ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

Financial Leverage and Financial Performance of Listed Manufacturing Firms in Nigeria

[1]Ibiam, Samuel Orji [2]Okoro, Chinonso Churchill & [3]Okafor, Okafor Okpan

[1]Department of Banking and Finance, College of Management Sciences, Michael Okpara University of Agriculture Umudike

[2&3]Department of Accounting, College of Management Sciences, Michael Okpara University of Agriculture Umudike

DOI: https://doi.org/10.51583/IJLTEMAS.2026.150700051

Received: 27 July 2026; Accepted: 01 August 2026; Published: 08 August 2026

ABSTRACT

The study focused on financial leverage and financial performance of listed manufacturing firms in Nigeria. Financial leverage was measured using debt to equity ratio & coverage ratio. However, financial performance was measured using return on asset, return on equity and earnings per share. To achieve the objectives of the study, ex-post facto research design was adopted. The source of data collection is secondary data. Data were generated from annual reports and accounts of the selected manufacturing firms. The data collected were analyzed using multiple regression analysis. The first findings revealed that financial leverage (Debt to equity ratio & coverage ratio) has a significant effect on return on asset of listed manufacturing firms in Nigeria. The second findings revealed that financial leverage (Debt to equity ratio & coverage ratio) has no significant effect on return on equity of listed manufacturing firms in Nigeria. the third findings revealed that financial leverage (Debt to equity ratio & coverage ratio) has a significant effect on earnings per share of listed manufacturing firms in Nigeria. The study recommends that the amount of debt finance in the financial mix of the firm should be at the optimal level so as to ensure adequate utilisation of the firms' assets.

Keywords: Financial leverage, debt to equity ratio, coverage ratio, financial performance, return on asset, return on equity, earnings per share.

INTRODUCTION

Financing decision is one of the fundamental functions of corporate decision making. It is ranked under much more preference to other functions that help financial managers on deciding where, how and when to obtain finances to meet investment needs of the firm (Abdul & Badmus, 2017). As stated in Nazir and Saita (2023), the decision on financing of a firm is very crucial. Debt financing has been revealed to have a notable implication for firms as far as its operations is concerned. Debt financing can lead to better performance of an organization and expansion as well as failure of a same organization. As such, financial managers of firms got to be careful while making financial decisions. Financial leverage used by firms is usually meant to earn more as far as fixed charges on funds are concerned than on costs. Financial leverage entails variations of shareholders' income in response to change in operating profits which result from financing a firm's assets with preferences stocks or debt (Rehman, 2023).

Firms normally fund investments through a combination of equity and debt (Adenugba, Ige & Kesinro, 2016). However, the use of leverage to finance firm's investments is supported by various theoretical foundations. The pecking order theory suggests that most companies look for external financing options rather than equity financing. The trade-off theory also explains that optimal debt financing level of the firms is established by a balance. That is between the advantages of borrowing and costs, holding assets of the firm and plans for investments steady or constant (Nazir & Saita, 2023). The Jensen and Meckling (1976) agency theory hold that high indebtedness instills disciple to managers, thus it is connected with better financial performance (Deloof, 2023). Horne, (2022) asserted that when a company gives a signal to the market that it expects positive cash

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

flows in future when it offers debt. This consequently gives the managers confidence of getting positive cash flows in future for better planning. The use of debt is beneficial to a company since interest payments are not taxable and that may lead to increasing firm value but one of the major issues with financing decision faced by managers is capital mix where long term funds are invested in short term projects and vise versa (Jelinek, 2017).

Debt financing has important advantages to the firm. Such advantages may include savings on tax, reduction of costs related to agency and other costs like financial distress which comes the use of debt financing (Raza, 2024). Lazaridis and Tryfonidis (2016) stated that the survival of the firm and its continuity often depends on its performance; most importantly its profitability which may be fueled by effective financial leveraging. Nonetheless, the management can make decisions which result to under-investment in its working capital due to liquidity challenges and the wrong capital mix. Abubakar (2025) echoed the same sentiments by stating that a higher potential return to investors is realized when financial leverage is availed but if the investment becomes worthless potential loss is also higher, loan principal and accrued interests on loans required to be repaid.

