Market capitalization. Type -3 leverage significantly impact ROA, Enterprise value and market capitalization. LTD/TA has significant negative effect on enterprise value. Also, LTD/TA and TD/TE insignificantly affect ROE. Based on findings we conclude no monotonic relationship between variables of study. However, the study revealed that leverage have positive impact on both market and accounting measures of performance. We recommend that Managers should exercise caution while using debt in capital structure despite the positive relationship between leverage and performance.

Keywords: Market performance, Nigeria Stock exchange, consumer goods firms

INTRODUCTION

All business entities seek profit and value maximization, which can be achieved through cost reduction strategies and identification of the appropriate source of funding which is most suitable to achieving the overall objective of the enterprise. Financing the business can be accomplished through internal and external funding arrangement. Internal funding require finance from retain earnings and reserves as well as right issue from existing shareholders to prevent share dilution. However, external funding require borrowing short term or long term to fund the activities of the business. Firms use a combination of internal and internal finance resources to fund operating, financial, and investing activities, representing their capital structure.

Firms face diverse decision-making dilemma and funding decision-making for financing of various projects and processes is one of the most essential decisions. Capital structure refers to how a company supports its activities via the use of bank loans, equity or both. Brigham & Houston (2015) it is the various alternatives used by a corporation in financing its assets. A suitable capital structure, with several sources of financing (debt and equity), enhances appropriate financing mix and enable firms to achieve the desired goals and increase value of the business. Richard and Robins (2006), observe that the goal of the firm is to maximize shareholders' wealth but that equity is riskier than debt and a rational investor will expect a higher rate of return on equity or market value, therefore it is not

appropriate to ignore taxation and cost of financial distress as any financial decision taken will affect the firm capital structure. Optimal capital structure play an important role in maximizing shareholder wealth and also a very determinant of firm market value or share price of a firm. Pandy (2005) posit that the primary motive of a company using financial leverage is to magnify the shareholder fund under favorable economic conditions. The basis of his assumption is that fixed charged fund obtained from financial institutions attract lower cost compared to the firm's rate of return on net asset. Thus when there is a disparity between the earnings generated by assets financed by debt funds and the cost of these funds is distributed to the shareholders, the earnings per share (EPS) or return on equity (ROE) increases there by increasing the market value of the firms. Modigliani and Miller (1958) in another submission posited that, the value of the firm remains constant regardless of the debt level, increases in debt level is equally matched with increases in cost of equity just enough to have weighted average cost of capital (WACC) constant therefore causing the cash flow generated to be only influence on the value of the firm thereby rendering capital structure irrelevant. According to them the firm can only increase the wealth of shareholder by making good investment decisions.

It is a necessity that firm managers try to achieve an optimal capital structure which ensures efficiency of the firm at optimum level. Manager should select capital structure that maximizes market value of the firm's shares. William (2006), suggested that corporate managers should try to achieve lowest possible cost of financing, so that shareholders could confidently entrust their saving to firms that guarantee maximum return for minimum risk. Existing shareholders should consider the uses of debt as good news and bad news. However prior studies indicate that share price rise when a firm announces leverage increase, such that debt for equity exchange affect debt financed, cash tender offers during acquisition of firms. He further suggested that leverage decreases involving payment with a firm's owns share is always associated with share decline

On the other hand, to evaluate the extent of increase in value by a business firm over a given period of time certain performance measures which involve use of capital assets and income generation must be used. To properly situate the issue of capital structure diverse conflicting theoretical postulations have been made and is still a contemporary issue being discussed by scholars, practitioners and business regulators in an attempt to properly determine the optimal strategy of funding profit oriented business entities that will ensure operational expansion and performance enhancement (Aggarwal & Padhan, 2017). Prior studies on the subject of capital structure produced conflicting results. However, despite the conflicts in findings of these studies, there is a reasonable agreement by many studies that capital structure can affect performance. A firm's financial performance and value can be affected by its decision to select a suitable capital structure, while an unwise choice could put the business at risk of financial crisis and bankruptcy (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007; Rehman, 2016; Singh & Kumar, 2012. Though the importance of capital structure on firm performance has been identified, the direction of its impact on a firm performance however is a subject of debate. Whilst many studies conclude capital structure is positively related to performance (Ajayi and Araoye (2017); Olokoyo (2012); Simon – Oke and Afolabi (2011); imalthasan & Brabeta (2010); Roden and Lewellen (1995); Ghosh and Jain (2000); Hadlock and James (2002); Abor (2005); Gill, Biger, and Mathur (2011) Nirajini and Priya (2013) other studies conclude a negative relationship (Aziz and Abbas (2019) Uremadu and Onyekachi (2018); Ayunku (2019); Ashraf et al. (2017); Ahmed (2017) Kooragama et al. (2017). Mauwa et al., (2016) (Kester (1986); Titman and Wessels (1988); Rajan and Zingales (1995); Fama and French (1998); Shubita and Alsawalhah (2012); ; Khan (2012); Sadeghian); Arulvel and Ajanthan (2013); Dawar (2014); Cheruyot and Ntoiti (2015). Abor (2005) this study is therefore motivated by this conflicts to try to ascertain the nature of relationship between capital structure and firm performance in the Nigeria Context.

