DEBT AND EQUITY ASSET COMPOSITION ON FIRM VALUE OF LISTED CONSUMER GOODS FIRMS IN NIGERIA

By

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Abstracts

Firm value can be said to be a clear expression of a firms' worth in the business environment in which it operates and is reflected in its profits generated with the share price as a sign of risk and returns from investment made by investors. This study examines debt and equity asset composition on firm value of listed consumer goods firms in Nigeria. Proxies to measure this are debt to total assets and equity to total assets, while the firm value is proxied by Tobin's Q. The study concentrated on the period from 2016 to 2022. Panel data was used to analyse the data sourced from the individual financial reports of the listed consumer sectors. The sample adopted eighteen (18) listed consumer goods firms out of the twenty (20) listed consumer goods firms in Nigeria. The study employed panel regression model to estimate the key relationship between debt and equity asset composition and firm value. The result shows that equity to total assets had significant effect on Tobin's Q, while debt to assets have no significant effect on Tobin's Q of listed consumer goods firms in Nigeria. The study recommended that the management of the consumer goods firms should minimize debt financing due to the high interest rate and the volatility of market, this might negatively affect firm value while floating of their shares through equity financing, strengthening ownership structure, which will improve existing shareholders confidence and enhance firm value.

Keywords: Capital Structure, Debt to Total Assets, Equity to Total Assets, Firm Value, Tobin's Q, Listed Consumer Goods Firms

Introduction

Maximizing shareholders' wealth is one of the goals of a firm. This involves making prudent financial choices that align with the firm's risk tolerance. One of the vital measures of shareholders wealth is the market value of the firm. The value of a firm is basically the sum of claims of its creditors and shareholders. Capital structure decision is about the combination of the various sources of funds a firm uses to finance its operations and capital investments. These sources include the use of debt financing, as well as equity financing. One of the most important goals of financial managers is to maximize shareholders wealth through determination of the best combination of financial resources for a company and maximization of the company's value by determining where to invest their resources (Aldei & Ugwuanyi, 2024). In addition, funding decisions are decisions made by managers to discover sources of funds and determine the required amount needed to fund investments and business activities in order to maximize firm value (Hariyanur, et.al, 2022).

Debt financing is expected to have an influence on a firm's performance which will enhance firm value. Debt shows the extent to which a firm is using borrowed funds in relation to its assets. It indicates the solvency of the business and the extent of cover for external liabilities. Even though debt financing plays an important role to increase future productivity of firms and more important future growth (Akani, 2024), investors prefer the ratio of debt to equity to be lower; because the lower the ratio, the higher the level of a firms financing that is being provided by shareholders and the larger the cushion (margin of protection) in the event of shrinking asset values or outright losses. In Nigeria, some consumer goods firms such as; Jos International Breweries Plc, PS Mandrides Plc, Premier Breweries Plc and UTC Nigerian

Plc in 2017 were delisted from the floor of Nigerian Exchange Group because the firms were unable to finance their debts and the firms' assets were taken over by creditors. These led to their inability to pay dividend and also not filing the quarterly and annual financial statements as required by rule.

Equity financing can provide a company with an alternative funding source, which can be especially important during a company's startup stage to finance plant assets and initial operating expenses. Equity financing can allow a company to reinvest the cash flow from its operations to grow the business rather than focusing on debt repayment and interest. Also, equity financing can dilute existing shareholders' holdings because the company's net income is divided among a larger number of shares (Husnain et al., 2021). The stakes taken by investors providing equity financing can be significant, and thus, profits going to the business owners may be reduced. Firms prefer to utilize equity capital rather due to the risks involved in the utilization of debt capital. This preference for equity capital is influenced by the risks associated with debt capital, which affect its utilization in the capital structure of quoted firms in Nigeria (Oyedokun et al, 2018).

The balance of equities and debts has to have an effect on the firm's success. Specifically, the lingering debate about what level of debt is the best for managers to choose has led managers to make the best decision possible in order to maximize shareholder value, taking into consideration the fact that firm performance is influenced by the debt to-equity ratio. For a long time, this problem has been of interest to many academics leading to studies been conducted in this regard, concentrating on the impact of capital structure on firm performance whereby many scholars have argued that there is a positive association between firm performance and debt to equity ratio. Therefore, choosing the best debt to equity composition increases the firm's value and hence the wealth of its owners (Ghardallou, 2022). In this regard, Nigeria consumer goods firms need to balance the desire to reward shareholders with the need to reinvest in the business to generate future profits (Ali et al, 2022). Therefore, this study will investigate the debt and equity composition on firm value of listed consumer goods firms in Nigeria from 2016-2022.

In line with the main objective of the study, the following hypotheses was tested:

H_{01}: Debt to total assets have no significant effect on firm value of listed consumer goods firms in Nigeria.

H_{02}: Equity to total assets have no significant effect on firm value of listed consumer goods firms in Nigeria.

Literature Review

Concept of Debt and Equity Composition

The composition of debt and equity asset can simply be referred to as the capital structure of a firm. According to Rehman et al (2019), Capital structure simply reflects the efficiency of a firm in term of its assets in use, financed through different options. There are various approaches used to finance the fund i.e. the debts to equity arrangement and the issue of shares. Capital structure is very vital in the smooth running of the business and it predicts and underlines the debts being employed by the firm in relation to its capital. The higher number of debts means higher risk. Capital structure is corporate financing consisting of long-term debt, preferred shares and shareholder capital (Horne & John, 2008). From the notions of Ngatno and Endang (2020), the capital structure is the financial composition between short-term debt, long-term debt, and own capital that is used to run company activities. Therefore, this capital structure policy is essential for the company because it will have a direct impact on the company's financial position. Thus, capital structure is referred to as the way in which the

firm finances itself through debts and equity. It is the composition of debt and equity that is required for a firm to finance its assets.