Researchers for quite a long time have continued to analyze leverage of a firm in a bid to determine an optimal capital combination. An optimal leverage ratio is usually defined as one that will minimize a firm's cost of capital, while maximizing shareholder's wealth (Gweyi & Karanja, 2024). Hence, financing decisions have great effect on the financial performance of the firm. The historical attempt to building theory of optimal financial leverage began with the presentation of a seminer paper by Modigliani and Miller [MM] in 1958. They assumed that the choice of finance of a firm is irrelevant. Under a certain market price process (the classical random walk), in the absence of taxes, bankruptcy costs, agency costs and asymmetric information and in an efficient market, the value of a firm is unaffected by how that firm is financed. They went further to state that it does not matter if the firm's capital is raised by issuing stock or selling debts. This hypothesis support the net operating income (NOI) approach of valuing the firm and it also state that the overall cost of capital are independent of the firm's leverage.

Several studies have been carried out on the effect of financial leverage on firm performance but it seems consensus is yet to be reached. The result from the previous studies on this subject matter were uncertain; Obradovich and Gill (2023) show that larger board size is negatively impacts the value of American firms and CEO duality, audit committee, financial leverage, firm size, return on assets and insider holdings positively impact the value of American firms. Rehman (2023) results shows positive relationship of debt equity ratio with return on asset and sales growth and negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. Rajin (2022) indicates positive relationship between financial leverage and shareholder return but negative relationship between financial leverage and market capitalization. Enuju and Soocheong (2025) found that financial leverage does not influence the restaurant firms' profitability. Akbarian (2023) indicates that financial leverage, market risk and economic risk with return of equity have positive significant relationship. Damouri, et al. (2023) in Malaysia also found a negative relationship between financial leverage and net profit margin. Jelinek (2017); Gweyi and Karanja (2024) on their study affirmed that financial leverage has significant on the performance of corporate firms.

There are mixed results from the previous studies on the financial leverage and firm's performance; this forms the basis of this studies on the effect of financial leverage on financial performance of listed manufacturing firms in Nigeria.

The specific objectives of the study are to:

i. Examine the effect of financial leverage (Debt to equity ratio & Cost coverage ratio) on return on assets of listed manufacturing firms in Nigeria.

ii. Ascertain the effect of financial leverage (Debt to equity ratio & Cost coverage ratio) on return on equity of listed manufacturing firms in Nigeria.

iii. Determine the effect of financial leverage (Debt to equity ratio & Cost coverage ratio) on earnings per share of listed manufacturing firms in Nigeria.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

REVIEW OF RELATED LITERATURE

Conceptual Review

Financial Leverage

Financial leverage is measured by the ratio of debt to debt plus equity or the cost coverage ratio(Akinmulegun, 2022). It uses debt to increase the expected return on equity or looks at the ability of the firm to furnish the cost of debt against profit (Gweyi & Karanja, 2024). However, the greater the ratio of funds contributed by creditors could be compared to funds contributed by stockholders. The fund could lead to greater a firm's financial leverage. Financial leverage magnifies changes in net income compared to changes in operating income. Financial leverage can be appropriately described as the level a business or investor is using the borrowed money to finance a business project.

Moreover, firms with high leverage are measured to be at verge of bankruptcy. Bankruptcy often occurs most times especially when the business owner are not able to repay the debts, which lead to difficulties in getting new lenders in future (Gibbs, 2023). Well managed financial leverages remain one of the effective ways various business organization use to increased shareholders' return on investment (Haim & Marshall, 2018). Although studies opine that if financial leverage levels of firms are not well structure from on set and properly managed it could have a significant consequence on business finances. Also, very often, there are tax advantages related with borrowing, also known as leverage (Ferri & Jones, 2019). Financial leverage has its advantages under good economic situations and at the same time, it is not free from disadvantages.

The Study of Enekwe, Agu and Eziedo (2024) highlighted various advantages and disadvantages that firm could experience via leveraging. The advantages of higher leverage are; in operating leverage, the operating profits can see a sharp increase with a small change in sales as most parts of the expenses are stagnant and cannot further increase with sales. Likewise, if we consider financial leverage, the earnings per share of each shareholder will increase significantly with an increase in operating profits. Here, higher the degree of leverage, higher will be the percentage increase in operating profits and earnings per share.

As stated in Enekwe et al (2024) the disadvantages of higher leverage is that; higher leverage inherits the risk of bankruptcy along with it. In the case of operating leverage, fixed expenses extend the breakeven point for a business which means the minimum activity (sales) required for achieving no loss/no profit situation so as to pay back the interest on debt capital.

Falope and Ajilore (2019), opined that financial leverage increases the minimum requirement of operating profits to meet with the expense of interest. In any case, if the required activity level is not achieved, bankruptcy cash losses become certain. When looking closely at the pros and cons of leverage, it seems that the balance is required between the rewards and risks associated with leverage. The degree of leverage should not be too high which invites the bankruptcy and on the contrary, it should not be too low that we lose out on the benefits and the viability of a business itself comes under question (Ezeamama, 2020).

