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Funding Structure and Performance of Quoted Manufacturing Firms in Nigeria

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Abstract

This study examines the relationship between funding structure and the performance of quoted manufacturing firms (QMFs) in Nigeria from 2012 to 2022. The ratio of short-term financial liabilities to equity (SFLE), ratio of long-term financial liabilities to equity (LFLE), ratio of lease liabilities to equity (LLE), and the ratio of trade and other payables to equity (TPE) were used as indices of funding structure, while gross profit (LGPT) was used as proxy for performance. We sourced for data from the annual reports of thirty-two QMFs and thus giving a total observation of 352. The study made use of an ex-post facto research design. The study employed the descriptive statistics, unit root, Hausman, Panel Causality, and the Fixed Effect Panel Ordinary Least Square (POLS) tests at the 95% confidence interval. The unit root test shows that all the variables are stationary at level requiring the Hausman test that verifies that the Fixed Effect POLS is the more appropriate technique to apply in this study. The Fixed Effect POLS shows that LFLE and TPE are positive and significant to LGPT, LLE is negative and significant, and SFLE is negative and insignificant to LGPT. The Panel Causality test shows that there are uni-directional supports from LFLE, SFLE, and TPE to LGPT for QMFs in Nigeria. However, there is bi-directional support from LLE and LGPT. The study concludes that the ratio of short and long-term financial liabilities as well as trade and other payables to equity affect the earnings of QMFsin Nigeria. The study recommends that QMFs should continue to use trade and other payables and long-term financial liabilities as means of funding their investments since it promotes their earnings.

Keywords:

Company, Quoted, Production, Gearing, Hausman.

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1.0 Introduction

Funding decisions are crucial considerations for all business enterprises, both during their initial stages and throughout their operations. These decisions impacts on the survival and sustainability of the business entity. During the initial stages of a business venture, it is crucial for the owners to carefully evaluate the factors of production that are necessary for the effective implementation of their business idea. During this process, the owners must address the question of how to secure funding for the project. To address this inquiry, an exhaustive examination of all potential funding sources is considered and documented in the business plan or feasibility report. Funding is a crucial consideration for every business organisation when initiating operations. The performance of a firm is influenced by the different funding structures it can access. Robert (2012) suggests that mishandling the finance mix can have negative consequences on a business's survival and profitability.

The funding structure of corporations refers to the combination of securities and financing sources utilised to finance real investment (Myers, 2006). Welch (2009) defines funding structure as the aggregate of all obligations on the firm's assets. The claims collectively represent the ownership rights over the assets of the firm. The funding structure typically consists of a blend of different sources of funds, primarily debt and equity. The funding structure refers to the manner in which a company obtains financial resources to support its operations and facilitate its expansion. This involves utilising various sources of funding. Titman and Wessels (1988) identify several factors that can influence a firm's decision regarding its debt-equity ratio. These factors include asset structure, non-debt tax shields, growth prospects, uniqueness of the firm, industry classification, size, earnings volatility, and profitability. The relationship between capital structure and company performance is reciprocal, as changes in a company's financial performance can influence its funding decisions.

The decision of financing involves balancing risk and return in order to maximise the wealth of shareholders (Berger et al., 2000). The primary goal of optimal financing decisions for a firm is to achieve a balance between debt, preferred stock, and common equity that maximises shareholder wealth and ensures sufficient liquidity for the firm's operations. This is because alterations in the firm's funding structure can impact its overall value (Farrington & Abrams, 2002). Manufacturing firms may have varying objectives in practise, but the fundamental goal for all is to minimise costs. While debt is commonly viewed as a unified source of funds for manufacturing firms, this study aims to explore additional aspects of funding choices beyond the decision to leverage. Debt can vary in nature and incentive properties based on factors such as maturity (long and short) and the providers involved.

The relationship between a firm's capital structure, its value, and performance has been a complex topic in corporate finance and accounting literature. Modigliani and Miller (1958) proposed that in a perfect capital market with no bankruptcy costs and frictionless capital markets, the firm's value is unaffected by its capital structure if there are no taxes. Debt can lower tax liabilities;therefore, it is optimal for enterprises to have a capital structure consisting entirely of debt. Numerous theories have emerged to elucidate the concept of a firm's capital, such as the Pecking Order Theory, Static Trade-off Theory, and Agency Cost Theory.

The choice of capital source by a firm has implications for its competitive position relative to other firms. Firms employs an optimal combination of debt and equity to maximisetheir

profitability. Several factors influence the amount of debt a firm undertakes in relation to financing its needs. The trade-off model of capital structure theory posits that firms with higher levels of business risk should employ lower levels of debt compared to firms with lower risk profiles. The greater the risk, the more likely it is that the firm will experience financial distress. Firms with tangible assets should utilise higher levels of debt compared to firms with more intangible assets, as only tangible assets can serve as collateral. Moreover, in the event of financial distress, it is highly probable that intangible assets will experience a decline in value. According to Brigham and Ehrhardt (1999), firms with higher tax rates should consider taking on more debt due to their lower bankruptcy risks compared to firms with lower tax rates.

