

FINANCING DECISIONS AND FIRM VALUE: EMPIRICAL EVIDENCE FROM LISTED MANUFACTURING FIRMS IN NIGERIA

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Abstract

The consequence of economic uncertainties is reflected in the fluctuating shareholder value of firm in the Nigeria manufacturing sector. The sector experienced a severe decline in general operation, shock in earnings and breach of debt covenant which was primarily attributed to a reduction in disposable earnings of customers, supply chain blockage, exchange rate fluctuation, continuous naira devaluation and increase in the prices of major inputs due to the economic recession and the recent Covid-19 Pandemic. This study examined the influence of financing decisions on the value of firms in the manufacturing sectors. Descriptive and historical research design was employed and twenty-four (24) listed firms in the sector for ten years (2016-2025) were selected using purposive sampling method. The data for the study were extracted from the firm's financial statement and the Nigerian Exchange (NGX) Group website while Prais Winsten was employed as a data estimation technique. The result revealed that external equity, internal equity, and short-term debt have a significant positive effect on the value of listed manufacturing firms in Nigeria. Therefore, it is recommended that the manufacturing firms in Nigeria consider the combination of internal and external equity and short-term debt in their financial structure to maximise the firm's value.

Keywords: financing decision, firm value, listed manufacturing firms, Nigeria

1. Introduction

All businesses have goal they are trying to reach. This goal is dependent on the kind of company. The financial objective of a firm includes profit maximization, growth in earnings per share or shareholders wealth maximization (Institute of Chartered Accountants of Nigeria [ICAN], 2014). To accomplish this goal, several decision needs are considered. These decisions are investment, financing and dividend. The financing decision involves the selection of an appropriate source of finance that can be tapped by the firm to finance its operations, taking into account the cost, risk, benefit and tax implication of each source (Akinsulire, 2014).

Financing can come from internal sources (retained earnings) as well as external sources of equity and debt for an established company. The ratio of debt-to-equity financing that would improve the performance of the firm is an important financing decision that the firm must make. The prices of raw material, foreign exchange, the changes in the supply chain, government policy and the level of disposable income of the customers are significant factors which influence this decision.

According to Proshare (2020), the Nigerian manufacturing industry comprises various sub-sectors, this includes food and tobacco processing, chemical and pharmaceutical production, and cement manufacturing. It also encompasses textile and footwear fabrication, automotive assembly, electronics, plastics, and wood processing, alongside heavy industries like oil refining, metallurgy, and paper production. The manufacturing sector plays an essential role in the Nigerian Economy as their activities



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are primarily to produce basic needs. The strategic value of Nigerian manufacturing is highlighted by its 17% contribution to the national Gross Domestic Product (National Bureau of Statistics, 2019).

Despite its importance, the sector has been hit by consecutive crises, starting with a multi-year recession between 2015 and 2017, followed by the global disruptions of the COVID-19 pandemic. As noted by Proshare (2020), the pandemic triggered a 10% plunge in the sector's real growth. This decline was driven by raw material shortages, low consumer purchasing power, foreign exchange inflation, and a general market shift toward essential survival.

The pandemic also affected the ability of firms to fulfil their debt obligation, which led to a breach of loan covenant due to a reduction in cash flows. The need for effective cash flow management arose due to the unexpected price change, fall in revenue generation and delay in debtor's payment which would significantly improve revenue and profitability hence the firm value. Similarly, Aluko (2018) pointed out that assessing capital at a low-interest rate is a significant challenge facing the manufacturing firms in Nigeria.

Moreover, there have been several studies that have investigated the link between financing decisions and firm value, but no consensus has been reached on how the link can be applied to all firms in various industries. Some of the existing literature such as Adenugba et al. (2016); Adedoyin (2014); Daniel (2017); Birru (2016); Xicang et al. (2012); Negasa (2016); Uzliawati et al. (2018); Ogebe et al. (2013); Goyal (2013); Cuang and Cahn (2012); Xuan and Craig (2017); Lucy et al. (2014); Ogebe et al. (2013); Edore and Ujuju (2020) found that financing decision significantly influence market performance. The results of the studies conducted by Khan et al. (2017); Daud et al. (2016) revealed that there was no significant relationship between financing decisions and firm value.