Financial leverage indicates the reliability of a business on its debts in order to operate. Knowing about the method and technique of calculating financial leverage can help you determine a business' financial solvency and its dependency upon its borrowings. Abor (2018), Dawood, Mustafa and Elhennawi (2021) define financial leverage as the way in which a firm finances its investment through some combination of equity and debt. Dawood, Moustafa and El-Hennawi (2021) stated that although debt and equity are very different in nature, they complement each other as sources of finance for corporate investment project. They went further to explain that if a company has too much debts, it may over extend its ability to service the debts and can be exposed to business depression and changes in interest rate and thus become financially risky. Too much equity on the other hand dilutes ownership interest, exposes the company to outside control and usually indicates that the company is not using its cash to obtain business assets. The above situation is referred to as capital mis-match.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

Financial Performance

The definition of firm performance and its measurement continues to challenge scholars due to its complexity. In this study, we attempt to contribute to this effort by creating and testing a subjective scale of performance that covers the domain of business performance in the words of Mesquita and Lara (2023).

There is a need to distinguish between performance antecedents and outcomes. It also provides a conceptual structure to define performance indicators and dimensions. The fact that profit and growth are relevant motives for the existence of a business firm and must be included in any attempt to measure performance is indisputable. The question is: what else is relevant and should be considered as well? In this case, Muhammad, (2013), asserts that measuring performance under this conceptualization involves identifying the stakeholders and defining the set of performance outcomes that measure their satisfaction.

In Muhammad (2023), he explained the stakeholder theory which offers a social perspective to the objectives of the firm and to an extent, conflicts with the economic view of value maximization. Such ontological discussion is within the scope of this research. The stakeholder theory has found its way into the corporate and academic world. It is possible to see its influence in corporate annual reports. The use of stakeholders' satisfaction as firm performance was also adopted by a large number of different authors like Rajin (2022) and Obradovich and Gill (2023). Besides offering a way to decide what performance is in a comprehensive way, the use of this theory allows one to resolve the issue of differentiating between performance antecedents and outcomes. Performance measures assess the satisfaction of at least one group of stakeholders. This conceptualization of firm performance is applicable across different companies, as acknowledged by Haugen and Senbet, (2018), allowing one to differentiate between high and low performers in the eyes of each stakeholder using indices such as profitability, Liquidity ratio and Earnings.

Superior financial performance is a way to satisfy investors and can be represented by profitability, growth, Liquidity and market value (Galai & Masulis, 2016). These four aspects complement each other. Profitability measures a firm's past ability to generate returns (Ezeamama, 2020). Growth and liquidity demonstrates a firm's past ability to increase its size and meets its cash demands (Gibbs, 2023). Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. Larger size also can bring economies of scale and market power, leading to enhanced future profitability. Market value represents the external assessment and expectation of firms' future performance. It should have a correlation with historical profitability and growth levels, but also incorporate future expectations of market changes and competitive moves.

Leverage and Financial Performance

According to the theorem of Modigliani and Miller, a firm's value is unaffected by the way that it is financed, e.g. whether the firm is financed by debt or equity. However, one of the assumptions under which they state this theorem holds, the absence of bankruptcy cost which is known to be untrue in real life. When the assumption of the absence of taxes is relaxed, the fact that companies can benefit from the so called tax shield can be taken into account (Hasanzadeh, et al., 2023). Due to the tax deductibility of the interest paid on the debt, one could easily argue that increasing debt will increase firm value due to the benefits obtained from the tax shield. When taken too far, however, firms might become threatened with bankruptcy due to increased financial distress costs. Apparently, capital structure decisions can affect firm performance and should, thus, be addressed.

Taken both the tax shield and the financial distress costs into account, an inverted U-shape relationship can be expected between the amount of financial leverage and firm financial performance. Besides these arguments with respect to leverage decisions, one could also examine the influence of leverage on firm performance under certain conditions.

Under the Free Cash flow hypothesis

Jensen (1986) developed the free cash flow hypothesis which can be used to explain the effects of capital structure and free cash flow. Free cash flow is defined by the cash flow in excess of the cash that is needed to

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

invest in all positive NPV projects. The free cash flow hypothesis assumes that managers with access to free cash will invest it in negative NPV projects instead of paying it out to shareholders in dividends. In his article, Jensen (1986) also discusses the benefits of debt in motivating managers to be efficient, called the control hypothesis. He argues that, by taken on debt, managers commit themselves to future payments and provide the issuer(s) of debt the right to declare the firm bankrupt in court. This puts pressure on the manager to engage in profitable investments and maintain the ability to pay the interest and principal payment. Jensen (1986), thus, proposes a positive influence of leverage on firm performance.