Myers (1977) introduced the pecking order theory, which is also applicable to the deviation of capital structure. Firms exhibit a preference for a specific hierarchy when making financing decisions. The primary priority is to utilise internal funding before considering external sources of capital. The Agency Cost Theory posits that an optimal capital structure can be achieved by mitigating the costs arising from the divergence of interests between managers and owners. Jensen and Meckling (1976) proposed that the level of leverage can serve as a means of monitoring managers in their pursuit of both the firm's objectives and their own. Reducing costs improves efficiency and ultimately enhances firm performance (Buferna et al., 2005).

Several studies (Nwanne&Ive, 2017; Premph et al., 2016; Abubakar, 2017; Enekwe, et al. 2014; Cyril, 2016) have examined the relationship between capital structure and firm performance in Nigeria. The focus of these studies were solely on the long-term funding structures of the examined firms. However, this study is distinct in that we looked at how short and long-term funding structure affects the earnings of quoted manufacturing firms. The inclusion of short-term funding structure is because of the fact that one of the main ways manufacturing firms fund their investments is through the use of trade payables since it does not accumulate interest and other funding structures like bank overdrafts and letter of credits, and short-term bank borrowings due to the ease of obtaining cash. Additionally, we disintegrated the long-term funding structure into financial liabilities and lease liabilities. The rationale behind this is to know which of the long-term funding structure actually promotes the performance of quoted manufacturing firms in Nigeria. The rest of this article is divided into literature review, methodology, results and findings, and conclusions and recommendations.

2.0 Literature Review

The study is anchored on the pecking order, trade-off, and M&M capital structure irrelevance theories.

2.1 Theoretical Review

2.1.1 Pecking Order Theory

The Pecking Order Theory, initially proposed by Donaldson in 1961 and subsequently popularised by Myers and Majluf in 1984, posits that firms have a predetermined hierarchy of preference when it comes to financing their investments. This hierarchy is based on the

available sources of finance. The preferred sources of financing are internal finance or retained earnings, followed by secured debt and unsecured debt. The last option is issuing shares (Myers & Majluf, 1984; Watson & Head, 2007). The pecking order theory suggests that firms prioritise the funding of projects and activities based on the cost of acquiring capital (Welch, 2009). The majority of organisations typically rely on internal sources of financing for their investments, with external debt being used to a lesser extent. This financing pattern aligns with the pecking order theory as described by Brealey, Myers, and Marcus (2007). Pandey (2010) proposed a practical framework for this theory, which posits that managers possess superior information compared to investors, enabling them to exploit this advantage. Managers strategically employ debt when they hold optimistic views about future prospects, while resorting to capital when they are uncertain or doubtful. Due to the absence of a clearly defined debt equity target, there are two types of equity: internal and external. Internal equity is prioritised over external equity. According to Myers (1984), firms tend to prioritise the use of retained earnings as their primary source of funds, followed by debt financing, and lastly, equity financing. This preference aligns with the pecking order theory.

Ryan (2007) suggests that contracting costs and information signalling play a crucial role in establishing a hierarchy of desirability for firms when selecting among various sources of financing. Myers and Majluf (1984) proposed a signalling model that examines the impact of investment and financing decisions on the market value of a firm. Their research demonstrates that firm insiders, who possess superior information, have an advantage over investors who are less informed. Consequently, this information asymmetry can lead to mispricing of the firm's shares. In their study, Helwege and Liang (1996) examined the pecking order hypothesis across different firms. Their findings supported the hypothesis, indicating that firms with excess funds tend to rely more on internal sources, while firms facing cash deficits tend to utilise external debt from the market. Frank and Goyal (2003) conducted a study spanning from 1971 to 1998, which found no evidence in support of the pecking order theory.

2.1.2 Trade-off Theory

Stewart Myers introduced this theory in 1984, positing that managers aim to balance the tax benefits of debt with its associated costs. Tax provides a chance for the tax shield benefit, which is offset by the need for a higher return to account for default risk. Tax shield and risk have a trade-off that leads to the optimisation of the cost of capital (Ryan, 2007). The firm borrows until the tax benefit from the investment is equal to the cost or risk associated with the increased profitability. This theory assumes that the firm's assets and operations are fixed, and focuses solely on potential variations in the debt-equity ratio. Graham and Harvey (2001) conducted a survey of chief finance officers and discovered that a majority of firms exhibit evidence of a specific debt equity ratio being targeted.