Research Studies such as Khan et al. (2017), Ali (2020), Goyal (2013); Xuan and Craig (2017); Hasan et al. (2011) were not conducted in Nigeria. Thus, the findings of these studies may not be applicable in Nigeria because of the differences in the government policies and economic systems. The researcher could not find any studies conducted on the manufacturing sector of Nigeria before the outbreak of COVID 19 with the exception of works done by Micheal & Babajide (2021), Edore & Ujuju (2020), Lyndon & Timi (2019) and Usman (2019). This restricted their findings to generalisation.

In addition, a previous research review identified three (3) more empirical gaps. To begin with, the literature reviewed (such as Birru, 2016; Xicang et al., 2012; Daud et al., 2016; Goyal, 2013; Usman, 2019; Lucy et al., 2014; Ogebe et al., 2013; Edore and Ujuju, 2020; Xuan and Craig, 2017; Adedoyin, 2014) does not take into account market base measures such as Tobins Q ratio as the accounting base measure. Therefore, their outcome cannot be extrapolated in the case of Market base measures.

In addition, some studies investigated the impact of leverage (Fixed interest capital) component of capital structure on performance (such as Negasa, 2016; Ali, 2020; Adenugba et al., 2016; Daud et al., 2016; Cuang and Cahn, 2012; Xuan and Craig, 2017; Ogebe et al., 2013; Lucy et al., 2014; Cheng et al., 2010; Hasan et al., 2011). Also, studies in Nigeria had restricted sample size like the one conducted by Adenugba et al. (2016) with 6 years of sample size which consisted of 5 manufacturing companies in Nigeria; Edore and Ujuju (2020) sampled 6 years comprising of 5 listed companies on the Nigeria exchange; Adedoyin (2014) sampled 6 years comprising of 15 publicly

owned commercial banks in Nigeria; and Usman (2019) sampled 6 years comprising of 6 consumer goods firms in Nigeria.

The study looks at the effect of financing decisions (internal equity, external equity, short term debt and long-term-debt) on the value of listed manufacturing firms in Nigeria for the period of 2016 to 2025 to address the above identified gaps. The paper reviewed literatures which includes concepts and measurement of the study variables, the empirical review and underpinning theories. Other parts include methodology, result and discussion, conclusion, recommendations, and policy implications.

The results of this research would be meaningful for the government, the shareholders, literature and other stakeholders. To the government, the study would throw more light on the effect of financing decisions on the value of the manufacturing companies in Nigeria after the COVID-19 pandemic, which would result in the formulation of policies and reforms that could be channeled towards the growth of the sector in the economy as a whole.

The findings of the study would be beneficial to the shareholder of the listed manufacturing companies as it shows how financing decisions result in the fluctuation of the firm's value, thereby resulting in further consideration of their investment choice in the industry. Likewise, the study contributes to the existing literature on the impact of financing decisions on firm value and applicability of the pecking order theory in the Nigerian context. It also serves as a stepping stone to future researchers who might be interested in continuing research in the field of interest.

2. Literature Review and Hypotheses Development

Under this section, the concept and measures of financing decisions and firm value were discussed. It also included the conceptual framework review of the previous empirical studies, local and international. This section thus formed the basis for developing the study hypothesis. It is based on a review of measures used by previous studies that reported mixed results that necessitated a further study.

Financing Decision

Scholarly definitions of financing decisions are hinged on strategic selection and acquisition of capital. For instance, Akinsulire (2014) see it as the process of identifying suitable funding streams for specific corporate initiatives. This is further expanded by ICAN (2014) and Paramasivan and Subramanian (n.d.) which focus on efficiency, and framed the concept as the obtaining funds from diverse channels while also considering the overall cost of capital. Beyond definitions, empirical literature revealed a lack of uniformity in how researchers operationalize and measure these funding choices.

While Khan et al. (2017) relied on the traditional debt-to-equity ratio, Daud et al. (2016) quantified leverage through the division of total debt against total assets. Alternatively, Adedoyin (2014) opted for a broader measure through the aggregation of the combined value of total debt instruments and corporate equity.