Debt Asset

Debt asset is one of the financing options available to a firm for running and growing its business concern. Debt asset is the use of external funds to finance the activities of an organization to increase the profitability of the organisation; this is referred to debt in the capital Structure (Rahji & Kamaldeen, 2020). Debt financing plays an important role to increase future productivity of firms and more important for future growth. Debt financing is the use of fixed assets or sources of fund to magnify returns accruing to the owners of a firm. Changes in debt result in changes in level of return and associated risk or degree of obligations (Okpala & Osundina, 2019). Toby & Sarakiri (2021) opined that a key principle to having a sound financial management is by working out a debt policy which would require setting boundaries for issuing debt and managing the debt portfolio of a firm. In the long run, this will provide direction on the prudent and cost-effective issuance of debt which ultimately leads to sound debt position that preserves the financial stability of the firm. However, this study conceptualized debt assets as the financial metric that measures the extent of a company's leverage by comparing its total debt to its total assets. It is calculated by dividing a company's total debt by its total assets and is expressed as a decimal or percentage. The formula for calculating the debt ratio is: Total Debt Ratio = Total Debt / Total Assets.

Equity Assets

Kruk (2021) defined equity assets as where by corporations raise money by selling ownership interests (represented by shares of stock) to investors. There are two types of equity issuance, the first is initial public offering, and it occurs when a company goes public, selling its stock on a major exchange for the first time. The second is called a "seasoned issue," occurring when an established public company sells shares from its supply of authorized but unissued stock. Financial theory suggests that financing by equity presents the costliest means of attracting capital. Equity finance is one of the financing options open to both the company and individual. It is the owner's capital contribution that is permanent in nature without exact maturity date and only entitle to dividend after all financial obligations have been fulfilled to the fund providers (Pandey, 2015). Sources of Equity finance include ordinary share capital, irredeemable debenture, and irredeemable preference shares. Increase in equity finance may be through right issues, public offer and private placement (Akintoye, 2016; Pandey, 2015). Firms choose equity finance method that is in line with the existing capital structure.

Firm Value

Firm value is how investors view a company in relation to the firms share price. According to Tri, (2019) the growth in the firm value is an attainment, which is in tandem with the desires of the owners of the business, because with the growth in the firm value, the benefit of the owners will increase, and this is the responsibility of the manager as an agent who has been given the trust by the principals.

The strategy suggested and implemented by the manager is key in the attainment of optimal results to increase the value of the firm. Hence, a good strategy taking into account efficiency and effectiveness will add value to the firm by the managers who are agents to the principal (shareholders). Chancharat, et al (2019) describe firm value as the term used for the difference between the wealth held by the shareholders at the end of a given year and the wealth they held the previous year. In other words, the value here refers to the increase or decrease of shareholders wealth.

Firm value can be measured in several ways such as Tobin;s Q, Return on Assets (ROA), Earnings per share (EPS), Return on Equity (ROE), Economic value Added (EVA) etc. For this study, the Tobin's Q will be used to measure firm value. Tobin's Q as measurement of firm value illustrates that the higher the Tobin's Q the higher the firm value, so that investors are getting more from the investment. According to Olaoye et al, 2022, Tobin's Q can be measured by the earnings generated by the company in terms of its performance. Firm's value is the measurement of what has been attained by the firm, which is an indicator of the good conditions for a period of time. The objectives of measuring firm value are to obtain very useful information about flow of funds, the uses of firm finances, their efficiency and effectiveness. Besides, the managers are able to make best decisions from the information on firm's value. Hariyanur et.al (2022) are of the opinion that the value of a firm is deemed important as it can be used to explain the state of the firm. In addition, that potential investors will have a positive impression of a firm with a high firm value because high firm value is a reflection of good firm performance.

Empirical Review

Debt Assets and Firm Value

Akani (2024) analysed the effect of debt financing on net profit margin of quoted consumer goods manufacturing firms in Nigeria. The study proxied long-term debt ratio, short-term debt ratio and total-debt ratio by long-term debt ratio, short-term debt ratio and total-debt ratio for debt financing while profitability was proxied by net profit margin. The study was anchored on Miller and Modigliani Theory, Pecking Order Theory and the Trade-Off Theory. The study adopted both deductive and inductive methods while ex-post facto research design was used. The population of the study consisted of all the twenty consumer goods manufacturing firms quoted on the Nigerian Exchange Group as at December 31st, 2022. The study adopted convenience sampling techniques while the sample size consisted of ten (10) consumer goods manufacturing firms in Nigeria. Panel data were sourced from Nigerian Exchange Group. The data were subsequently analysed using panel least squares regression technique while p-value was used to test the hypotheses formulated at 5% level of significance. The findings obtained in the study showed that long-term debt ratio has a positive and significant effect on net profit margin of quoted consumer good manufacturing firms in Nigeria, short- term debt ratio has a positive and significant effect on net profit margin of quoted consumer good firms in Nigeria while total debt ratio has a positive and significant effect on net profit margin of quoted consumer good manufacturing firms in Nigeria. However, there was no justification for adopting ten consumer goods out of twenty consumer goods in the body of the study.