According to McGuigan et al. (2007), the trade-off theory posits the coexistence of bankruptcy cost and agency cost. Financing with debt offers advantages due to tax shield benefits, but it also incurs costs such as bankruptcy and financial distress costs. Debt offers a tax advantage but also raises the likelihood of bankruptcy, along with associated costs. The

tax benefit derived from debt decreases as the level of debt increases. Pandey (2010) demonstrated that financial distress has an impact on firm value and that the determination of capital structure is influenced by the tax benefit and cost of financial distress. The optimal point is achieved when the marginal present value of the tax benefit is equal to the present value of the financial cost of distress. According to Ryan (2007), management should utilise debt in a manner that maximises shareholders' wealth and reduces the overall agency cost, taking into consideration the tax advantage associated with debt.

Several studies suggest that firms have a target capital structure, and managers adjust their debt ratios accordingly. Managers adjust their capital structure over time to maintain an optimal balance between the cost and benefit of debt, which is relative to the level of adjustment (Hovakimian, Opler & Titman, 2011). Dang (2013) conducted a study on firms in Germany, France, and the UK to examine the applicability of the static trade-off theory to their capital structure decisions. The study utilised error correction models and found that the theory effectively explains these decisions. A study conducted by De Jong, Verbeek, and Verwijmeren (2011) on US firms produced comparable findings.

2.1.3 Signaling Theory

To avoid adverse selection concerns and losing value in the pecking order model, good quality enterprises must use internal money. These companies' capital structures cannot signal their quality. Capital structure is used as a signal of private information in signalling theory (Ross, 1977). This hypothesis predicts that the market reaction to debt issues (and, more broadly, to leverage-increasing events such as issuing convertible debt, repurchasing shares, and debt for equity swaps) will be positive. Likewise, the market reaction to stock issues (or leverage-reducing transactions) is negative.

Leland and Pyle (1977) achieve the same findings by substituting managerial risk aversion for a bankruptcy penalty. As indicated in the previous section, a negative share price reaction to the announcement of equity offerings is usually consistent with empirical evidence (same for leverage-decreasing transactions). With the exception of debt difficulties, evidence on the favourable market reaction to leverage-increasing transactions supports signalling theory (Baker, Powell, & Veit, 2003;Antweiler& Frank, 2006). The evidence on debt issue announcements does not support signalling hypotheses. Stock prices respond insignificantly to pure corporate debt offerings (Eckbo, 1986;Antweiler&Frank, 2006). If there is a separate equilibrium, high-quality enterprises will issue debt and low-quality firms will issue equity. The empirical prediction is that the debt-to-equity ratio and firm value (or profitability) are positively associated. However, the evidence is equivocal. As previously noted, most empirical research show a negative association between leverage and profitability. In a similar vein, other research show that equity-issuing enterprises outperform before and after the issuance (Jain & Kini, 1994; Loughran & Ritter, 1997). Several studies look at long-term firm performance after changes in capital structure. According to Shah (1994), company risk decreases after leverage-increasing exchange offers but increases after leverage-decreasing exchange offers. Long-run operating underperformance of equity issuing enterprises is documented by Jain and Kini (1994), Mikkelson, Partch, and Shah (1997), and Loughran and Ritter (1997).

2.1.4 Modigliani and Miller (M&M) Theorem

The modern understanding of capital structure theory can be traced back to the influential work of Modigliani and Miller (M&M), who published their renowned article in 1958. Most business and finance academics are familiar with M&M's capital structure irrelevance proposition, which is often discussed in textbooks on corporate finance as a starting point for understanding capital structure and cost of capital. Furthermore, M&M According to Myers (2002), capital structure theories and empirical evidence primarily examine the financing strategy and optimal debt ratio selection for firms operating within specific institutional environments. Myers (2002) argues that these theories are credible because they allow for the observation of the costs and benefits that influence financing strategies, rather than solely focusing on accurately capturing variations in total debt ratios. Although a universal theory of capital structure does not exist, there are several conditional theories that focus on the factors influencing the optimal combination of debt and equity. Myers (2002) identifies various factors including taxes, agency costs, differences in information, and institutional or regulatory constraints. The author emphasised that these factors may hold great significance for certain firms while being relatively unimportant for others.