REVIEW OF LITERATURE

Theoretical Framework

Frictionless theory

The frictionless theory of capital structure propounded by Modigliani and Miller forms the springboard of discussion on capital structure theory. Modigliani and Miller (1958) explained that the firm's choice of financing is irrelevant to the determination of its value. They suggested a frictionless capital market exist where individuals can lend and borrow at risk-free rate, without bankruptcy costs and firms can issue risk-free debt and risky equity. Also, all firms were assumed to exist in the same risk class, no growth and no agency costs, expectations are homogeneous and there is no information symmetry. They further enthused in their first proposition that the value of a firm is anchored on its real assets. Therefore $V^L = V^U$ where V^L is the value of the levered firm, and V^U that of the unlevered firm. It was further suggested that a firm cannot change the total value of its securities by splitting its cash flows into different streams. In this form, the MM Proposition I, the principle of value addition is reverse, and is known as law of conservation of value: thus, the value of an asset is preserved regardless claims against it (Brealey, 1988). Coase (1960) in furtherance of the MM proposition opined that in the absence of contracting costs and wealth effects, the assignment of property rights leaves the use of real resources MM further argued that in respect of cost of capital the average cost of capital to any firm is completely independent of its capital structure and is equal to the capitalization of a pure equity stream of its class. This view however proposed by MM agrees with net operating income assumptions although with a rigorous proof

1) b) With risky debt:

By varying only, the assumption of risk-free debt to take into account risky debt, the same propositions can be shown to hold good. Stiglitz (1969) used the state-preference framework to prove this. Rubinstein (1973) proved this in a Capital Asset pricing model (CAPM). Given the "pure" MM assumptions, therefore, there can be no optimal capital structure for a firm. Modigliani & Miller (1958) using cross-section equations on data taken from 43 electric utilities during 1947-1948 and 42 oil companies during 1953 found that there is no gain from leverage, lending support to their theory

Modigliani and Miller's Proposition 2

The original MM Proposition 2 can be slightly rephrased as: The expected rate of return on equity of a levered firm increases in proportion to the debt-equity ratio, expressed in market values (Brealey, 1988: 391). Therefore,

$$k_e = r + (r - k_d) \frac{B}{S}$$

where k_e is the cost of equity, r is the discount rate for an all-equity firm, ΔB is the change in B, i.e., change in the market value of debt, ΔS is the change in S, i.e., change in the market value of stock, or stockholders' wealth. Hamada (1972) combined the Modigliani-Miller theory and the CAPM to test this proposition (Copeland). Ultimately, he was able to derive indirect evidence to confirm that the cost of equity does increase with higher financial leverage.

2.1.2 Agency Theory

Agency theory developed by Jensen and Meckling (1976) is anchored on the principal agent conflict where there is deviation from the goal of the enterprise/principal by the agents to satisfy selfish interest. To curtail this divergence the theory suggest an optimal debt level in capital structure by minimizing the agency costs arising from the divergent interest of managers with shareholders and debt holders. Jensen and Meckling (1976) suggest that either ownership of the managers in the firm should be increased to align the interest of managers with that of the owners or use of debt should be motivated to control managers' tendency for excessive perk consumptions. Jensen (1986) presents agency problem associated with free-cash flow. He suggests that free cash flow problem can be somehow controlled by increasing the stake of managers in the business or by increasing debt in the capital structure, thereby reducing the amount of "free" cash available to managers..

2.1.3 Signalling Theory

Ross (1977) laid down the foundations of signaling theory and its various extensions. He assumes that managers being the insiders have a better knowledge about the true distribution of future returns of the firm whereas investors do not. According to Ross, investors interpret larger levels of leverage as a signal of the firm's current stable income, high future cash flows and managers' confidence about the performance of their own firm. Accordingly, Ross (1977) concludes that investors take larger levels of debt as a signal of higher quality and that profitability (as a proxy of quality performance) and leverage are thus positively related.

2.1.4 Pecking Order Theory

Pecking order theory, suggested by Myers and Majluf (1984) captured the effect of asymmetric information upon the mispricing of new securities. The theory suggests that there is no well-defined target debt ratio. Investors generally perceive that managers are better informed of the price sensitive information of the firms. Investors' perception is such that managers issue risky securities when they are overpriced. This perception of investors leads to the underpricing of new equity issue. Sometimes this underpricing becomes so severe that it causes substantial loss to the existing shareholders. To avoid the problem arising from information asymmetry firms fulfill their financing needs by preferring retained earnings as their main source of financing, then debt and finally external equity financing as a last resort. Capital structure is thus arranged by a hierarchy of preferences for the issuance of new capital. Titman & Wessels (1985) study shows that more profitable firms will tend to use less external financing and provides support for the pecking order theory. Event studies show that issue of equity is interpreted as bad news by the market, with significantly negative announcement date effects on equity prices (Masulis & Korwar, 1986), Asquith & Mullins, 1986), Kolodny & Suhler (1985) and Mikkelson & Partch, 1986]. This is consistent with the "pecking order" theory. Therefore, firms will resort to equity issues only as a last resort

2.1.5 Trade Off Theory

According to this model, optimal capital structure does exist. A firm sets its target debt level and then gradually moves towards it. This theory asserts that a firm's optimal debt-equity ratio is achieved at the point when the marginal present value of the tax on additional debt is equal to the increase in the present value of financial distress costs. Under this theory, a firm's target leverage is driven by three competing forces: (i) taxes, (ii) costs of financial distress (bankruptcy costs), and (iii) agency costs. Both tax-based and agency-cost-based models belong to the static tradeoff models as supported by Kraus and Litzenberger (1973).

2.2.0 Conceptual Framework

According to Creswell (2003) categorization, mapping and description of concepts and inter relationships amongst variable of study can be depicted through conceptual framework. The framework assist the researcher to establish the research, scope, identify gaps in literature and establish relationships among the concepts of study.

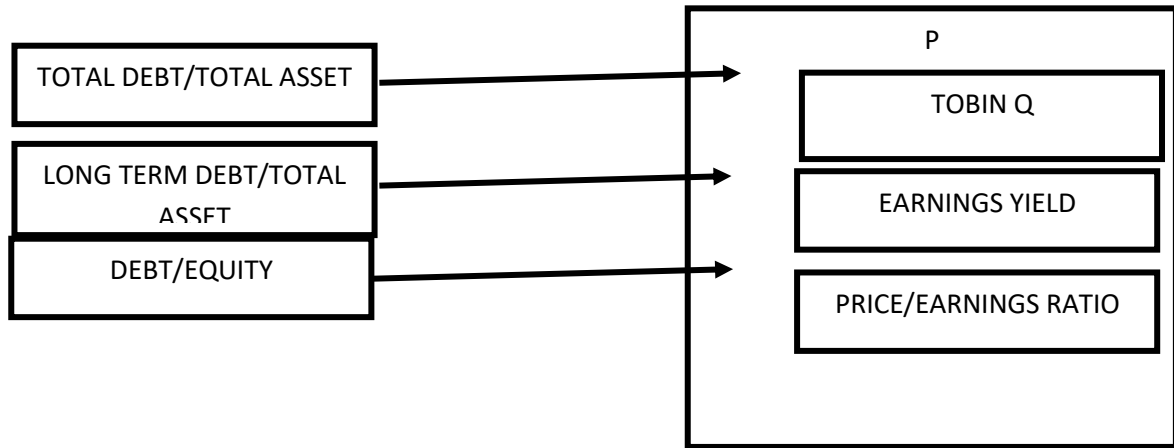


Fig 1: Conceptualized Framework of Capital Structure and Financial Performance of Manufacturing firms in Nigeria