Ghardallou (2023) looked at the effect of debt financing on the performance of Saudi listed companies. It particularly proposes to examine the heterogeneity of this relationship depending on firm profitability and firm size. The study used a sample of 120 non-financial companies listed on the Tadawul stock exchange during the period 2017–2020. Data was obtained from the companies' financial reports. The study used the GMM and the quantile regression. The first methodology examines the effect of leverage decisions on firm performance, whereas the second one tests the heterogeneity of this relationship. The findings demonstrated the adverse effect of leverage on firm performance in terms of return on assets, return on equities and Tobin's Q. Besides, quantile regression results show that this relationship is heterogeneous. Particularly, leverage seems to have a greater adverse effect on the performance of high-profitable firms than low-profitable firms. Moreover, leverage has a negative effect in larger firms, whereas the influence becomes negative in smaller ones. This study is unique in that it approaches the capital structure issue from a different perspective, where the leverage decision is distinctly considered at various levels of firm profitability and

firm size. In addition, the majority of the existing studies is carried out in developed countries. However, the results might not apply to emerging countries given the specificity of their institutional structure.

Rizqa et al (2023) investigated the relationship between debt and firm value as well as to examine the potential mediating role of firm performance, specifically return on equity and earnings per share. The study employed a quantitative approach, utilizing the partial least squares-structural equation modelling (PLS-SEM) tool. Sampling was conducted using a purposive sampling method giving a sample size of 687 companies listed on the Indonesia Stock Exchange (IDX) for the 2021 period. The findings indicate that leverage does not have a direct impact on firm value, but rather, the mediating role of return on equity is significant in this relationship. In contrast, earnings per share were found not to mediate the relationship between leverage and firm value. The study was limited to listed companies in Indonesia.

Abideen (2023) investigated the association between financial leverage, firm liquidity, and firm size with the performance of companies in China. The study adopted a quantitative approach and gathered secondary data from 2010 to 2022 from firms listed on the China Stock Exchange via the wind database. Using a fixed effect model to empirically test the hypotheses, the result indicate that firm liquidity and firm size significantly affect a company's performance in China. Moreover, the study claims that financial leverage also plays a significant role in influencing firm performance.

Khan and Siddiqui (2023) examined how financial leverage, supply chain finance, and liquidity affect a firm's performance in Pakistan's cement, textile, sugar, and pharmaceutical sectors. Data source was from the World Bank official website and the financial reports from the official websites of all 50 companies in four industries for 10 years (2011 to 2020). Analysing data was done using the generalized method of moment (GMM) and the results show that financial leverage has a negative impact on company performance in the cement industry, but a positive impact in the textile, sugar, and pharmaceutical industries. In the cement industry, supply chain finance (SCF) has a detrimental effect on firm performance whereas supply chain financing has a positive impact on the textile, sugar, and pharmaceutical sector. Liquidity (LIQ) has a favourable impact on firm performance in the cement, textile, sugar, and pharmaceutical sectors. This study's innovative conclusion is that increased debt levels and their inefficient use have a detrimental effect on firm performance. The findings indicate that financial leverage improves a company's performance as long as debt levels do not exceed equity. Due to the many market and industry conditions and scenarios that businesses in a given industry must deal with, several factors have varying effects on how well a firm performs.

Kalash (2023) examined how financial distress risk and currency crisis affect the relationship between financial leverage and financial performance. The study used data of 200 firms listed on Istanbul Stock Exchange during the period from 2009 to 2019, resulting in 1,950 firm-year observations. Pooled ordinary least squares, random effects, firm fixed effects and two-step system GMM models were used to investigate the hypotheses of the study. The results revealed that financial leverage has negative and significant effect on financial performance, and that this effect is stronger for firms with higher financial distress risk. Furthermore, the findings provide moderate evidence that currency crisis exacerbates the negative association between leverage and performance. The results of this study have important implications for firms in emerging markets. Managers can enhance firm performance by reducing the level of financial leverage, especially in firms with higher financial distress risk.

Ali et al (2022) investigated the relationship between the debt financing and firm performance. The study used accounting-based measure to measure the performance, which is return on assets (ROA) and return on equity (ROE) as dependent variables, while leverage, ownership proxies and other control variables as independent variables. The ownership proxies included the managerial ownership, institutional ownership and family-owned ownership while

the control variables included the size of the firm and net income of the selected firms. The study used panel data analysis while using data of 70 firms listed on Pakistan Stock Exchange, for the years 2010 to 2016. This study found negative but statistically significant relationship of leverage on firm performance with both ROA and ROE.

Evbayiro-Osagie and Enadeghe (2022) examined the impact of capital structure on return on assets (ROA) performance of nonfinancial firms in Sub-Sahara Africa for a period of nine (9) years (2012-2020). A total of forty (40) non-financial firms were studied using capital structure variables of long-term debt to equity (LTDQ), total debt (TD), total debt to equity (TDQ), and total debt to total assets (TDTA) as independent variables and ROA as the dependent variable to measure performance. The panel data analysis technique was employed. It was found that LTDQ, TD and TDQ have positive impact on ROA performance; while TDTA has a negative impact on ROA performance, and all variables were significant at 1 percent level.