The free cash flow hypothesis as proposed by Jensen (1986) has been tested in several research designs. Jensen (1993) investigated the investment behavior of managers of firms in industries with excess capacity, meaning industries in which the actual production of firms is less than the achievable or optimal production level. Jensen observed that the reaction of many managers, in response to the excess capacity, was to invest in unprofitable projects with the free cash flow available to them. These observations confirm the free cash flow hypothesis as stated by Jensen (1986), namely that free cash available to managers will be invested in negative NPV projects. Jensen (1993) also conducted a study regarding the efficiency of R&D spending and capital expenditures. He found that corporate internal control mechanisms, like the board of directors, weren't sufficient to prevent inefficient investments and that, although the average performance results were positive, a substantial number of firms reported inefficient R&D spending and capital expenditures. These results are also in line with the free cash flow hypothesis, since these results suggest that managers will spend free cash in negative NPV projects when they aren't constraint sufficiently by internal control mechanisms.

Under the Monitoring Hypothesis

Another theory with respect to the influence of leverage on firm performance is the monitoring hypothesis. The monitoring hypothesis states that debt can also reduce the agency conflict by creditor monitoring, especially when companies engage in bank loans (Haugen & Senbet, 2018). Banks can protect themselves from borrowers defaulting on their obligations by monitoring managerial behavior and control it using covenants. Covenants are formal debt agreements stating what activities can or can't be carried out often related to future borrowing behavior. Therefore, credit monitoring can reduce risky behavior by managers, asset substitution; replacement of low-risk assets with more risky ones and overinvestment; managerial decision to invest in negative NPV projects. Fama (1985) further argues that banks have inside information, compared to public debt holders which not only enables them to monitor borrowers more efficiently but engagement in bank loans can also serve as a signal to outside investors and debt holder.

Although the idea that debt financing can enhance firm performance due to debt holder monitoring has been tested and demonstrated in several studies before, the majority of these studies focused on the stock responses associated with debt financing. These effects, however, are more related to the signaling effect of a bank loan compared to the effect of bank loans on firm performance. An example of such a study is the study by Karaduman et al., (2021). They compared the difference in stock responses of firms announcing a new bank loan agreement compared to firms engaging in new private placements. The stock response was estimated using abnormal returns. Their study found that the abnormal returns were significantly higher than zero when firms announced a new bank loan agreement. In the case of the announcement of private placements, negative abnormal returns were observed. Further, he found that straight debt issues used to replace bank loans also resulted in negative abnormal returns. These stock responses can be explained by the monitoring hypothesis of debt. These results, namely, indicate that stockholders value firms engaging in bank loans higher compared to firms that do not.

These expectations regarding better firm performance can be caused by the expectations of shareholders that banks will monitor managerial behavior. A similar study was conducted by Singh and Pandey, S. (2018), investigated whether the announcements of initiations or renewals of bank loans influenced stock prices. The results reveal that only the share prices of small size firms were positively affected by these loan announcement compared to large size firms. This indicates that especially small size firms gain value from the monitoring of banks which can be caused by their greater vulnerability to moral hazard and adverse selection.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

Theoretical Review

This study is anchored on the Trade off theory and the Modigliani and Miller (MM) Irrelevancy Theory.

The Trade-Off Theory

The tradeoff theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the cost and benefits. The classical version of the hypothesis goes back to Kraus and Robert (1973) who consider a balance between debt weight costs of bankruptcy and the tax saving benefits of financing leverage. An important purpose of the theory is to explain the facts that firms usually, are financed partly with debts and partly with equity. It states that there is an advantage to financing with debts and there a cost for financing with debts. The cost of financing with debts results mostly from financial distress i.e. bankruptcy cost of debts and non-bankruptcy cost of debts. Examples of non-bankruptcy cost include: staff leaving, suppliers, demanding disadvantageous payment terms, bond/stock holders in fighting etc.

The marginal benefits of further increase in debts decline debt increases, while the marginal cost increase. As a result of the above, a firm that is optimizing its overall value will focus on its trade off when choosing how much debt and equity to use for financing. Empirically, this theory may explain differences in debt equity ratios between industries, but it doesn't explain the differences within the same industry.