Empirical Review

Alamgir et al. (2019) in a study of capital structure of listed Romanian constructions sector firms in the Bucharest Stock Exchange using cross-sectional regressions on capital structure indicators as long and short-term debt, optimal debt and equity ratio with firm’s financial indicators as return on assets and return on equity. Result showed that the financial performance was higher when manufacturing companies avoid debt rather than equity. A panel data estimation was developed through using 20 companies and period selected between 2009 and 2011. Result indicate capital structure is negatively affected by profitability and liquidity ratios. Aziz and Abbas (2019) examined the effect of debt financing on firm performance in a study on 14 non-financial sector of Pakistan with a sample size of three hundred and sixty (360) companies were selected for the study for the period (2006 to 2014). Result revealed debt financing have significant negative impact on performance. Adeoye and Olojede (2019) carried out an empirical investigation on the effect of capital structure on financial performance of listed banks in Nigeria using a cross sectional time series secondary data covering the period of seven years (2012-2018) on information obtained from s sample size of nine banks. The descriptive statistics, Pearson moment correlation and multiple linear regressions were used. The correlation results revealed that capital structure is negatively correlated with financial performance (ROA and ROE). Salam and Shourkashti (2019) examined the relationship between capital structure and firm performance in emerging market using non-financial public listed companies in Malaysia from 2005 to 2016 The study revealed a reverse relationship between capital structure and firm’s performance in Malaysian companies as emerging market and also confirm the existence of an inverted U-shaped relation between them.

Yinusa et al. (2019) carried out an empirical investigation on the impact of capital structure on firm performance of 115 listed non-financial firms in Nigeria using dynamic panel model and the two-step generalized method of moments (GMM) estimation method that recognizes the persistence of the dependent variable by including its lag value as an explanatory variable in the regression model. The study revealed that there exists a statistically significant relationship between capital structure and firm performance particularly when debt financing is moderately employed. However, the study revealed evidence of non-monotonic relationship between capital structure and firm performance when firms in Nigeria employed excessive debt financing which impinged on the performance of firms. Ayunku (2019) empirically examined the effect of capital structure on performance of microfinance banks in Nigeria. The population of the study consist of thirty-nine (39) microfinance

banks in Nigeria. Result showed negative and insignificant relationship between Debt to equity ratio and return on equity, a positive and insignificant relationship between Long term debt ratio and return on equity and a positive and significant relationship between Total debt ratio and return on equity. Olarewaju (2019) studied the dynamic relationship between capital structure and quoted manufacturing firms' performance in Nigeria from 1990-2016 using sample size of thirty (30) firms. The study used panel unit root test to verify the stationarity property of the data, while Padroni cointegration tests and Panel Vector Error Correction Method (PVECM) were employed to examine the equilibrium among the variables as well as to analyze the data. The study revealed that there is evidence of long run relationship between capital structure and firms' performance in Nigeria. Also, the study revealed that, throughout the period i.e. both in the long run and short run, except itself, none of the variables' shocks in the system significantly accounts for variations in the returns on asset (ROA), given variance error decomposition's statistics.

Ahmed et al. (2018) examined the relationship between capital structure and performance of deposit money banks in Nigeria using a sample size of 12 banks for the period 2007- 2016. The study revealed a positive relationship with financial performance measured by Net Interest Margin (NIM). Nenu et al. (2018) carried out an empirical investigation on the impact of capital structure on risk and firm performance in Romania for the period 2000—20 16, which covers a cycle with significant changes in the Romanian economy debt structure negatively impact corporate performance, whether this calculated on accounting measures or seen as market share price evolution. Uremadu and Onyekachi (2018) carried out empirical investigation on impact of capital structure on corporate performance in Nigeria with special focus on consumer goods listed on the Nigeria stock exchange between 2002 to 2016. Study revealed a negative and insignificant impact of capital structure on corporate. Long-term debt ratio to total asset had a negative and insignificant impact on returns on assets, while total debt ratio to equity also had a negative and insignificant impact on returns on assets. Mursalim and Kusuma (2018) evaluated the determinants of capital structure of Malaysia, Thailand and Indonesia. Variables used were gross domestic product (GDP rate), corporate governance, growth opportunity, volatility, profitability, firm size, inflation rate using the two stage least square regressions. The findings revealed that company's profit, size of the firm and volatility has consistent and significant roles in trying to explain the changes that occur in capital structure composition.

Chandra and Udhayakumar (2018) examined the impact of capital structure on firm performance in India. The study focuses on wholesale trading and manufacturing industry especially those listed in the Bombay Stock Exchange (B SE) for a time period of five (5) financial years from April 2012 to March 2017. Panel data model for the period financial year 2012 to 2017. A Sample of two thousand, one hundred and twenty-one (2121) wholesale trading and manufacturing companies listed in Bombay Stock Exchange (BSE) were selected for the study. Capital structure was measured by leverage while firm's performance was measured by Earnings before Interest and Tax (EBIT) and Return on Assets (ROA). Panel Regression analyses was used to analyze the data gathered. The study revealed that leverage is not significantly affecting the firm's performance.