Opoku-Asante et al (2022) investigated the relationship between capital structure and financial performance and consider the effect of debt maturity on the relationship between capital structure and financial performance, considering the debt maturity, using 425 cross-sectional firm-year samples from firms in Ghana and Nigeria from 2014 to 2019. The empirical findings suggested a significant negative relationship between capital structure and financial performance. Debt maturity did not affect the relationship between capital structure and financial performance. However, the industry influences the direction of the relationship between capital structure and financial performance. Also, debt maturity influences the capital structure performance relationship in specific sectors but not the market. This study extended on previous studies on the relationship between capital structure and financial performance by incorporating sectorial and debt maturity on firms in Ghana and Nigeria. The use of a non-parametric tool such as Chi-square makes the study relatively elementary and not robust enough to capture policy making analysis.

Equity Assets and Firm Value.

Aldei and Ugwuanyi (2024) examined corporate financial policy and firm value of industrial goods firms in Nigeria. The specific objectives of the study were to determine the effect of Long-Term Debts, Debt Equity Ratio and Debt Assets Ratio on Net Assets Per Share of industrial goods firms in Nigeria. The sample consists of seven (7) industrial goods firms listed on Nigeria Exchange Group during a period of eleven (11) years (2012-2022). Time series data were obtained from the annual reports and audited financial statements of the selected firms and were analysed using multiple regression analysis. Research findings indicate that Long Term Debts, Debt Equity Ratio and Debt Assets Ratio positively, but non-significantly affect Net Assets Per Share of the industrial goods firms in Nigeria during the period. The implication of these findings is that all things being equal, the firm value of the industrial goods firms will increase as any of the independent variables is increased. In view of these findings, the study recommends that the firms should include long term debt in their capital structure in order to maximize firm value for stakeholders. However, the extent of debts in their capital structure should not exceed the optimal capital structure. Thus, there is no proper justification for adopting only seven (7) industrial goods firms.

Laghari et al (2023) investigated the impact of equity ratio on firm financial performance. The study uses generalized estimating equations (GEEs) methodology to analyse longitudinal data for sample of 20288 listed Chinese non-financial firms from the period 2018-2020. The main advantage of GEEs method over other estimation techniques is its ability to robustly estimate the variances of regression coefficients for data samples that display high correlation between repeated measurements. The findings of study show that the decline in cash flow measures and metrics bring significant positive improvements in the financial

performance of firms. The empirical evidence suggests that performance improvement levers (i.e. cash flow measures and equity) are more pronounced in low leverage firms, suggesting that changes in cash flow measures and equity bring more positive changes in low leverage firms' financial performance relatively to high leveraged firms. The results hold after mitigating endogeneity based on dynamic panel system generalized method of moments (GMM) and sensitivity analysis considering the robustness of main findings. The author failed to link how the study findings could be used for policy making as appropriate statistical tools were not used. Findings were not linked to empirical literature reviews either.

Suleiman et al (2022) examined the effect of equity financing on the financial performance of listed deposit money banks in Nigeria. Return on Assets was used as a measure of financial performance while share capital, retained earnings, and other reserves were used as independent variables. Data for the study was obtained from the audited annual reports of the 14 sampled deposit money banks for a period of 10 years covering 2009 to 2018. The study employed robust ordinary least square regression as a tool for analysis and testing of hypotheses based on the Hausman specification test. The result revealed that share capital has a positive and insignificant effect on return on assets while retained earnings and other reserves have a positive and significant effect on return on assets. The study concluded that retained earnings and other reserves improve the financial performance of listed deposit money banks in Nigeria in line with pecking other theories. The use of OLS is not sufficient and robust for policy making with the use of post estimation stability test. More so, the findings made from the study were not based on empirical reviews.

Chinedu (2022) investigated the relationship between equity capital and financial performance of listed pharmaceutical companies in Nigeria from 2013–2017. The ex post facto research design was adopted for the study with a population of ten (10) listed pharmaceutical companies in Nigeria as listed by the Nigerian Exchange Group in 2021. Data were retrieved from the annual reports of the selected listed pharmaceutical companies for the period 2013–2017. Multiple regression analysis was used to analyse the data gathered with the aid of Stata12 statistical software. The study revealed a positive and significant relationship between equity capital and profit before tax of listed pharmaceutical companies in Nigeria. It also revealed the existence of a positive and significant relationship between equity capital and return on assets of listed pharmaceutical companies in Nigeria. Therefore, this study was focused on pharmaceutical companies, while the current study will focus on consumer firms.

Owolabi et al (2021) assessed the effect of equity financing options on financial performance of listed manufacturing firms in Nigeria. Secondary data were obtained from purposively selected 60 out of the 70 listed manufacturing firms. Return on assets (ROA) was used to measure performance while the equity finance options used in the study are; retained earnings, ordinary share capital and preference shares. The overall effect of all the independent variables is statistically significant in explaining the variation in return on assets as their individual probability values are less than 0.05 level of significance. The individual effect of each of the explanatory variables reveals that retained earnings and preference shares significantly influence performance listed manufacturing firms in Nigeria given its probability value of 0.000 which is less than 5%. Although, the effect of ordinary share capital on performance of listed manufacturing firms in Nigeria was positive but statistically insignificant with a probability value of 5%. The study thus concluded that equity financing option composition significantly affect financial performance of listed manufacturing firms in Nigeria. The use of fixed effect model is premised on the outcome of the Hausman test, and that was not the case in this study. It appears the author just decided to use fixed effect model without pre-estimation test.