Amidst these varied empirical approaches, the contemporary financial literature centers on the pecking order theory and the trade-off theory to explain corporate capital structures. In this specific study, corporate financing choices are quantitatively represented by short-term and long-term debt dynamics, external equity injections (comprising share premium and share capital), and internal equity reserves (retained profits).



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Equity Finance and Firm Value.

In order to optimize shareholder wealth, corporate executives strategically deploy available capital into diverse financial frameworks designed to accelerate revenue growth and boost overall returns. Along with the other theory, it is important to prioritize internal financing over other means of financing; because it has minimal information asymmetry problem and lower transaction cost than other options, which will increase the revenue and profitability, hence the value of the firm (Myers & Majluf, 1984).

The majority of empirical studies (such as Khan et al., 2017; Daud et al., 2016) have considered equity financing to be simply the aggregate of all equity components in the statement of financial position (share capital, share premium, retained earnings and reserves). Retained earnings are also separate financing means, which, according to pecking order theory, have to be used before other financing means (Mayers and Majluf, 1984). Therefore, it is necessary to split up equity financing into internal equity (retained earnings and revenue reserve) and external equity (share capital and share premium).

Internal Equity finance and Firm Value

Corporate entities fundamentally rely on a dichotomy of funding mechanisms (internal and external reserves). While newly established enterprises are restricted to external financing instruments such as issuing public shares, debentures, or securing bank loans, mature corporations possess the flexibility to tap into both external and internal capital to meet operational demands.

Retained earnings constitute the primary channel for internal funding (Myers & Majluf, 1984). Frequently categorized in the literature as self-finance or the plugging back of profits (Paramasivan & Subramanian, n.d.), this approach is highly cost-effective because it avoids the floatation and administrative costs tied to issuing new market securities (Akinsulire, 2014).

Consequently, using accumulated reserves drops a firm's weighted average cost of capital, which can drive share prices upward. This aligns with the pecking order framework outlined by Myers and Majluf (1984), which stipulates that businesses implement a strict financing hierarchy that prioritize internal cash generation, followed by debt issuance, and resorting to new common stock only as a last resort.

Empirical literature regarding the performance outcomes of self-financing remains divided. For instance, Hung and Cuong (2020) analyzed 30 pharmaceutical companies on the Vietnamese stock exchange between 2015 and 2019, and reported that heavy reliance on self-financing negatively impacts corporate performance. This relationship is further expanded by recent empirical work. Aghaebe and Oranefo (2024) evaluated listed consumer goods companies in Nigeria and observed that while total debt ratios positively influence a firm's return on assets, an over-reliance on bloated equity models can depress a company's financial performance attributes. This is supported by Amusan (2026), whose panel analysis on manufacturing firms indicated that both equity and debt ratios yield positive returns, but debt remains the statistically dominant variable in driving changes in asset returns.

Conversely, global perspectives highlight different risks, Tighil et al. (2024) noted that while standard capital configurations have low direct impacts, external macroeconomic factors like exchange rate volatility heavily penalize heavily leveraged firms. Furthermore, Obi and Nworie (2024) demonstrated that excessive long-term debt-to-equity ratios create negative perceptions among market investors which lead to

a downward pressure on corporate share prices. Based on these conflicting theoretical and empirical literature, this study hypothesized that:

H₀₁: Internal equity does not influence the value of listed Manufacturing firms in Nigeria.

External Equity finance and Firm Value

Common equity (equity shares) represents ordinary share capital distinct from preference shares. Holders of these instruments function as the primary proprietors of the enterprise and exercise significant voting control over corporate management (Paramasivan & Subramanian, n.d.).

Within the empirical literature, the exact nature of the relationship between external equity injections and corporate performance remains highly contested. For instance, Lyndon and Timi (2019) utilized longitudinal secondary data spanning 2009 to 2018 to evaluate Aluminum Extrusion Company PLC and concluded that equity capital has a negligible influence on corporate outcomes. This aligns with the perspectives of Xicang et al. (2012), who argued that financial managers should prioritize long-term debt liabilities over equity financing, given that debt metrics demonstrate a superior capacity to enhance overall firm valuation.