Ezenwakwelu (2018) carried out an empirical investigation on capital structure and commercial banks performance in Nigeria.. The study revealed that capital structure has no significant effect on return on equity, return on assets and earnings per share of commercial banks in Nigeria. However, commercial bank size had a significant effect on earnings per share. Run and Omagwa (2018) examined the relationship between capital structure and financial performance of small and medium enterprises in Embu County, Kenya. The study revealed that Equity capital and Debt capital has a significant effect on financial performance of the SMEs studied due to a p-value of 0.02 1 and 0.020 respectively with the significance level being 0.05. However, retained earnings were found not to have a significant effect on financial performance of the SMEs studied since the p-value was 0.797. Among the three variables Equity capital had greatest proportion in terms of contribution towards capital structure due to its advantage to the firm

Ashraf et al. (2017) carried out a study on the impact of capital structure on firm's profitability a case of consumer goods industry of Pakistan from 2006-to-2015. The firm's profitability was measured by ROA and ROE, while capital structure determinants like, debt equity ratio (DER), interest coverage ratio (ICR), debt Ratio (DR), short term debt ratio (STDR), and long-term debt ratio (LTDR) were

used. The study revealed that debt ratio and long-term debt ratio have significantly negative relationship with return on asset (ROA) and return on equity (ROE), while short term debt have significantly positive link with ROA and ROE. It is concluded that consumer goods industry of Pakistan used more debt to funding their resources. This means that firm's interest expenses increased and profitability decreased, so firm managers needs to pay a proper concentration deciding about capital structure.

Ajayi and Araoye (2017) examined the effect of capital structure on the financial performance of manufacturing firms in Nigeria. The secondary data were extracted from the published annual reports of ten sampled manufacturing firms for the period 2008- 20 14. The study revealed that debt-equity ratio has a negative but statistically significant effect on financial performance However, the study also revealed that the debt-equity ratio has positive and insignificant effect on financial performance.

Ahmed (2017) carried out a study on capital structure and firm performance in Pakistan a moderating role of business strategy and competitive intensity. The data of 333 listed non-financial firms of Pakistan over the period of eight years (2006-20 13) was selected for the final analysis. The results of the study depicted that capital structure negatively and significantly influence the accounting measures of performance whereas the relationship between capital structure and market performance (Q ratio) was significantly positive. Hamyat et al., (2017) examined the effect of firm size and diversification on capital structure and firm value in Indonesia Stock Exchange. The results revealed no effect of capital structure on Firm's value.

Amenawo and Offiong (2017) examined a relationship between Capital Structure and the Performance of Quoted Companies in Nigeria. The result revealed that Capital mix has a significant relationship with the earnings per share of quoted firms in Nigeria. Debt equity ratio has a significant positive impact on the return on assets of quoted companies in Nigeria and debt asset ratio has a significant inverse relationship with the return on assets of quoted companies in Nigeria. Also, debt equity ratio has a significant inverse impact on the return on equity of quoted companies in Nigeria and debt asset ratio has a significant positive impact on return on equity of quoted companies in Nigeria and concluded that quoted companies in Nigeria should invest their profits when there are good investment opportunities and pay cash dividend as soon as enough income is generated

Kooragama et al. (2017) carried out a study on the impact of capital structure on performance of listed manufacturing companies in Sri Lankan. The study revealed that leverage of a company is negatively related with firm's performance.

Mauwa et al., (2016) carried out an empirical investigation on the effect of capital structure on financial performance of firms listed on the Rwanda stock exchange. The regression results indicated that the relationship between capital structure and both ROA and ROE is negative and significant. This means that the association between capital structures and both ROA and ROE is negative and capital structure explains a larger change in ROA than in ROE. The study therefore concluded that capital structure is negatively and significantly related to financial performance of firms listed at the Rwanda stock exchange.

Chadha and Sharma (2016) examined the impact of capital structure on firm performance in India. A sample size of 422 listed Indian manufacturing companies on Bombay Stock Exchange (B SE) was taken to analyze the relationship between leverage and firm performance. A period of 10 years from 2003—2004 to 2012—2013 The study revealed that financial leverage has no impact on the firm's financial performance parameters of return on asset and Tobin's Q.

3.1 METHODOLOGY

The research is based on ex-post facto design for a period of seven years 2015-2022. Secondary data for the study was obtained from firms' financial statement and website for the period of the study. The population of the study consist of all firms listed on the Nigeria Stock Exchange. However, the study adopted cross-sectional ex-post facto design since only the sub sector of consumer goods firms was considered. Census method was deployed for the study and it required no sample size determination. The entire firms in consumer subsector were considered because of the contribution to the economic development of Nigeria. These are firms with complete data for the study. Firms with incomplete information were eliminated to avoid pollution of data. The sample size represent ninety five percent of the firms in the Consumer firms subsector in terms of number, size of assets and

market capitalization. Multiple Regression method was used to establish the nature of relationship between leverage and financial performance. Various classic assumption test was conducted on the data set to ensure robustness of the result of the study.

3.2 Variables

Three strands of measurement of capital structure was adopted in the study namely: total debt/total asset, long term debt/total asset and Debt/Equity while The dependent variable for this study are returns on asset, returns on equity, enterprise value and market capitalization

The proxies of capital structure and financial performance of the firms are summarized on the table below:

Summary of Variables of the study

Variables	Proxies	Expected sign
Independent		
Leverage type 1	Total debt/Total asset	positive
Leverage type 2	Long term debt/Total Asset	Positive
Leverage type 3	Debt/Equity	Positive
Dependent		
ROA	$\frac{\text{Earnings before interest and taxes}}{\text{Total Assets}}$	Positive
ROE	$\frac{\text{Earnings before Interest and Taxes}}{\text{Shareholders' Equity}}$	Positive
Enterprise Value to sales ratio	Enterprise value divided by sales. Enterprise value is calculated as the market capitalization <i>plus</i> debt, minority interest and preferred shares, minus total cash and cash equivalents.	Positive
Market Capitalization	No of issued shares multiplied by market price	Positive