2.2 Empirical Review

Nwanne and Ive (2017) examine the influence of financial leverage on the performance of Nigerian firms during the period of 2006-2015. The study utilises data from a sample of 13 Deposit Money Banks (DMBs). Using the multivariate ordinary least squares (OLS) technique, our analysis reveals a significant negative relationship between the debt-to-equity (D/E) ratio and profitability. Prempeh, Sakyere, and Asare (2016) employed the Random and Fixed effect models to examine the relationship between FLE and profitability in a study of five publicly traded Ghanaian manufacturing firms from 2005 to 2015. Their findings revealed a negative correlation between FLE and profitability. Abubakar (2015) gathered data on nine Deposit Money Banks (DMBs) in Nigeria from 2005 to 2013. The author demonstrates a significant negative correlation between the variables through a correlational analysis. Abubakar (2016) analyses the performance of five publicly traded healthcare companies in Nigeria from 2005 to 2014. He specifically observes that a high debt-to-equity ratio has a significant negative impact on profitability. Abubakar (2017) found a positive correlation between financial leverage and profitability in a sample of 66 publicly traded non-financial firms from 2005 to 2014. Enekwe, Agu, and Eziedo (2014) conducted an analysis of three Nigerian pharmaceutical companies and observed a positive correlation between increasing the debt-to-equity (D/E) ratio and profitability, as measured by Pearson correlation. Nwaolisa and Chijindu (2016) employ the POLS method to determine that there is no statistically significant relationship between financial leverage and profitability in a sample of 23 consumer goods firms from 1993 to 2013. Cyril (2016) utilises the POLS method to analyse the financial leverage of six publicly-traded companies from various industries during the period of 2011 to 2015. The study's findings indicate that none of the companies consider financial leverage to be significant in their operations.

Factors that can have a negative impact on a firm's profitability include an overreliance on short-term financing instead of long-term debts and the underutilization of fixed assets. This

study employs two models, namely pooled ordinary least squares (OLS) and panel data analysis, to analyse a sample of 155 listed firms in Sri Lanka. Manawaduge et al. (2011) found that the financial performance of developing countries is adversely impacted by the utilisation of current liabilities as opposed to long-term liabilities. According to Evgeny (2015), leverage negatively impacted both return on equity (ROE) and return on assets (ROA), as well as the operating margin. In a study conducted by Abor (2005), 22 Ghanaian firms were analysed over a five-year period. The study utilised profitability ratios, specifically EBIT to equity, as the response variable. The explanatory variables included the short-term debt to total capital ratio, the long-term debt to total capital ratio, and the total debt to total capital ratio. Additionally, firm size and sales growth were considered as control variables. OLS regression analysis revealed an inverse association between LTD and profitability, while short- and long-term mix exhibited a positive correlation with profitability. Previous research has found a negative association between debt and a firm's profitability, as measured by indicators such as return on assets (ROA) and return on equity (ROE) (Pouraghajan et al., 2012; Ahmed, Awais, & Kashif, 2018). Singh and Bansal (2016) conducted a study on 58 publicly traded consumer goods companies with significant growth rates between 2007 and 2016. This study employs the metrics of return on assets (ROA) and economic value addition to assess financial performance. Additionally, enterprise value and Tobin's Q method are utilised to evaluate firms' valuation. The findings of this study, using a panel data econometrics model, suggest that leverage has a significant negative impact on performance and value, similar to the findings of Ahmad et al. (2015). García-Gómez et al. (2020) discovered a negative relationship between profitability and leverage, which aligns with the pecking order theory.

However, several researchers have discovered that leverage can be advantageous for a firm's profitability. Highly profitable firms tend to retain a larger portion of their earnings in order to minimise the need for external borrowing, resulting in a low level of leverage. Obtaining external debt financing is more accessible for highly profitable firms compared to less profitable ones (Fu-sheng & Nan-hui, 2014; Grau & Reig, 2021). Guo et al. (2021) demonstrated that debt-based financing can enhance profitability by effectively utilising surplus cash flow that would otherwise be squandered by management. Dalai (2018) found a reciprocal relationship between debts and profitability in the context of registered manufacturing firms in China. The study analysed panel data from 2006 to 2017, consisting of 1,503 firms. The analysis employed an OLS regression model to examine the effects of short-term debt ratio (STDR) and total debt ratio (TDR) on profitability measures, specifically return on assets (ROA) and return on equity (ROE). The results indicated that both STDR and TDR had positive impacts on ROA and ROE. Adenugba et al. (2016) discovered a varied correlation between a company's value and its performance. Similar to previous research, this study also supports the notion that incorporating a significant amount of borrowed capital in the debt-equity mix can lead to unfavourable firm performance if the return on investment is lower than the cost of debt. It is important to acknowledge that debt interest is tax deductible and can potentially reduce loan repayments. Financial leverage can enhance return on investment. The statistical technique of Ordinary Least Squares (OLS) was employed to identify a significant positive correlation between the value of enterprises and

their leverage. Rahman et al. (2020) discovered a significant negative relationship between financial leverage and firms' value in their study of 22 textile firms listed on the DSE. They employed statistical techniques such as OLS, fixed effect, and GMM, which differed from previous studies.