Conversely, some strand of literature report different outcome, for instance Usman (2019) analyzed a sample of six Nigerian consumer goods manufacturers and demonstrated that equity financing is a major driver of corporate financial performance. Moreover, Alao and Babalola (2024) discovered that external equity issuance significantly elevates corporate value, as market participants perceive equity expansions as a signal of long-term stability. This stands in contrast to the findings of Nnorom (2025), who analyzed listed manufacturing firms and revealed that excessive equity financing dilutes earnings per share and result in a statistically negative impact on net profit margins.

Furthermore, international panel data from Chen and Zhang (2024) indicates that while equity capital fosters financial buffer zones during market downturns, it fails to optimize short-term profitability metrics when compared to debt. Conversely, Ibrahim and Bello (2026) demonstrated that the efficacy of equity finance is contingent on corporate governance structures, the study showed that equity only enhances performance when paired with strong institutional ownership. In light of these divergent empirical findings, this study establishes the following null hypothesis:

H₀₂: External Equity does not affect the value of listed Manufacturing firms in Nigeria.

Debt and Firm Value

Operational funding derived from borrowing is classified as debt capital. Within this category, extended-maturity obligations represent the least risk, this is because firms are granted multi-year horizons to amortize the principal while managing only servicing fees in the intervening periods (Nawaz et al., 2011). Furthermore, appropriate thresholds for financial leverage vary across sectors, given that distinct industries exhibit highly divergent operational risk profiles and cash flow characteristics (Gitman & Zutter, 2012).

Under the framework of trade-off theory, the propensity of corporate entities to over-leverage is constrained by potential insolvency costs (Kraus & Litzenberger, 1973). Consequently, literature suggests that corporate managers continuously substitute equity for debt and vice versa in an effort to hit a leverage target that maximizes shareholder wealth. As such, this trade-off paradigm centers on the reconciliation of the tax-shield advantages of borrowing against associated financial distress liabilities to derive an ideal capital structure (Gansuwan & Önel, 2012).



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Short-Term Finance and Firm Value.

Beyond long-term capital investments, enterprises require ongoing funding to cover immediate operational outlays such as inventory procurement, labor wages, and routine administrative expenses. These overheads represent short-term financial obligations necessary to sustain daily business functions (Paramasivan & Subramanian, n.d.). Such working capital needs are frequently met through short-term external financing instruments, such as commercial bank credit lines or informal money lender advances.

Empirical literature offers mixed findings regarding how these short-term liabilities affect corporate outcomes. For instance, an assessment of 80 Kuwait Stock Market equities between 2000 and 2008 demonstrated that short-term leverage ratios exert a substantially positive effect on market performance as measured by Tobin's Q (Hasan et al., 2011). In alignment with this view, Edore and Ujuju (2020) concluded that near-term obligations favorably optimize corporate market value. Furthermore, Cuang and Cahn (2012) evidenced that the interaction between capital leverage and overall enterprise value is nonlinear.

Conversely, several emerging-market studies reported adverse effects. An investigation by Usman (2019) focused on six Nigerian consumer goods corporations indicated that near-term borrowing fails to meaningfully alter financial performance. Although Adenugba et al. (2016) broadly confirmed that capital structure choices significantly dictate overall corporate valuation, specific sector dynamics can yield different outcomes. This is highlighted by Micheal and Babajide (2021), who longitudinally tracked 18 Nigerian manufacturing and consumer goods entities from 2008 to 2018, the findings revealed an inverse correlation between short-term debt reliance and operational performance. Based on this, the study posits the following hypothesis;

H₀₃: Short-term debt does not affect the value of listed Manufacturing Firms in Nigeria.

Long term debt and Firm Value

Long-term financial requirements frequently operationalized as fixed capital entails the long-term resources necessary to secure physical infrastructure, such as land, commercial real estate, heavy machinery, and other permanent assets (Paramasivan & Subramanian, n.d.). When addressing these long-term obligations, corporations often turn to debt financing which is a mechanism heavily favored in classical corporate finance due to the strategic benefit of interest tax shields (Myers & Majluf, 1984).

The real-world utility of leverage is non-linear. For example, Cheng et al. (2010) identified a triple threshold effect within Chinese A-share listed enterprises, documenting an inverted U-shaped correlation between leverage and firm performance, which implies that debt only adds value up to a specific tipping point. This underscores the recommendation by Daniel (2017) that corporate executives must strictly balance the marginal returns of long-term liabilities against their corresponding marginal distress costs before integrating them into the capital mix.