3.3 Test and Selection of Model

Hausmann Test is used for selection of model. HT is a method use in selecting between two alternatives; fixed and random effects. The criteria is that random effect is a null hypothesis while fixed effect is the alternate. The test follows a statistical distribution chi square with degree of freedom as many as K. K represents number of independent variables. When the null form is rejected where the value of statistics is greater than the critical value (the value of the table chi square) then fixed effect is utilized conversely reject fixed effect and accept random effect. Random effect model is utilized when interconnection of variable disorder occurs between time and individuals. RM assumes that a variable disorder composes of dual components which are first variable disorder that is a combination of time series and cross section and second variable disorder individually. It assumes that unobserved effect does not correlate with one or more independent variables. If on the fixed effect model, the disparity between individuals or time is shown on the intercept, then RM can be tolerated by error. Individual components of the error do not correlate with each other and no autocorrelation in the data both cross-unit data and time series. Fixed Effects model uses the relationship between predictor and outcome variables within an entity. Each entity has its own individual characteristics that may or may not influence the predictor variables. Fixed Effects model assumes that something within the individual may impact or bias the predictor or outcome variables and this should be controlled. There is an assumption of the correlation between entity's error term and predictor variables. Fixed Effect removes the effect of time-invariant characteristics and assesses the net effect of the predictors on the outcome variable. Fixed Effect assumes that the time-invariant characteristics are unique to the individual and should not be correlated with other individual characteristics. Each entity is different therefore the entity's error term and the constant which

captures individual characteristics should not be correlated with the others. If the error terms are correlated, then FE is not suitable and can lead to incorrect inferences.

3.4 Classic Assumption Test

The study carried out various diagnostic tests. The test in the study are multicollinearity test, heteroscedasticity test, autocorrelation test, normality test, and linearity test.

3.3 Model specification

$$ROA = \alpha_0 + \alpha_1LEV1 + \alpha_2LEV2 + \alpha_3LEV3 + U_{1,t} \quad (i)$$

$$ROE = \beta_0 + \beta_1LEV1 + \beta_2LEV2 + \beta_3LEV3 + U_{2,t} \quad (ii)$$

$$ENVA = w_0 + w_1LEV1 + w_2LEV2 + w_3LEV3 + U_{3,t} \quad (iii)$$

$$MCP = x_0 + x_1LEV1 + x_2LEV2 + x_3LEV3 + U_{3,t} \quad (iv)$$

4.1 RESULTS

4.1.1 Descriptive Statistics

Table 4.1 presents annualized mean, annualized standard deviation and other summary statistics on the financial performances of the selected firms and the other variables in Nigeria. The descriptive statistics show that, for the performance variables. Average ROA is lower than average ROE for the firms, although the standard deviation of ROE is quite high at 3.23 which shows that there was wide variations in the performance of ROE among the firms or over the years. This is also confirmed by the high skewness value of 4.39, which suggests a very positive skewness among the data and show that much of the ROE values for the firms actually lie below the reported average value in the Table..

Table 4.1: Descriptive Statistics of the Data

	Mean	Med	Max.	Min.	S.D.	Skew	Kurt	J-B	Prob.
ROA	0.09	0.07	0.38	-0.30	0.11	-0.25	3.92	4.64	0.10
ROE	0.27	0.21	3.23	-0.50	0.49	4.39	27.25	2827.12	0.00
ENVATT	1.32	1.02	6.08	-0.38	0.91	2.18	9.73	273.57	0.00
MCP	9.93	10.10	15.13	4.15	2.75	-0.05	2.25	2.41	0.30
TD/TA	0.54	0.57	1.50	0.19	0.18	1.31	10.23	251.30	0.00
LTD/TA	3.11	3.06	5.93	-0.94	1.78	-0.22	2.17	3.72	0.16
TD/TE	-8.34	0.06	0.80	-855.79	84.74	-9.95	100.01	41675.50	0.00

Source: Author's computations

Average ENVA value is 1.32 and average MCP is 9.93. For the explanatory variables, average leverage is 0.54, which shows that over 50 percent of the assets of most of the firms is made up debt instruments. The standard deviation of 0.18 is relatively low, suggesting that the leverage of the firms are evenly distributed, though the skewness value of 1.31 shows slight leaning towards lower values of the mean reported. Average Lev2 (LTD/TA) is 3.11. Average leverage 3 (TD/TE) in assets is negative at -8.34, The J-B tests for each of the categories are high and easily passed the significance tests at the 1 percent level indicating that the datasets are non-normally distributed. These show clear cases of heterogeneity in the data sets across the firms. Essentially, the non-normal distribution shows that there are strong firm-specific influences on the outcome of each of the performance and leverage datasets reported on the table.

4.2 Correlation Analysis

The correlation Table for leverage performance variables in the study is shown below. From the Table, it is seen that, apart from ENVA, positive correlations exist among all the performance variables in the study. This shows that when each of the performance indicators among the firms are increasing, leverage are also increasing. Thus, all performance indicators, apart from ENVA, move in

the same direction. However, ENVA has a negative correlation with ROA and ROE. Indeed, the negative correlation between ENVA and ROE and ROA is significant and shows that when ROE or ROA are rising in the firms, ENVA is falling at the same time. Moreover, the correlations among the variables are significant (at least at the 5 percent level).

Table 4.2: Correlation Matrix for performance variables

	ROA	ROE	ENVATT
ROA			
ROE	0.25		
	0.01		
	0.66	0.36	
ENVA	-0.24	-0.22	
	0.01	0.03	
LMCP	0.30	0.14	0.25
	0.00	0.16	0.01

The correlations among the different strands of leverage among the firms are also presented in this section. This correlation analysis helps to present the initial patterns of relationship among the independent variables and also to consider the level of multicollinearity among the explanatory variables. It should be noted the multicollinearity may occur in estimates where the correlations among independent variables are very high, thereby rendering the estimated coefficients highly inefficient and biased. From the correlation matrix in Table 4.3, it can be seen that the correlations among each of the variables are very low, more importantly, the low correlation among the variables shows that the problem of multicollinearity among the variables would not arise since all the variables are shown to exhibit less relationships among each other.