The influence of a firm's leverage on performance has yielded mixed results, according to several researchers. Iqbal and Usman (2018) found that leverage had a negative impact on return on equity (ROE) but a positive effect on return on assets (ROA). The study's findings suggest that high interest rates and increased debt negatively impact profitability by reducing the value of the company's stock. According to Hasan et al. (2014), there is a statistically significant positive relationship between short-term debts and EPS. Conversely, long-term debts are found to have a significant negative correlation with EPS. Chen (2020) found a positive relationship between a firm's leverage and performance through the use of OLS and 2SLS methods. Al-Tally (2014) In the absence of significant economic downturns, the researcher found that reducing debt levels is likely to result in long-term improvements in profitability and returns on assets and equity. There is evidence suggesting that corporate leverage has a limited impact on firms' performance. Hasan et al. (2014) conducted a study on 36 publicly traded companies in Bangladesh from 2007 to 2012. They examined the relationship between the financial performance indicators, such as return on equity (ROE), earnings per share (EPS), return on assets (ROA), and Tobin's Q, and the exogenous variables, including short-term debt (STD), long-term debt (LTD), and total debt (TD). Chesang (2017) examined the relationship between capital structure and profitability measures such as return on equity (ROE) and Tobin's Q. The study specifically focused on the impact of leverage on the profitability of agricultural firms listed on the NSE. The explanatory variables included return on capital employed (ROCE), debt-to-equity ratio, current ratio (CR), and asset size. The profitability measures used were return on assets (ROA), earnings before taxes (EBT), and total assets. The debt-equity ratios and the current ratio significantly affected profitability, while the long-term debt-to-capital-employed ratio and company size did not have a notable impact.

3.0 Methodology

The ex-post facto research design was used in this study. This is due to the fact that we do not have the prerogativesto change the data used in this study because it was gathered secondarily. For the period 2012 to 2022, the population of the study includes all quoted manufacturing firms in the Nigeria Exchange Group. This represents the study's total finite population. The study employed the purposive sampling techniques to choose thirty-two (32) quoted manufacturing companies. The rationale for the inclusion of only thirty-two quoted manufacturing firms is based on the availability of consistent data for the study period under investigation. Secondary data used in the study were sourced from the Nigeria Exchange Group (NGX) and annual reports of the selected thirty-two quoted manufacturing firms for the period 2012-2022, totaling 352 observations. The income statements, statements of financial positions, and cash flow statements are all included in the annual reports. Several studies (Rahman et al., 2020; Ahmed et al., 2018; García-Gómezet al., 2020; Guo et al., 2021)made used of gross profit as measure of performance of firms. Thus, this study adopts

the same measure as an indicator of performance of quoted manufacturing firms. Another reason for its usage is as a result of the fact that it is not affected by various depreciation methods adopted by the quoted firms. In proxying for funding structures, this study disintegrates it into short (ratio of trade and other payables to equity and ratio of short-term financial liabilities to equity) and long-term (ratio of lease liabilities to equity and ratio of long-term financial liabilities to equity).This study makes use of the descriptive statistics, Hausman and Fixed Effect POLS techniques at the 5% significant level.

Justification for the Inclusion of the Selected Variables

Long-term financial liabilities as a ratio of equity refer to any form of long-term borrowing recorded in the financial statements of QMFs that accumulate interest at a specific point in time, in relation to shareholders' funds. There is a positive relationship between the ratio of long-term financial liabilities to equity and gross profit of QMFs. This is based on the realization that the borrowed funds will be utilized in investments with positive net present values; thus, allowing QMFs to increase their earnings by engaging in more profitable projects that would have been overlooked due to resource constraints. This condition holds true when the proportion of equity exceeds long-term financial liabilities by a significant margin. Based on apriori expectations, we anticipate a positive relationship between the long-term liabilities to equity ratio and earnings of QMFs in Nigeria.

The ratio of trade and other payables to equity (TPE) represents the percentage of unpaid merchandise received from suppliers in relation to the owners' funds at the time the account was prepared. There is a positive relationship between TPE and gross profit. A higher proportion of owners' funds in relation to trade and other payables reduces the risk posed by suppliers if the QMFs fail to meet their debt obligations. This also gives management confidence to acquire and efficiently utilise more trade and other payables to increase firm earnings. We anticipate a positive relationship between TPE and gross profit.

The ratio of lease liabilities to equity (LLE) represents the relative amount of long-term lease liabilities in relation to shareholders' funds. There is a positive correlation between LLE and gross profit. An increase in LLE will lead to higher earnings for QMFs in Nigeria. A higher LLE ratio signifies reduced risks for investors, QMFs, and lessors. Due to the reduced risk level, QMFs have the capacity to lease advanced equipment and expand their production of high-quality goods and services on a larger scale. This will lead to a decrease in production costs and selling prices, resulting in increased sales volume and higher profitability. We anticipate a positive correlation between LLE and gross profitof QMFs in Nigeria.

Short-term financial liabilities as a ratio of equity refer to the various types of short-term borrowing that QMFs have recorded in their financial statements, which accumulate interest and are compared to shareholders' funds at a specific point in time. There is a positive correlation between the ratio of short-term financial liabilities to equity and the gross profitof QMFs. This is based on the realization that the borrowed funds will be utilized in investments with positive net present values; thus, allowing QMFs to increase their earnings by engaging in more profitable projects that would have been overlooked due to resource constraints. This condition is met when the proportion of equity exceeds short-term financial liabilities by a

significant margin. Based on apriori expectation, we anticipate a positive correlation between the ratio of short-term financial liabilities to equity and earnings of QMFs in Nigeria.