Purwanti (2020) determined the effect of profitability, capital structure, equity ratio, and dividend policy on firm value. The companies in this study are manufacturing companies

listed on the Indonesian stock exchange during the period of 2015 to 2018. The population of this research is all manufacturing companies listed on the Indonesian stock exchange in 2015-2018. The research sample of 11 companies. A purposive sampling technique was used and secondary data was obtained from the Indonesian Capital Market Directory. Testing the research hypothesis using multiple linear regression test, simultaneous test (F test), partial test (t test), and coefficient of determination test (R2 test) the results showed that simultaneous profitability, capital structure, company size, and dividend policy significantly influence the value of manufacturing companies. Partially, profitability has a positive and significant effect on firm value, capital structure has a positive and significant effect on firm value, company size has a negative and significant effect on firm value, and dividend policy has positive and not significant effect on firm value. However, the theoretical framework was found missing in the body of the study.

Nguyen and Nguyen (2020) examined the relationship between capital structure and profitability of non-financial companies listed on Vietnam's stock market. The panel data is extracted from financial statements of 488 listed companies between 2013 and 2018. Research data was extracted from the audited financial statements of these companies. Capital structure discussed is represented by the ratios of short-term liabilities, long-term liabilities and total liabilities to total assets, and profitability is measured by Return on Equity (ROE), Return on Assets (ROA) and Earnings per share (EPS). Firm size, growth rate, liquidity, ratio of fixed assets to total assets are control variables in the study. The Generalized Least Square (GLS) was applied to different models, including ROE, ROA and EPS Model, and tests of autocorrelation, multicollinearity and heteroskedasticity are run to confirm the relationship between capital structure and business performance. Variance Inflation Factor (VIF) was used to check multicollinearity. The results show that the capital structure of Vietnamese listed non-financial companies is negatively related to their performance. Taking industrial product sectors as the preference sectors, the results show that pharmaceutical and medical, the consumer goods and the public utility industries had a higher relationship between capital structure and firm's performance (via ROE, ROA, EPS) than industrial product sectors. These evidences are useful new insights to investors, business managers and governmental authorities. However, the author failed to carry out more empirical reviews in the body of the work.

Theoretical Framework

Modigliani-Miller Theory.

The theory was proposed by Franco Modigliani and Merton Miller which suggests that financial leverage boosts the value of a firm and reduces the weighted average cost of capital (WACC) when tax information is available. In 1958, the two financial researchers developed Modigliani and Miller propounded the theory which contributed widely to capital structure by Proposition I Theorem which showed that under certain restrictive assumptions, the value of the firm is unaffected by the debt. Later they developed Proposition II, that relaxed the assumptions under Proposition I and further considered corporate taxes. In 1977 Miller advanced the two propositions and developed a model that recognized personal taxes.

Proposition I, also known as net operating income, they argued that the capital structure is irrelevant in determining the value of the firm. Capital structure decisions do not affect the value of the firm since firm value is independent of its leverage there is no advantage of using debt since there are no corporate taxes, the weighted average cost of capital of a levered firm and unlevered firm is independent of the capital structure, the cost of equity increases as the gearing increases and the cost of debt remain unchanged as level of gearing increases hence irrelevance of capital structure decision on the value of the firm. Under restrictive assumptions

of a perfect market, tax free economy, no transaction costs and homogeneous expectation of investors, capital structure is irrelevant in determining the firm's value.

According to Modigliani and Miller, if the assumptions do not hold, the arbitrage process shall take place where investors take advantage of the market imperfections and opt to sell their shares in the overvalued firms and buy the shares in the undervalued firms resulting to arbitrage gain realized. They supported their argument that capital structure is irrelevant in determining the value of the firm by applying the arbitrage process to two companies identical in every aspect. As investors take advantage of arbitrage opportunities, the market will reach equilibrium when the prices of overvalued shares fall and the undervalued shares rise (Ryan, 2007; Watson and Head, 2007; Welch, 2009 & Pandey, 2010). Modigliani and Miller (1958), respect except for their leverage levels have equal cost of capital and therefore should not have different market values (Welch, 2009). Studies carried out thereafter concludes that these assumptions do no hold and have led to researchers to rationalize the MM proposition I and its underlying assumptions to prove that capital structure affects firm value and performance.

Watson and Head (2007) concludes that the theory had serious flaws based on their restrictive assumptions. Firstly, the assumption that individuals and companies can borrow at the same rate can be challenged, since borrowing by individuals are riskier and costly. Secondly, presence of no transaction cost is untrue since borrowing cost exists and eliminate risk free profit thus affecting arbitrage gain, Thirdly, investors have a variant in expectation and finally a perfect market do not exist. Later they developed a second paper, Proposition II also known as net income approach that relaxed the unrealistic assumptions under proposition I (Net operating income) and recognized that corporate tax exists and tax shield benefit associated with debt capital exists. They concluded that as companies take more debt, they shield more of their profit from corporation tax. They further argued that the value of a levered firm will always be higher than that of unlevered by an amount equal to the interest on tax shield (Watson & Head, 2007; Pandey, 2010 & Welch, 2009).

In 1977 Merton Miller extended the proposition I and II and introduced the personal taxes and its effect to the value of the firm. Miller developed a model that incorporates gearing levels, corporation taxation, personal taxation on debt and equity returns and amount of debt and equity available to investors. He argued that investors choose investment in companies that are in line with their personal taxation preference, considering company's capital structure that is debt and equity levels. Investors who pay income tax will be inclined to invest in equity to take advantage of capital gain tax allowance avoiding debt (Welch, 2009). US and UK have changed their tax regime to ensure that minimal difference in personal tax treatment into capital structure; this however does not eliminate corporation tax associated with increased gearing (Watson and Head, 2007). Despite the numerous positive and negative criticism on the M & M theory, it has been widely used by various research works especially as its regarded as the ground breaking finance theory. With this in mind, it has been adopted to be used as the underpinning theory for this study owing to the fact that it generally has to do with the firm value and the firm capital structure, which this study is examining.