Within the Nigerian industrial landscape, empirical evidence heavily leans toward the value-maximizing potential of long-term debt tools. Local study by Edore and Ujuju (2020) confirmed that long-term debt liabilities enhance corporate performance. This is corroborated by Adenugba et al. (2016), who verified a statistically significant link between corporate leverage configurations and firm valuation.

Similarly, Adedoyin (2014) demonstrated that debt instruments act as a primary multiplier of firm value within the Nigerian banking arena, whereas equity plays a much

more limited role. Further supporting this baseline, Ogebe et al. (2013) evaluated a decade of financial data (2000–2010) across selected Nigerian corporations and concluded that capital gearing remains a central determinant of corporate output.

Beyond direct financial returns, structural tax incentives play a critical role. Anshu and Narendra (2014) examined 145 manufacturing firms between 2001 and 2009 and reported that non-debt tax shields serve as a foundational driver of corporate leverage with tax-shielded manufacturing firms exhibiting much higher debt adoption rates. Despite these documented structural advantages, certain scholars warn against debt reliance, Lucy et al. (2014) argued that managers should avoid long-term credit lines entirely due to inherent financial risks. Thus, the study posits the following hypothesis:

H₀₄: Long-term debt has no influence on the value of listed Manufacturing firms in Nigeria.

Theoretical Review

There are two dominant models that are used to explain firms' financing decisions, this includes the Pecking order theory and the trade-off theory, while the Ohlson clean surplus theory explains the relationship with firm value. The trade-off model is used to identify the weighted cost and benefit of debt to find the optimum capital structure.

Debt has, for instance, the advantage of interest being tax deductible and free-cash-flow agency problems being reduced. Potential bankruptcy costs and agency conflicts between stockholders and bondholders are part of the costs of debt. The leverage is at an optimal level when the benefit of taking up additional debt equals the cost of the debt.

Conversely, Myers (1984) along with Myers and Majluf (1984) proposed the pecking order framework as a competing capital structure paradigm. This hierarchical model posits that asymmetric information costs specifically transaction expenses and executives' asymmetrical superior insight into the true value of the company's risky securities covers the structural costs and tax benefits outlined in the trade-off hypothesis. Consequently, firms adhere to a strict financing chronology that prioritize internal retained earnings first, transition to risky debt instruments only when internal funds are exhausted, and resort to external equity issuance strictly as a final alternative.

Ohlson (1995) posited that a corporation's market valuation is a direct reflection of its book value, net earnings, and auxiliary value-relevant indicators. This accounting-based valuation perspective behaves differently across international borders; Bao and Chow (1999) discovered that the value relevance of corporate financial records diminishes over time in developed financial systems but strengthens within emerging markets. This paradigm relies heavily on the clean surplus theory, which allows a firm's market valuation to be mathematically derived from core income statements and balance sheet components (Scott, 2003).

Consequently, stock prices can be viewed as a weighted average of net earnings and book values (Ohlson, 1995). The major strength of the Ohlson (1995) model lies in its ability to reconcile market equity prices with internal accounting metrics. Assuming clean surplus accounting rules are maintained, the model calculates a security's price as the sum of its present book value and the present value of its discounted future abnormal earnings (Ohlson, 1995; Feltham & Ohlson, 1995).

Over the past few decades, scholars have adjusted this baseline framework to accommodate specialized economic variables. Research like Bala et al. (2021)



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extracted transitory earnings from the model and replaced them with specialized indicators of intellectual capital efficiency to better capture firm value.

3. Research Methodology

The study adopted descriptive and ex post facto research design. The ex post facto approach was chosen because the analysis relies on historical archival secondary data, meaning the underlying events have already transpired and cannot be manipulated. Complementing this, the descriptive framework is utilized to map, analyze, and interpret the distributional characteristics and interactions among the operationalized variables. This specific methodological synthesis mirrors empirical precedents in sub-Saharan accounting literature which align with the analytical frameworks utilized by Usman (2019) and Adenugba et al. (2016).