To succinctly carryout this study, our model is stated as follows:

$$LGPT = f(LFLE, LLE, SFLE, TPE) \quad 3.1$$

$$LGPT_{it} = \beta_0 + \beta_1 LFLE_{it} + \beta_2 LLE_{it} + \beta_3 SFLE_{it} + \beta_4 TPE_{it} \quad 3.2$$

The econometric form of the model for this study is stated below with the introduction of the error

$$LGPT_{it} = \beta_0 + \beta_1 LFLE_{it} + \beta_2 LLE_{it} + \beta_3 SFLE_{it} + \beta_4 TPE_{it} + \mu_{it} \quad 3.3$$

β_1, β_2, β_3, and $\beta_4 > 0$

Where, LGPT = Natural logarithm of gross profit(this is done to bring all the variables to the same scale of measurement),LFLE = Ratio of long-term financial liabilities to equity, SFLE = Ratio of short-term financial liabilities to equity, LLE = Ratio of lease liabilities to equity, TPE = Ratio of trade and other payables to equity, μ = Error Term, t = the period of study, i = the firms under study.

4.0 Results and Discussions

4.1.1 Descriptive Statistic Result

Table 4.1 Descriptive Summary Result

	LGPT	LFLE	LLE	SFLE	TPE
Mean	13.82876	0.401728	0.141776	0.109179	0.286881
Median	13.93502	0.005750	0.004794	0.003589	0.002500
Maximum	20.20633	7.046514	1.714703	0.626181	2.830521
Minimum	6.549651	0.001617	0.001282	0.000989	0.000855
Std. Dev.	2.131598	1.236590	0.314785	0.171584	0.632234
Skewness	-0.000580	3.587634	2.982637	1.411959	2.529519
Kurtosis	3.175065	15.16957	11.76860	3.679481	8.399703
Jarque-Bera	0.449520	2927.217	1649.602	123.7310	803.0095
Probability	0.798708	0.000000	0.000000	0.000000	0.000000
Sum	4867.723	141.4082	49.90520	38.43093	100.9821
Sum Sq. Dev.	1594.842	536.7331	34.78047	10.33381	140.3018
Observations	352	352	352	352	352

Source: E-views Output

The thirty-two quoted manufacturing companies considered in this analysis are described in detail in Table 4.1 for the time period 2012–2022. According to Table 4.1's descriptive results, the mean values for gross profit(LGPT), long-term financial liabilities to equity (LFLE), lease liabilities (LLE), short-term financial liabilities to equity (SFLE), and trade and other payables to equity (TPE) ratio were 13.82876, 0.401728, 0.141776, 0.078554, 0.109179, and 0.286881, respectively. LGPT, LFLE, LLE, SFLE, and TPE smallest and highest values are 6.549651 and 20.20633, 0.001617 and7.046514, 0.001282 and 1.714703, 0.000989 and 0.626181, and 0.000855 and 2.830521, respectively. LGPT, LFLE, LLE, SFLE, and TPE had dispersion levels from the mean of 2.131598%, 1.236590%, 0.314785%, 0.171584%, and

0.632234%, respectively. The Kurtosis result shows that only LGPT is mesokurtic since its values is below 3 (3.175065); while LFLE, LLE, SFLE, and TPE are leptokurtic as their values are above 3 (15.16957, 11.76860, 3.679481, and 8.399703, respectively). The Jarque-Bera statistics test demonstrates the normality of the distribution. If the probability value associated with the Jarque-Bera test is greater than the specified significant threshold of 5%, the distribution is considered to be regularly distributed, according to the null hypothesis. As a result, because the p-values of the Jarque-Bera test of LFLE, LLE, SFLE, and TPE (0.000000, 0.000000, 0.000000, and 0.000000, respectively) are below 5% level, the null hypothesis is rejected, while the alternate hypothesis that the variables are not normally distributed for the period studied is accepted. However, because the Jarque-Bera tests for LGPT(0.798708)are above 5% level of significance, the null hypothesis is accepted while the alternate hypothesis that the variables are normally distributed for the period investigated is rejected.

Table 4.2 Unit Root Result

Variables	Levin, Liu & Chu t-Stat @ Level	P-value @ level	Order of Integration
LGPT	-5.82504	0.0000	I(0)
LFLE	-2.73983	0.0031	I(0)
LLE	-2.21146	0.0135	I(0)
SFLE	-2.14165	0.0161	I(0)
TPE	-10.1942	0.0000	I(0)

Source: E-views Output

Table 4.2 demonstrates that all variables are stationary at level. This means that their p-values are less than the 5% level of significance. As a result, the study only examines the Panel Ordinary least (POLS) test to determine the short-run relationship between funding structure and performance of quoted manufacturing firms in Nigeria. Before we do this, we make used of the Hausman test to verify between the fixed and Random effect POLS which is more appropriate.