Methodology

The research design for this study is expo-facto research design. Expo-facto design involves describing the relationship between the past factors on the present trend or occurrence. The population of the study will adopt all the twenty (20) Consumer firms listed on the floor of Nigerian Exchange Group (NGX) 2024. These are, Cadbury Nigeria Plc, Champion Brew. Plc, Dangote Sugar Refinery, Dunlop, Flourmill, Gold Brew, Guinness, Honey flour, International Breweries Plc, Mcnichols, Multitrex, Nig. Flour Mills Plc, Nascon, Nestle, Nigerian Brew. Plc, Enamel Ware, PZ Cussons Nigeria Plc, Unilever, Union Dicon, Vitafoam. Thus, eighteen (18) firms were sampled, with two (2) companies been exempted from the

sampled Consumer firms which are; Multitrex Plc, and Union Dicon Plc due to unavailability of complete data. This study used secondary method of data collection. The panel data was extracted from the published annual reports of listed consumer firms in Nigeria, from 2016 - 2022. The research data related to debt assets and equity assets was used as proxies for capital structure of quoted consumer firms in Nigeria, while Toboin's Q was used as proxy for firm value in this study. The panel data was analysed using E-views version 12. Descriptive statistics, correlation matrix, normality test and regression analysis were carried out and post estimation analysis such as Heteroskedasticity test, serial correlation and Hausman test was also carried out. The specific model given below for the Hausman test describes a convenient version for regression applications that involves testing whether certain transformations of the original regressors have zero coefficients.

$H_n \equiv n\,(\theta_{1n} - \theta_{2n})\,S'\,[S\,V_n\,S\,]^{-}\,S'\,(\theta_{1n} - \theta_{2n})$.

The Model Specification:

The model adopted for this study is given as thus:

$TOQ_{it} = ao + \alpha_1 DEA_{it} + \alpha_2 EQA_{it} + e_{it}$……..(1)

Where;

TOQ_{it} = Tobin's Q of firms (dependent variable)

DEA_{it} = Debt assets of firms

EQA_{it} = Equity assets of firms

a0 = Constant,

e_{it} = Error term

a1,a2, = the slope or the coefficient of the independent variables.

Decision Rule

The decision rule to test the hypothesis of the study is as follows: If the p-value of the t-coefficient is less than 5% (0.05), the null hypothesis is rejected, otherwise accept.

Table 1: Variables Measurement

S/N	Variable	Nature	Measurement	Studies
1.	Tobin Q	Dependent variable	Market Capitalisation + Total Liabilities - Cash flow divided by Total asset	Olaoye et al (2022)
2.	Debt assets	Independent variable	Long term Debt + Short term debt Assets divided by total assets.	Nwala et al (2020)
3	Equity assets	Independent variable	Total Shareholder's equity / Total Assets	Purwanti and Siregar (2019)

Source: Authors Compilation (2024)

Results and Discussions

Tables 2: Descriptive Statistics

	TOQ	DEA	EQA
Mean	1.397661	0.046879	0.021120
Median	1.380000	0.602457	0.391120
Maximum	1.800000	0.55710	0.461246
Minimum	0.700000	0.020795	0.45710
Std. Dev.	0.167240	0.016081	0.003784
Skewness	-0.113993	1.666789	-2.405050

Kurtosis	4.478946	35.87985	35.47355
Jarque-Bera	11.56951	6249.263	6052.179
Probability	0.003074	0.000000	0.000000
Sum	173.3100	129.8130	2.618884
Sum Sq. Dev.	3.440222	778.6715	792.2011
Observations	126	126	126

Source: E-Views 12, 2024

The table 2 revealed the data used in the study with Tobin's Q, debt asset ratio and Equity assets ratio having a mean value of 1.397661, 0.046879 and 0.021120 respectively. The deviation from the mean (standard deviation) was 0.167240, 0.016081 and 0.003784 respectively. In like manner, the Jacque-Bera values confirm the normality of the data.

Table 3: Correlation Matrix

	TOQ	DEA	EQA
TOQ	1	-0.003300608	-0.0158451
DEA	-0.003300	1	-0.9145393
EQA	-0.0158451	-0.9145393	1

Source: E-Views 12, 2023

Table 3 explained the correlation of debt and equity assets and firm value of listed consumer firms in Nigeria where the TOQ was correlated with DEA to the value of -0.003 which signifies there is low correlation since the value is negative, While the TOQ were correlated with EQA to the value of -0.01 which signifies there is low correlation since the value is negative. Also, DEA was correlated with TOQ to the value of -0.003 which signifies there is low correlation since the value negative. DEA was correlated with EQA to the value of -0.91 which signifies there is low correlation since the value is negative. Finally, EQA was correlated with TOQ to the value of -0.01 which signifies there is low correlation since the value is negative. EQA were correlated with DEA to the value of -0.91 which signifies there is low correlation since the value is negative.

Table 4: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.772725	2	0.1516

Source: E-Views 12, 2024

The result of the Hausman test in the table 4 indicates that the fixed effect regression model is the most appropriate model to analyse the data of the study. With the probability of 0.1516, the random effect was rejected. Therefore, the fixed effect estimator was used to run the regression.