Table 4.3: Correlation Matrix for Leverage variables

	LEV	LEV2	LEV3
LEV2 L	0.09		
	0.38		
LEV3	0.12	0.23	
	0.23	0.02	

In general, the correlation matrix shows that LEV1 (TD/TA) has a positive correlation with LEV2 (LTD/TA) and LEV3 (TD/TE), while LEV2 (LTD/TA) also has a mostly positive correlation with other variables. An important positive correlations exist between LEV2 (LTD/TA) and LEV3 (TD/TE)

4.3 Cross-section Dependence Test

Given that the number of cross-sectional units in this study is greater than the time), the standard Breusch and Pagan (1980) LM test for cross-equation correlation is also appropriate for testing cross-sectional dependence in a panel data model (Baltagi, Feng & Kao, 2012). Thus, for this study, we also adopt the cross-sectional dependence (CD) test developed by Pesaran (2004) which uses a pair-wise average of a sample correlation to test the existence of cross-sectional dependence.

Table 4.4: Cross-section Dependence Test Results

Variables series tested	Pesaran CD	P-value	Breusch-Pagan LM	P-value
ROA equation	3.28	0.00	275.4	0.00
ROE equation	3.04	0.01	277.6	0.00
ENVA equation	6.03	0.00	293.5	0.00
MCP equation	9.39	0.00	337.6	0.00

Source: Author's computations

The results of cross-section dependence test are reported in Table 4.4. From the result, it is seen that the Pesaran CD test and Breusch-Pagan LM test for each of the equations on firm performance pass the significance test at the 5 percent level, suggesting the absence of cross-sectional dependence for

the estimation structure. The absence of cross-sectional dependence implies that the estimations are efficient even with heterogeneous operational structures among the firms in the sample. Apparently, the test above reject the null of presence of cross-section dependence.

4.4 Empirical Results on the Panel Analysis

The standard test for the method of panel analysis to adopt is the Hausman test for random effects. For this test, the null hypothesis is that that a random effect does not exist in the cross sections of the data. Thus, if the coefficient of the Chi-square is significant, the null hypothesis is rejected, then the random effect estimates become inefficient in capturing the relationships in the Equations. The results of the Hausman test is presented below and indicates that the null hypothesis is rejected for both the each of the Equations. From the Hausman test results, the statistic provides little evidence against the null hypothesis that there is no misspecification when the fixed effect model is employed for the performance Equations. Hence, the best method to apply is the Fixed-effect strategy.

Table 4.5: Hausman Test for Cross-Section Random Effects

<i>Model</i>	<i>Chi-Sq. Statistic</i>	<i>Chi-Sq. d.f.</i>	<i>Prob.</i>
<i>ROA equation</i>	12.25	8	0.016
<i>ROE equation</i>	13.47	8	0.00
<i>ENVA equation</i>	21.11		0.00
<i>MCP equation</i>	13.37		0.00

4.5 Panel Estimation Analysis

The result of the fixed effects model for firm performance Return on Assets is shown on table .From the result, it can be seen that the diagnostic statistics are all high and impressive. The adjusted R-squared statistic is very high at 0.958, suggesting that over 95 percent of the variations in ROA was captured in the model. The individual contributions of the explanatory variables to the performance of ROA in the model is demonstrated by the coefficients of the explanatory variables. From the results on the table, it can be seen that only the coefficients of LEV2 (LTD/TA and LEV3 (TD/TE), passed the significance test at the 1 percent and 5 percent levels. This result shows that among the main variables of the study, only LEV2 (LTD/TA, LEV3 (TD/TE) exert relevant influence on ROA. LEV2 (LTD/TA) and LEV3 (TD/TE) tend to impact ROA significantly. TD/TE prospects tend to perform better in terms of ROA in Nigeria. This implies that these variables exert influence on the performance variable.

Table 4.6: Leverage and performance (Dependent variable is ROA)

Variable	Coefficient	t-Statistic	Prob.
C	-0.034	-1.025	0.309
LEV1(TD/TA)	0.004	0.110	0.913
LEV2(LTD/TA)	0.003	3.886	0.000
LEV3(TD/TE)	0.001	3.730	0.000
Adjusted R-squared	0.958		0.168
F-statistic	79.03		1.324355

Source: Author’s computations

The result for ROE is also shown on Table 4.7 below and it suggests an impressive goodness of fit statistics for the model. The adjusted R-squared value of 0.917 is very high. It shows that the model exhibits are very high explanatory power and leverage with the strong influence on ROE has been captured in the model. The F-statistic value of 38.79 is also highly significant at the 1 percent level, which shows that the model has impressive overall significance. Indeed, the result of the F-test shows that a significant relationship exists between ROE and all the independent variables combined.

Table 4.7: Leverage and financial performance (Dependent variable is ROE)

Variable	Coefficient	t-Statistic	Prob.
C	-0.194	-2.169	0.033
LEV1	0.629	6.038	0.000
LEV2 LTD/TA	0.011	1.897	0.062
LEV3 TD/TE	0.001	0.623	0.535
Adjusted R-squared	0.917		
F-statistic	38.789		

Source: Author's computations

A close examination of the individual coefficients of the explanatory variables reveals that the coefficients of LEV1 (TD/TA), passed the significance test at the 1 percent level, while those of the other variables fail the significance test even at the 5 percent level. This shows that the main factors that determine ROE among the firms are leverage1,. The other leverages (1 &2) are not important determinants of ROE among the firms. The result also shows that leverage1 have positive impacts on ROE, On the other hand, leverage 2 is shown to be unimportant in explaining the behaviour of ROE among the firms, even though leverage2 was an important factor in the determination of both ROA.

Another measure of financial performance among the firms is enterprise value (ENVA). The result for the relationship of Leverage and ENVA among the firms is presented in Table 4.8. In this result also, the coefficient of determination is also high, which indicates are high goodness of fit statistic. The adjusted R-squared value shows that the over 90 percent of the systematic variations in ENVA is explained by the explanatory variables in the model. Moreover, the F-value easily passes the significance test at the 5 percent level. This shows that the combined effects of the independent variables on the dependent variable is highly significant and that the model model therefore exhibits an impressive overall significance.

For the individual effects of leverage on ENVA, we focus on the coefficients of the explanatory variables. From the result in Table 4.8, it is shown that the coefficients of LEV1 (TD/TA), LEV2 (LTD/TA) all passed the significance test at the 1 percent level, while the coefficients of lev3, passed the significance test at the 5 percent level. This shows that ENVA is the financial performance indicator that is more related to each of the leverage factors selected in the study.. On the other hand, leverage 2 (LTD/TA) has negative impacts on ENVA.