Table 4.3: Hausman Test Result

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.157884	4	0.0000

Source: E-view Output

For the Hausman test, if the p-value is below 0.05, we choose the fixed effect model; otherwise, we chose the random effect model as the more appropriate for the study.The choice of the Fixed Effects model over the Random Effects model was favoured by the Hausman test result that is below the 5% threshold.

Table 4.4: Fixed Effect Regression Result

Dependent Variable: LGPT
Cross-sections included: 32
Total panel (balanced) observations: 352

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.91953	0.206415	67.43474	0.0000
LFLE	2.040620	0.629408	3.242126	0.0013
LLE	-4.248183	2.323452	-1.828393	0.0685
SFLE	-3.510297	1.011155	-3.471572	0.0006
TPE	0.949556	0.392104	2.421692	0.0160

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.781732	Mean dependent var	13.82876
Adjusted R-squared	0.724329	S.D. dependent var	2.131598
S.E. of regression	1.617307	Akaike info criterion	3.896058
Sum squared resid	826.5555	Schwarz criterion	4.291202
Log likelihood	-649.7063	Hannan-Quinn criter.	4.053307
F-statistic	8.392097	Durbin-Watson stat	1.822681
Prob(F-statistic)	0.000000		

Source: E-view Output

The fixed effect regression result shows that LFLE ispositive (2.040620) and significant (0.0013) to LGPT. This means that a unit increase in the quoted manufacturing businesses' LFLE causes LGPTto rise by 2.040620 units. LLE is negative (-4.248183) and insignificant (0.0685) in relation to the LGPT of Nigeria's quoted firms. This suggests that as the LLE of the quoted manufacturing firms increases, the LGPTreduces by 4.248183 units. TPE is positive (0.949556) and significant (0.0160) to LGPT. This means that a unit increase in the quoted manufacturing businesses' TPE causes LGPT to rise by 0.949556 units. SFLE is negative (-3.510297) and significant (0.0006) in relation to the LGPT of Nigeria's quoted manufacturing firms. This suggests that as the SFLE of the quoted manufacturing firms increases, the LGPT reduces by 3.510297units.

The adjusted R-squared of 0.724329 indicates that independent variables all explained the variation in LGPT by 72.4% while the remaining 21.6% are explained by other factors not included in this study. The F-stat p-value of 0.000 shows that the model is of best fit. Furthermore, the Durbin-Watson value of about 2 (1.822681) indicates that the model is free of first order autocorrelation

Table 4.4: Fixed Effect Regression Result

Pairwise Dumitrescu Hurlin Panel Causality Tests
Date: 06/25/23 Time: 11:05
Sample: 2012 2022
Lags: 1

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
LFLE does not homogeneously cause LGPT	3.05646	3.34656	0.0008
LGPT does not homogeneously cause LFLE	1.28711	-0.22808	0.8196
LLE does not homogeneously cause LGPT	4.94399	7.15995	8.E-13
LGPT does not homogeneously cause LLE	2.98570	3.20361	0.0014

SFLE does not homogeneously cause LGPT	2.53739	2.29788	0.0216
LGPT does not homogeneously cause SFLE	1.80141	0.81097	0.4174
TPE does not homogeneously cause LGPT	3.33144	3.90210	0.0001
LGPT does not homogeneously cause TPE	2.08712	1.38820	0.1651

Source: E-view Output

Table 4.4 demonstrates a unidirectional support from LFLE, SFLE, and TPE to LGPT in quoted manufacturing firms in Nigeria. In Nigeria, the earnings of quoted manufacturing firms are supported solely by long- and short-term financial liabilities, as well as trade and other payables. The reverse is not true. LLE and LGPT provide mutual support in both directions. Long-term lease liabilities and earnings of quoted manufacturing firms are mutually supportive.

Discussion of Findings

Ratio of long-term financial liabilities to equity significantly promotes the earnings of quoted manufacturing firms in Nigeria. This implies that a rise in the proportion of long-term financial liabilities to equity for quoted manufacturing firms will result in an increase in their earnings. The reason for this phenomenon can be attributed to the extended gestation period associated with long-term funds, as well as the comparatively lower risk associated with them in comparison to short-term liabilities. Furthermore, we ascribe this phenomenon to the successful and optimal deployment of long-term borrowings in projects that exhibit favourable net present values. Several studies (Fu-sheng & Nan-hui, 2014; Grau & Reig, 2021; Guo et al., 2021; Nwanne& Iye, 2017) have demonstrated that leverage has a positive impact on a firm's profitability. Firms that exhibit high profitability tend to retain a larger portion of their earnings in order to mitigate the need for external borrowing, thereby maintaining a low level of leverage. Moreover, the accessibility of external debt financing is more favourable for firms exhibiting higher profitability as compared to those with lower profitability. This finding is in opposition to the results reported by Manawaduge et al. (2011), Evgeny (2015), Abor (2005), Singh and Bansal (2016), Pouraghajan et al. (2012), and Ahmed et al. (2018), all of whom observed a negative correlation between financial leverage and firm profitability.