Table 5: Panel Result
Dependent Variable: TOBIN_Q

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.397532	0.015261	91.57293	0.0000
DEBTS_ASSETS	-0.001021	0.000852	-1.198534	0.2472
EQUITY_ASSETS	0.007505	0.000260	28.90444	0.0000
	Effects Specification			
Cross-section fixed (dummy variables)				
	Weighted Statistics			
Root MSE	0.095315		R-squared	0.850796
Mean dependent var	2.295155		Adjusted R-squared	0.823538
S.D. dependent var	1.178605		S.E. of regression	0.104077
Sum squared resid	1.126525		F-statistic	31.21232
Durbin-Watson stat	1.406410		Prob(F-statistic)	0.000000
	Unweighted Statistics			
R-squared	0.672089		Mean dependent var	1.397661
Sum squared resid	1.128086		Durbin-Watson stat	1.263614

Source: E-Views 12, 2024

The P-value of equity assets (EQA) is 0.000 which is less than 0.05, this indicates that equity assets have a significant effect on Tobin's Q of listed consumer firms in Nigeria. Therefore, for every 1% increase in equity assets, there is a 0.007505 increase in Tobin's Q. Also, the P-value of debt assets (DEA) is 0.24 which is more than 0.05, this indicates that debts assets does not significantly affects Tobin's Q of listed consumer firms in Nigeria. Therefore, for every 1% increase in debts assets, there is a -0.001021 decrease in Tobin's Q. The coefficient of determination R^2 value at 0.85 shows that 85% of change in the dependent variables is explained by the independent variables. The probability of the F-Statistics which is less than 0.05 indicates that the independent variables jointly explain the dependent variables. Therefore, the model is fit and appropriate with 0.0000 value.

Table 6: Stability Test
Panel Cross-section Heteroskedasticity LR Test
Equation: UNTITLED
Specification: TOBIN_Q C DEBTS_ASSETS EQUITY_ASSETS

	Value	df	Probability
Likelihood ratio	86.88536	18	0.13050
LR test summary:			
	Value	df	
Restricted LogL	46.44151	121	
Unrestricted LogL	89.88419	121	

Source: E-Views 12, 2024

The Stability test indicates that the analysis is free from irregular variation denoting that, the data are normal. This is Heteroskedasticity by the statistics of 86.88536 and its corresponding P-value of 0.13050 which is higher than the value of 0.05.

Discussion of Findings

Based on the findings of the research, the study is consistent with the research of Akani (2024), Ghardallou (2023), Rizqa et al (2023) that the relationship between debt assets and firm value is insignificant, this implies that higher debt financing will be more likely not to influence its financial performance. This can be seen from the higher interest coverage and it has a negative effect on the company's value. The result of significant effect of equity assets and firm value of listed consumer firms in Nigeria, shows consistency with the works of Aldei and Ugwuanyi (2024), Laghari et al (2023), Suleiman et al (2022). The firm would desire to have a relatively higher equity assets because that would indicate that the firm is viable and has the ability to attract more investors.

Conclusion and Recommendations

The paper evaluates the effect of capital structure on firm value of listed consumer firms in Nigeria. In agreement with prior evidence from developed countries that show significant linkage between capital structure and firm value. Thus, the study concluded that a unit increase in equity assets will have an increase on firm value. Even though debt assets have no significant effect on firm value, a unit increase in debt assets will not have any increase on firm value. This study revealed based on the model that there is a significant relationship between capital structure on firm value of listed consumer firms in Nigeria during the period under study.
Drawing from our research findings, the recommendations are proffered as follows:

i. The management of the consumer firms should minimize debt financing due to the high interest rate and the volatility of market; this might negatively affect firm value.
ii. Due to the significant effect of equity assets, the management of the consumer firms should float their shares with more equity financing, by having more ownership structure, this can help improve existing shareholders confidence and enhance firm value.

Reference

Abideen, ZU. (2023). Firm Performance in China: An Analysis of the Interplay between Financial Leverage, Firm Liquidity, and Firm Size. *Journal of Accounting and Finance in Emerging Economies*, 9 (3) 141-150.

Adolphus, J.T, & James, A.S. (2021). Corporate Debt Policy and Firm Value: New Evidence from Nigeria. *International Journal of Financial Management,* 10(2), 1-14.

Akani, H.W. (2024). Debt financing and net profit margin of quoted consumer goods manufacturing firms in Nigeria. *Advance Journal of Banking, Finance and Investment*. 8(1), 1-26.

Akash, R.S., Khan, M.I. & Shear, F. (2023). The Corporate Financial Policy and the Firm Value. *International Journal of Business and Economic Affairs* (IJBEA) 8(3), 65-74.

Aldei, A. G. A., & Ugwuanyi, B. U. (2024). Corporate financial policy and firm value of industrial goods firms in Nigeria. *Advance Journal of Banking, Finance and Investment*, 7(6), 1–26.

Aldei, A. G. A., & Ugwuanyi, B. U. (2024). Corporate financial policy and firm value of industrial goods firms in Nigeria. *Advance Journal of Banking, Finance and Investment*, 7(6), 1–26.

Ali, J., Soukaina, K., Wilayat Shah, Khan, S., Khan, Z. U., & Tahira, Y. (2022). The impact of capital structure on dividend policy: Evidence from Pakistan. *Journal of Public Value and Administrative Insight*, 5(1), 141–152.

Chancharat, S., Detthamrong, U. & Chancharat, N. (2019). Board structure, political connection and firm performance: evidence from Thailand. *International Journal of Business and Society,* 20(3), 1096-1111.