Table 4.8: Leverage and financial performance (Dependent variable is ENVA)

Variable	Coefficient	t-Statistic	Prob.
C	1.665	11.684	0.000
LEV1 (TD/TA)	0.491	3.446	0.001
LEV2(LTD/TA)	-0.160	-4.961	0.000
LEV3(TD/TE)	0.001	2.406	0.019
Adjusted R-squared	0.902024		3.034842
F-statistic	32.60928		2.211261

Finally, the result for MCP is also shown in Table 4.9 below and it also suggests an impressive goodness of fit statistics for the model. The adjusted R-squared value of 0.996 is very high. It shows that the model exhibits are very high explanatory power leverage and have been captured in the model. The F-statistic value of 775.9 is also highly significant at the 1 percent level, which shows that the model has impressive overall significance. Indeed, the result of the F-test shows that a significant relationship exists between MCP and all the independent variables combined.

Table 4.9: Leverage and financial performance (Dependent variable is MCP)

Variable	Coefficient	t-Statistic	Prob.
C	9.945	43.271	0.000
LEV1(TD/TA)	0.061	0.176	0.861
LEV2(LTD/TA)	0.030	3.193	0.002
LEV3 (TD/TE)	0.001	2.849	0.029
Adjusted R-squared	0.995		
F-statistic	775.97		

For Leverage and MCP, the coefficients of the explanatory variables are considered in terms of signs and significance. It is seen that the coefficients of LEV2 (LTD/TA) passed the significance test at the 1 percent level, while the coefficients of LEV3 (TD/TE), pass the significance test at the 5 percent level. Thus, the result show that leverage LTD/TA and TD/TE exert significant influence on MCP. In particular, the result shows that the leverage LTD/TA and TD/TE, tend to promote MCP in the firms.. It is only in this result that both coefficients of leverage 2 and leverage3s are both significant and have the same positive sign. The normality plots for the residuals of all the estimated equations show that the residuals are generally normally distributed since the histogram plots follow a bell-shaped structure. Moreover, the J-B value for each of the estimated residuals fails the significance test at the 5 percent level. This shows that the null hypothesis of normality cannot be rejected for each of the equations. Thus, it is seen that the application of the Fixed Effects estimator actually leads to normally distributed estimates for the model.

4.6 DISCUSSION OF FINDINGS

The objective of the study is to determine the relationship between different spectrums of leverage and accounting and market performance. We proxied three strands of leverage as debt-asset ratio, long term debt-asset ratio and total debt-equity ratio. Accounting measures of performance were return on assets and returns on equity whilst market based measures were enterprise value and market capitalization. From the result obtained in the study, leverage type-1 Total debt divided by Total asset (TD/TA) has a positive coefficient of 0.004 and p-value of $0.913 > 0.05$ showing an insignificant relationship implying it exert a weak positive influence on return on asset. It also has a weak insignificant relationship with market capitalization with a co-efficient of 0.061 and p-value of $0.861 > 0.005$. However this strand of leverage have positive significant relationships with Returns on equity and Enterprise value with a positive co-efficient of 0.629 and p-value of $0.000 < 0.005$ for returns on equity, positive co-efficient of 0.491 and p-value of $0.001 < 0.005$ enterprise value. Thus while leverage type-1 significantly positively influences returns on equity and enterprise value it has a weak relationship with returns on asset and market capitalization.

The result of leverage type-2 from the various tables above indicate that (LTD/TA) has a positive co-efficient of 0.003 and p-value $0.000 < 0.05$ and a positive significant relationship with market capitalization with a positive co-efficient of 0.030 and p-value of $0.002 < 0.005$. this imply that long term debts have significant positive implications on return on assets increase in long term debts increases market capitalization and returns on asset. However, it is also observed from the result of the study, that long term debt exert significant negative influence on enterprise value with a negative co-efficient of -0.160 and p-value $0.00 < 0.05$. This implies that increase in long term debt reduces enterprise value. Also, long term debt is found to exercise weak influence on Returns on equity with a weak insignificant positive relationship with a co-efficient of 0.011 and p-value of $0.062 > 0.05$.

The study also revealed the nature of relationship between leverage type-3 Total debt divided by Total Equity (TD/TE), this type of leverage exerts positive significant relationship on Returns on asset, enterprise value and market capitalization with positive coefficient of 0.001 and p-value of $0.000 < 0.05$ on ROA, a positive co-efficient of 0.0001 and p-value of $0.019 < 0.05$ and a positive coefficient of 0.030 and p-value $0.029 < 0.05$ for Market capitalization. However, the study also

revealed a positive insignificant relationship with returns on equity with a negative co-efficient of 0.001 and p-value of $0.535 > 0.05$

Ayunku (2019) carried out an empirical analysis on the effect of capital structure on firm performance of microfinance banks in Nigeria between 2009 and 2018. The results from the analysis revealed a negative and insignificant relationship between Debt to equity ratio and return on equity, a positive and insignificant relationship between Long term debt ratio and return on equity and a positive and significant relationship between Total debt ratio and return on equity. Our study shows reverse finding with the study of Ayunku(2019) and found a positive insignificant relationship between debt to equity ratio. However, it agrees with the same study by finding a positive insignificant relationship between long term debt and returns on equity.

Amenawo and Offiong (2017) examined a relationship between Capital Structure and the Performance of Quoted Companies in Nigeria. The result revealed that Debt equity ratio has a significant positive impact on the return on assets of quoted companies in Nigeria. This agrees with the findings of our study which confirmed a coefficient of 0.001 and p-value of $0.000 < 0.05$ However the finding of the study by same researcher that debt asset ratio has a significant inverse relationship with the return on assets of quoted companies in Nigeria contradicts our result which shows a positive insignificant relation. . Also, the study by same researchers confirmed debt equity ratio has a significant inverse impact on the return on equity of quoted companies in Nigeria contradicts our study which found an insignificant relationship while our study with a positive co-efficient of 0.629 and p-values of 0.000 agrees with findings of the authors that debt asset ratio has a significant positive impact on return on equity of quoted companies in Nigeria. Uremadu and Onyekachi (2018) carried out an empirical investigation on the impact of capital structure on corporate performance in Nigeria with special focus on consumer goods. Study revealed that long-term debt ratio to total asset had a negative and insignificant impact on returns on assets, while total debt ratio to equity also had a negative and insignificant impact on returns on assets. This findings however contrast with our finding of significant positive relationship between total debt to equity and return on assets in the same industry. This disparity could be a result of different time frame and sample size as our sample size is larger than the prior empirical study.