The target population for the inquiry were forty-five (45) listed manufacturing firms. These companies are clustered across three core industrial classifications which includes consumer goods, healthcare, and industrial goods (Detailed in Appendices A, B, and C). The following purposive three-stage filtering was applied:

- i. Uninterrupted access to annual financial data spanning the ten-year period from 2016 to 2026;
- ii. Active trading status on the exchange floor;

The following companies were dropped using this filter: Northern Nigerian Flour; Dunlop; Multi Trex Integrated Food; Golden Guinea Breweries; DN Tyre and Rubbers; McNichols; Notore Chemicals Industries Plc; DN Meyers; Ekocorp Plc; Cement Company of Northern Nigeria; Evans Plc; Afrik Plc; Morison Plc; Nigeria-German Plc. Further, the working population of thirty-one (31) firms was sampled because the manufacturing firms are concentrated in a few sectors.

The study data were obtained from the published report of the firms from 2016-2025 as well as their websites. The study utilized multiple regression analysis techniques and all estimation procedures, diagnostic checks, and econometric modeling were executed using STATA (Version 17) software.

Variable Definitions and Measurements.

Myers (1984) noted that companies issue equity when they are out of debt capacity. Debt capacity depends on the growth of the firms and their size. A firm with a high growth rate also has low debt, so that it can have the capacity to borrow more in the future. The possession of high tangible assets indicates lower cost of failure (distress) and high debt capacity. So, growth and tangibility were employed as the study control variable. Table 1 provides the information about how the variables would be measured.



Table 1

Variable Definition and Measurement

Dependent Variable	Apriori	Measurement
Tobins Q ratio		Sum of book value of total debt + Market value of equity divided by book value of asset
Independent Variable		Measurement
Internal Equity (IE)	+	Value of retained earnings/revenue reserve as reported in the statement of financial position
Eternal Equity (EE)	-	Value of Share capital plus Share premium as reported in the statement of financial position.
Short term debt ratio (STD)	-	Ratio of short-term to total debt
Long term debt ratio (LTD)	-	Ratio of long-term to total debt
Modified Ohlson (1995) Model Variable		Measurement
Book Value Per Share (BVPS)		Book value of equity per share measured as Total shareholders equity divided by number of ordinary shares outstanding.
Earnings Per Share (EPS)		Earnings per Share measured as Profit After tax (PAT) divided by number of ordinary shares outstanding
Control Variable		Measurement
Tangibility (TANG)	+	Natural logarithm of fixed assets
Revenue Growth (RG)	+	Current revenue minus previous revenue divided by previous revenue

Source: Developed by the Researcher Based on Literature

Model Specification

This study follows the Ohlson (1995) models to develop regression models. Unlike other models (Barth, 2000), Ohlson's model (equation 1) directly relates the accounting amounts to the firm value. The modified model by Barth (2000) is given in equation 1.

$$P_{it} = \alpha_0 + \beta_1 BV_{it} + \beta_2 E_{it} + fit \dots \dots \dots (1)$$

P = market value of common equity. The accounting inputs are represented by BV, which denotes the net book value of equity at the close of the financial year, and E, which measures the net annual earnings allocable to common shareholders. The above equation was extended and modified to include measures of financing decision and Tobin's q ratio was substituted for market price.

The estimated Model is given in equation 2. The Model estimated is presented in equation 2 as thus: $Tobinsq_{it} = \alpha_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_3 IE_{it} + \beta_4 EE_{it} + \beta_5 STD_{it} + \beta_6 LTD_{it} + \beta_7 TANG_{it} + \beta_8 RG_{it} + \varepsilon_{it} \dots \dots \dots (2);$

where, $Tobinsq_{it}$ is Tobins q ratio, $BVPS_{it}$ is book value per share, EPS_{it} is earnings per share, IE_{it} is internal equity, EE is External equity, STD_{it} is short term debt Ratio, LTD_{it} is long term debt ratio, $TANG_{it}$ is tangibility, and RG_{it} is revenue growth of firm i at time period t.