Chinedu, E. S. (2022). Capital structure and financial performance of listed pharmaceutical companies in Nigeria. *African Journal of Accounting and Financial Research*, 5(2), 1-12.

Chong, V.K., Monroe, G.S., Wang, I.Z. & Zhang, F. (2023). Performance Measurement Systems Design Choice: The Roles of Political Connections and Social Networking on Firm Performance – Evidence From China", Karim, K.E. (Ed.) *Advances in Accounting Behavioral Research (Advances in Accounting Behavioural Research, Vol. 26*), Emerald Publishing Limited, Leeds, 43-77.

Evbayiro-Osagie, E. I., & Enadeghe, I. B. (2022). Capital structure and performance of non-financial firms in Sub-Sahara Africa. *International Journal of Finance Research*, 3(1), 49 – 62.

Ghardallou, W. (2023). The heterogeneous effect of leverage on firm performance: a quantile regression analysis. Inter*national Journal of Islamic and Middle Eastern Finance and Management*, 16(1), 210-225.

Ghardallou, W. (2022). Capital Structure Decisions and Corporate Performance: Does Firm's Profitability Matter*? Journal of Scientific & Industrial Research* (JSIR), Volume 81, 859-865.

Horne, V., & John, W.M. (2008). *Fundamentals of financial management*. Harlow: Pearson Education.

Husnain, M., Manzoor, A. & Nida, F. (2021). Analysing the mediating role of financing decision in relation between firm's growth and financial performance: empirical evidence from Pakistan. *Journal of ISOSS*, 7(3), 27-38.

Kalash, I. (2023). The financial leverage–financial performance relationship in the emerging market of Turkey: the role of financial distress risk and currency crisis. *EuroMed Journal of Business*, 18(1), 1-20.

Laghari, F., Ahmed, F., & López, G. M. (2023). Cash flow, equity ratio and its effect on firm performance: Empirical evidence on non-financial firms of China. *PLoS One,* 18(6), Article e0287135. https://doi.org/10.1371/journal.pone.0287135.

Ngatno, A. & Endang, P. (2020). Moderation Effects of Organisational Environment on the Relationship Between Capital Structure and Financial Performance of Central Java Rural Banks, Indonesia. *Asian Economic and Financial Review.* 10(1), 78-93.

Nguyen, H.T., & Nguyen, H.A. (2020). Capital structure and firm performance of non-financial listed companies: Cross-sector empirical evidences from Vietnam. *Accounting* 6,137–150.

Okpala, K. & Osundina, K. A. (2019). Debt financing and firm performance in Nigeria: An empirical investigation. *International Journal of Development and Management Review*, 14(1), 34-45.

Olaoye, F.O., Olaoye, A.A. & Murigi, M. (2022). Enhancing the Performance of Consumer Goods Firms through the Equity Capital in Nigeria (2011-2021). *Journal of Sustainable Business and Economics*. 5(4), 22-30. https:// doi.org/10.30564/jsbev.5427.

Olusola, B. E., Mengze, H., Chimezie, M. E., & Chinedum, A. P. (2022). The Impact of Capital Structure on Firm Performance-Evidence from Large Companies in Hong Kong Stock Ex- change. *Open Journal of Business and Management*, 10, 1332-1361.

Owolabi, O.A., Kolawole, A.D., Ogungbade, O.I. & Adekoya, A.C. (2021). Equity financing options and financial performance of listed manufacturing firms in Nigeria. *Palarch's Journal of Archaeology of Egypt/Egyptology*, 18(7), 1730- 1741.

Oyedokun, G. E., Job-Olatuji, K. A. & Sanyaolu, W. A. (2018). Effect of capital structure on the financial performance of firms in Nigerian manufacturing sector. *International Accounting and Taxation Research Group, Faculty of Management Sciences, University of Benin, Benin City, Nigeria.* 2(1) 1-14.

Purwanti, T. (2020). The Effect of Profitability, Capital Structure, Company Size, and Dividend Policy on Company Value on the Indonesia Stock Exchange. *International Journal of Seocology*, Volume 01, Issue 02.

Rahji, O. I. & Kamaldeen, I. N. (2020) examined the effect of debt financing on firm performance. *Journal of Management, Economics, and Industrial Organization*, 4(3), 75-88.

Rehman, A., Raza, Z., Rehman, H. & Farooq, M. (2019). Capital Structure, Liquidity and Financial Performance of the Firms In Cement And Sugar Industries Of Pakistan. *SUIT Journal of Social Sciences and Humanities (JOSSH).* Vol. 3, Issue 1&2.

Rindi, H., Ratna, S. & Agus, Z.I.(2022). The effect of Investment and financing decision, dividend policy and cost of capital on Indonesian Firm Value. *Asian Journal of Economics and Business management*. Vol.1 (2) 73-81.

Rizqa, A., Giri, S. & Muhammad, R. (2023). Leverage on firm value: the role of financial performance mechanisms. *Jurnal Aplikasi Manajemen dan Bisnis*, 9(3), 751-762.

Saifi, M. (2021). The effect of financial policy on the performance of industrial companies in the insurance sub-sector in Indonesia. *Jurnal Aplikasi Manajemen*, 19(4), 925–937.

Suleiman, U., Popoola, A. & Yahaya, A. O. (2022). Equity financing and financial performance of listed deposit money banks in Nigeria. *International Journal of Research and Innovation in Social Science* (IJRISS), 6(12), 619-626.

Tri, P. (2019). ABID concept in the effect of financial policy on firm value. *Holistica*, Vol. 10, issue 2, 51-68.