Ratio of lease liabilities to equity is negative and insignificant to earnings of quoted manufacturing firms in Nigeria. This suggests that there is a negative relationship between the ratio of lease liabilities to equity of manufacturing firms and their earnings. The aforementioned factors contributing to this phenomenon include the elevated expenses associated with equipment importation, the volatility of exchange rates impacting the cost of equipment leasing, and the substantial lease payments associated with such arrangements. This finding is consistent with the research conducted by Manawaduge et al. (2011), Evgeny (2015), Abor (2005), Singh and Bansal (2016), Pouraghajan et al. (2012), and Ahmed et al. (2018), all of whom identified a negative correlation between financial leverage and firm profitability. This finding contrasts with the studies conducted by Fu-sheng and Nan-hui (2014), Grau and Reig (2021), Guo et al. (2021), and Nwanne and Iye (2017), which all concluded that leverage has a positive impact on firm profitability.

The earnings of manufacturing firms quoted in Nigeria are significantly impacted by the decrease in the ratio of short-term financial liabilities to equity. This implies that a rise in the

proportion of short-term financial liabilities to equity among manufacturing firms that are publicly traded will result in a decline in their earnings. The rationale behind this phenomenon can be attributed to the inherent riskiness of many short-term financial obligations, coupled with the elevated interest expenses associated with such liabilities. Furthermore, there exists a discrepancy in the utilisation of equity as a protective measure for short-term debtholders. This finding is consistent with the research conducted by Manawaduge et al. (2011), Evgeny (2015), Abor (2005), Singh and Bansal (2016), Pouraghajan et al. (2012), and Ahmed et al. (2018), all of whom observed a negative correlation between financial leverage and firm profitability. This finding contrasts with the studies conducted by Fu-sheng and Nan-hui (2014), Grau and Reig (2021), Guo et al. (2021), and Nwanne and Iye (2017), which all concluded that leverage has a positive impact on a firm's profitability.

The correlation between the ratio of trade and other payables to equity and the earnings of quoted manufacturing companies in Nigeria is substantial. This suggests that an increase in the proportion of trade and other payables relative to equity will result in a corresponding increase in the profits of publicly traded manufacturing companies in Nigeria. This is attributed to the relative advantage of interest-free cost that trade payables offer to manufacturing firms. This phenomenon can be attributed to the fact that these companies possess the benefit of utilising raw materials in the manufacturing process of final products prior to making payments for them. These payments are typically made either after the inventories have been sold or in accordance with the credit terms associated with the procurement of the raw materials. Several studies (Fu-sheng & Nan-hui, 2014; Grau & Reig, 2021; Guo et al., 2021; Nwanne& Iye, 2017) have demonstrated that the utilisation of leverage has a positive impact on a firm's profitability. Firms exhibiting high profitability tend to retain a larger portion of their earnings in order to mitigate the need for external borrowing, thereby maintaining a low level of leverage. Moreover, the accessibility of external debt financing is significantly higher for firms exhibiting higher profitability in comparison to those with lower profitability. This finding is inconsistent with the results reported by Manawaduge et al. (2011), Evgeny (2015), Abor (2005), Singh and Bansal (2016), Pouraghajan et al. (2012), and Ahmed et al. (2018), all of whom observed a negative correlation between financial leverage and firm profitability.

5.0 Conclusions and Recommendations

This study investigates how funding structure affects the performance of quoted manufacturing firms in Nigeria. Specifically, the study considers how short-term (ratio of trade and other payables and financial liabilities to equity) and long-term (ratio of lease liabilities and financial liabilities to equity) funding structure affect the gross profitof quoted manufacturing firms in Nigeria. Data utilized in the study were collected from the Nigeria Exchange Group and annual reports of the selected quoted manufacturing firms in Nigeria. Using the Fixed effect POLS technique, the study strongly supports that the ratio of short and long-term financial liabilities as well as trade and other payables affect the earnings of quoted manufacturing firms in Nigeria for the period investigated.The study supports the trade off hypothesis between tax shield and risk where cost of capital is optimized (Ryan, 2007). This

connotes that quoted manufacturing firms in Nigeria are borrowing up to a point where the tax benefit from the investment equals the cost or risk that comes from the increased profitability.

The study recommends that quoted manufacturing firms should continue to use trade and other payables and long-term financial liabilities as means of funding their investments since it promotes their earnings. Additionally, short-term financial liabilities and long-term leasing should be greatly reduced since it declines the earnings of quoted manufacturing firms in Nigeria.

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