4. Results and Discussion

Descriptive Statistics

Table 2 shows the descriptive statistics for the study variables. The average value of TOBQ (Tobin's Q) is 1.7677 with a standard deviation of 1.5587. The average values of TOBQ suggest that the firm is earning a rate above the replacement rate; this could encourage other firms to diversify into the manufacturing line of business, reduce market share and market prices of the manufacturing firms.

Tangibility has a standard deviation of 88,421,161 billion and LTD (Long-term debt) has a standard deviation of 0.1579. The higher standard deviation of TANG (Tangibility), EE (external equity) and IE (internal equity) indicates the large variation of samples listed manufacturing firms in the tangible asset, share capital and retained earnings. The lowest values are 21,320 million for External equity (EE) and 0.0000 for long-term debt (LTD). This finding implies that the minimum share capital of the sampled manufacturing firm in Nigeria is about 21,320 million naira.

Table 2

Descriptive Result

Variable	Obs	Mean	Std. Dev.	Min	Max
TOBQ	240	1.768	1.559	.124	9.287
BVPS	240	12.85	17.132	-5.005	69.116
EPS	240	2.949	33.115	-125.874	186.003
EE	240	10257243	19100313	21320	77768807
IE	240	20490907	45986108	-5981515	4.965e+08
STD	240	.335	.231	0	2.23
LTD	240	.116	.158	0	2
RGRWTH	240	.225	.888	-.999	9.342
IANGIBILITY	240	15.89	2.054	9.688	20.36

Sources: Output from STATA 17

Correlation Analysis

The result of pairwise correlation between independent themselves (IE, EE, LTD, and STD) and the relation with the dependent variable of the study (TOBQ) is shown in Table 3 below:

Table 3
Correlation Analysis

Variables	TOBQ	BVPS	EPS	EET	IET	STD	LTD	RG	TANG	VIF
TOBQ	1.000									
BVPS	-0.122 (0.059)	1.000								1.16
EPS	0.061 (0.350)	0.075 (0.247)	1.000							1.04
EET	0.089 (0.169)	0.312* (0.000)	0.020 (0.754)	1.000						1.19
IET	0.025 (0.702)	0.084 (0.192)	0.015 (0.816)	0.075 (0.249)	1.000					1.01
STD	0.151* (0.019)	0.038 (0.560)	-0.015 (0.816)	-0.131* (0.042)	-0.003 (0.964)	1.000				1.25
LTD	-0.005 (0.933)	-0.146* (0.024)	-0.018 (0.776)	-0.021 (0.743)	-0.048 (0.455)	-0.073 (0.260)	1.000			1.03
RGRWTH	-0.024 (0.706)	-0.092 (0.153)	-0.178* (0.006)	-0.053 (0.413)	-0.068 (0.297)	-0.127* (0.049)	0.027 (0.682)	1.000		1.07
TANG	0.343* (0.000)	-0.135* (0.037)	0.022 (0.735)	-0.162* (0.012)	-0.007 (0.915)	-0.372* (0.000)	0.067 (0.303)	-0.017 (0.790)	1.000	1.24

*** p<0.01, ** p<0.05, * p<0.1

Sources: Output from STATA 17

The output indicates that external equity (EE), internal equity (IE), and short-term debt (STD) exhibit positive correlations with the tobins q ratio with the coefficients of 0.0269, 0.1763, and 0.0210, respectively. Conversely, an inverse relationship is observed between revenue growth (RG) and tobins q ratio, as evidenced by a negative coefficient of -0.0303. Long-term debt (LTD) demonstrates a marginal but positive near-zero association with tobins q ratio at 0.0002.

The pairwise coefficients fall below the threshold of perfect linear association which signal that the independent variables are not perfectly collinear. Moreover, a test for multicollinearity was performed by variance inflation factor (VIF) to verify if there is no perfect correlation among the explanatory variables. Tolerance values of all the explanatory variables are less than 1 and VIF values are less than 5. Thus, the study found that there was no multicollinearity between the independent variables.

Diagnostic Test

Post-estimation diagnostics conducted on the fixed-effects model revealed that the dataset violates several classical linear regression assumptions. Specifically, the Modified Wald test confirmed panel-level heteroscedasticity ($p = 0.0000$), while the Pesaran (2004) CD test ($T < N$) indicated the presence of cross-sectional dependence driven by contemporary corporate integration (Hoyos & Sarafidis, 2006).