As stated earlier the literature on the subject of capital structure and performance is rich and findings of studies conflicting. Many studies found negative relationship while others found positive relationships. For instance Salawu (2007); Olokoyo (2012; Khan (2012; Oke and Afolabi (2011); Nor and Fatihah (2012); Soumadi and Hayajneh (2013); Kooragama et al. (2017) found negative relationships of capital structure with performance measure. Salawu (2007) carried out an empirical analysis of capital structure of 50 selected non-financial quoted companies of Nigeria between the period 1990 and 2004. Leverage is found to be negatively correlated with profitability. Olokoyo (2012) carried out a study in capital structure and corporate performance of Nigeria quoted firms. It was found out that a firm's leverage has a significant negative impact in firms accounting performance measure (ROA). An interesting finding is that any leverage measures have a positive and highly significant relationship with the market performance measure (Tobin's Q). Khan (2012) studied the relationship of capital firms in Pakistani market listed in Karachi stock exchange during 2003-2009. Negative significant relationship between financial leverage measured by short-term debt to total assets (STDTA) and total debt to total assets (TDTA) and firm performance measured by return in assets (ROA), gross profit margin (GPM) and Tobin Q.

. Simon – Oke and Afolabi (2011), did a study of 5 quoted firms within a period of five years (1999-2007) from the static trade-off and agency cost theory point of view and study revealed a positive relationship between firm's performance and equity financing as well as between firm's performance and debt-equity ratio. There is also a negative relationship that exists between firm's performance and debt financing due to high cost of borrowing in the country. Nor and Fatihah (2012) explored the impact of debt and equity financing on the performance of the firms listed in Bursa Malaysia. They cited a statistical significant negative relation between capital structure and firm's performance. . Soumadi and Hayajneh (2013) studied capital structure and corporate performance in the public Jordanian shareholding firms listed in Amman Stock. Study concluded that capital structure associates negatively and statistically with firm performance. Kooragama et al. (2017) carried out a study on the impact of capital structure on performance of listed manufacturing companies in Sri Lanka. The

study revealed that leverage of a company is negatively related with firm's performance. However, part of our study confirmed a negative relation of long term debt with enterprise value agreeing with the studies of Salawu (2007); Olokoyo (2012); Akeem, Adwin, Kiyanjui and Kayoda (2014); Soumadi and Hayajneh (2013); Kooragama et al. (2017)

Contrastingly some studies found positive relationships thus agreeing with the results of part of our study. For instance studies by Akinyomi (2013); Semiu and Collins (2011); Abor (2005) Akinyomi (2013) using three manufacturing companies randomly from food and beverage categories and a period of five years (2007-2011). The study revealed that each of debt to common equity, short term debt to total debt and the age of the firms is significantly and positively related to return on asset and return on equity but long-term debt to capital is significantly and relatively related to return on asset and return on equity. The study reveals that there is significant relationship between return on asset and return on equity. Semiu and Collins (2011) suggested a positively significant relationship exists between a firm's choice of capital structure and performance. Abor (2005) also investigated the link between capital structure and profitability of firms listed in Ghana Stock Exchange for the period 1998-2002 using regression analysis he witnessed a significantly positive relation among ROE and the short term debt and total debt ratio while a negative relation with long term debt. Our study confirms a positive relation of long term debt to total assets leverage ratio and total debt equity ratio as being positively related to return on assets. Also, total debt –asset ratio significantly and positively relate to return on equity and enterprise value, long term debt and total debt to equity ratio positively relate to market capitalization. Based on findings we summarize that the effect of capital structure on performance is not consistent with all the performance variables and therefore non- monotonic.

5.1 CONCLUSION AND RECOMMENDATION

The study found both positive and negative correlation of different spectrums of leverage to accounting and market performance. We conclude based on findings that long term debt-total asset ratio and debt-equity ratio representing leverage significantly and positively impact Returns on Assets and market capitalization while total debt-total equity ratio significantly impact Returns on equity and enterprise value and insignificantly impact Returns on Assets and Market capitalization. We also conclude debt-equity ratio significantly impact ROA, Enterprise value and market capitalization. Leverage measured by long term debt-total asset ratio has significant negative effect on enterprise value. Also, Long term debt –total asset leverage and debt equity ratio insignificantly affect ROE. Based on findings we conclude no monotonic relationship exist between variables of study. However, the study revealed that leverage have positive impact on both market and accounting measures of performance We therefore conclude is not monotonic but rather responds to firms structure and prevailing economic circumstance. We therefore recommend that although long term debt to total assets and Debt equity ratio exert significant influence on both accounting and market performance Managers should exercise caution when using debt in capital structure as excessive debt is accompanied with high risk of default and bankruptcy.

5.2 Implication for theory and practice

The study found three different theoretical support to the findings of the study. First, the positive correlation of some aspects of leverage supports the agency theory which states that increasing use of debt reduces cash flow available to managers and prevent agency conflict. Secondly, the trade-off theory recognizes the tax advantages inherent is use of debt as managers continue to exploit the tax shield advantage to enhance performance hence the positive performance returned by long term debt-total asset ratio and total debt-total equity ratio in relation to returns on asset and market capitalization. The long term debt-total asset ratio has significant negative effect on enterprise value thus supporting pecking order theory. In practice Managers have the discretion to choose which aspect of the firm performance that requires more attention to increase performance. Hence, the study by dissecting the various impacts of leverage will provide a useful guide to decide which of the leverage combination will maximize profit and achieve the objective of the firm

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