Additionally, diagnostic screening identified first-order serial correlation within the error structure. To resolve these combined threats of heteroscedasticity, spatial dependence, and autocorrelation, the study utilized Prais-Winsten regression paired with Panel-Corrected Standard Errors (PCSEs) to generate robust and unbiased empirical estimates.



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Table 4

Diagnostic Test

Test	Statistics	P-value
<i>Group Wise Heteroscedasticity</i>	1.7e+05	0.0000
<i>Cross Sectional Independence</i>	8.145	0.0000
<i>1st Order Serial Correlation Test</i>	2.78	0.005

Sources: STATA 17

Regression Result and Discussion

Table 5

Regression Result

TOBQ	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
BVPS	-.009	.004	-2.66	.008	-.016	-.002	***
EPS	.003	.002	0.18	.859	-.004	.005	
EET	.048	.022	2.19	.029	.005	.091	**
IET	.575	.309	1.86	.063	-.032	1.181	*
STD	1.129	.319	3.54	.000	.504	1.755	***
LTD	-.094	.247	-0.38	.702	-.578	.389	
RGRWTH	-.018	.04	-0.45	.649	-.096	.06	
TANGIBILITY	.283	.072	3.92	.000	.142	.425	***
CONSTANT	-3.157	1.053	-3.00	.003	-	-1.092	***
					5.221		
Mean dependent var	1.768		SD dependent var	1.559			
R-squared	0.207		Number of obs	240			
Chi-square	40.914		Prob > chi2	0.000			

*** p<.01, ** p<.05, * p<.1

Sources: Output from STATA 17

The regression model used for the study is given below in Table 5. The result of the Prais Winsten regression model shows that External Equity (EET) enhance the value of listed manufacturing firm in Nigeria and this suggest that a unit increase in share capital and premium drives a 0.048 increase in corporate value (see table 5). This outcome aligns with Usman (2019) but contradicts Lyndon and Timi (2019).

Moreover, the result presented in table 5 indicates Internal Equity (IET) significantly enhance firm value at 10% level. This indicates that increased reliance on retained earnings enhances market valuation. Also, the regression result showed that at 1%, 5% and 10% significance level, Short-term debt (STD) has a significant favourable effect on firm value. The findings are in agreement with the result of Adenugba et al. (2016), Edore and Ujuju (2020) and Hasan et al. (2011) but contrast the findings of Cuang and Cahn (2012), Usman (2019) and Micheal and Babajide (2021).

Additionally, table 5 shows that there is a negligible adverse relationship between long-term debt and value (Tobin's Q) of listed manufacturing companies in Nigeria. This is in line disagreement with Lucy et al. (2014), Edore and Ujuju (2020), Ogebe et al. (2013), Anshu and Narendra (2014), Adedoyin (2014), Adenugba et al. (2016). The study finds that there is a negligible negative relationship between long-

term debt and the value of listed manufacturing companies in Nigeria. Hence, the study failed to reject H4.

The result presented in Table 5 shows that one of the two Ohlson (1995) modified main variables (book values per share) exert a significant negative influence on firm value. Likewise, the Wald Chi2s value of 99.44 suggests that the overall model (explanation) of the independent variables is significant at 5% as shown by the prob > chi2 value of 0.000 in Table 5.

5. Conclusion and Recommendations

The outcome shows that financing decision plays an important role in the explanation of the changes in the market value of firms in the Nigeria manufacturing sector. Therefore, the following recommendations were made.

- i. An increase in the use of external equity would lead to an increase in the firm's market value. Thus, the listed Manufacturing companies in Nigeria should continue to have external equity in their financial structure. Other types of share issuance, for example, share-based payment to employees and shareholder, can also be evaluated.
- ii. Retained earnings should be prioritized and considered the first source of finance, and this can be done by increasing the earnings retention ratio which will lead to capital gain for existing shareholders since it has no transaction cost.
- iii. In addition, the higher the level of STDs, the more valuable the manufacturing firm is in Nigeria. So, management should make more use of short-term debt as it increases the value of the firm. But the firm should be conscious of using debt financing by considering the cost and benefit of taking up additional debt.

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