The Modigliani and Miller (MM) Irrelevancy Theory

The Modigliani and miller (MM) irrelevancy theory first came in to existence in 1958, resulting from their seminal work. In this study they stated that "under a certain market price process (the classical random walk), in the absence of taxes, bankruptcy costs, agency costs and asymmetric information and in an efficient market, the value of a firm is unaffected by how that firm is financed". They went further to state that it does not matter if the firm's capital is raised by issuing stock or selling debts and it does not matter what the firm's dividend policy is. This hypothesis support the net operating income (NOI) approach of valuing the firm and it also state that the overall cost of capital are independent of the firm's capital structure.

In 1963 with consideration to corporate taxes, Modigliani and Miller modify the theory to recognize tax shield. They stated that because debt can reduce the amount of tax to be paid, the best capital structure of enterprise should be 100% debt. The MM model is probably true in the theory, but in practice, bankruptcy cost and taxes increase when equity is traded off for debt. Brigham and Gapensuio, (1984), Leland (1994) are of the opinion that at the optimal capital structure, marginal bankruptcy cost associated with firm's debts is equated with marginal tax benefits. Since income of firms are taxable and interest charges are also tax deductible, the cost of borrowing funds to the firm will be less the rate of return. This also creates a weakness in the Modigliani and Miller irrelevancy theory.

Review of Empirical Studies

Kenn-Ndubuisi and Nweke (2019) examined the relationship between financial leverage and firm financial performance in Nigeria using 80 non-financial firms quoted on the Nigerian Stock Exchange from 2000 to 2015. The total debt to capital ratio, debt to equity ratio, cost of debt, debt to asset ratio and long term debt to capital ratios were proxies for financial leverage. Panel data technique in the form of the pooled regression model, fixed effect model, random effect model, and the marginal model had been applied to test hypotheses. The findings of their study revealed earnings per share is significant and negatively related to the debt to equity ratio and the total debt to total asset measures of financial leverage while the return on equity shows an insignificant relationship with the financial leverage measures in Nigeria while the direction of the relationship differs from one variable to the other. EPS was positive with the total debt to capital ratio and the cost of debt while the total debt to asset ratio, long term debt to capital ratios and the debt to equity ratio was negative.

As stated in the work of Dilpreet and Harish (2018) there prevail a notion that liquidity is important for any business unit to boost its profitability and also that financial leverage is helpful in enhancing financial

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

performance of the companies. In India, real estate is the second largest employer after agriculture and is slated to grow at 30 per cent over the next decade. The real estate sector comprises four sub sectors - housing, retail, hospitality, and commercial. Few large developers with a pan-India presence dominate the market. Therefore their study proposed to study the impact of financial leverage and liquidity on the profitability of DLF Ltd.; a construction and contracting real estate Company in India. They used Operating profit margin, Net profit margin, Return on Capital Employed, Current Ratio, Quick Ratio, Working Capital Turnover Ratio, Debt/Equity Ratio as proxies for Financial Leverage and Degree of Operating Leverage. Using multiple regression, their study revealed that leverage has a significant effect on the financial performance of the firm.

Akhtar, et al. (2022) examined financial leverage and its effect on corporate performance of firms in Nigeria from 1999-2016 using long-term-debt, return on asset and return on equity as dependent and explanatory variable respectively by employing the Ordinary Least Square (OLS). The results revealed that ROA and ROE had positive effect on longterm debt of firms that was significant respectively. Their study concluded that financial leverage has a significant influence on the corporate performance of firms in Nigeria and recommended the effective management of the long-term debts.

John-Akamelu, Iyidiobi and Ezejiofor (2017) studied the effect of financial leverage on the financial performance of food production firms in Nigeria from 2009 to 2014 using the earnings per share, Return on Equity, Return on Assets as a proxy for performance. The paired sample t-test analysis showed that financial leverage has no significant effect on the EPS of food production firms in Nigeria while there are effects on return on equity and return on assets of companies in Nigeria. They recommended that the amount of debt finance in the financial mix of the firm should be at the optimal level to ensure the firms' assets are utilization appropriately.

Orajaka (2017) explored financial leverage to ascertain its impact on financial performance. The data for his research were accessed through secondary source. A total of twenty four (24) manufacturing companies listed on Nigeria Stock Exchange, four (4) companies data were used to verify and validate the research. Five (5) dependable variables were used to determine the impact of leverage financing on financial performance. The descriptive method was used to analyze the data generated for the research. General regression statistical tool was used to determine the relationship between the dependent and independent variables. The hypotheses were tested using descriptive statistics, general regression and correlation statistical tool. From the findings, the researchers observed that Return on Equity is significant to return on Assets, Net Profit Margin and Assets Turnover. It was also observed that Return on Assets is significant to return on Equity, Net Profit Margin and Assets Turnover. Net Profit Margin is also significant to Return on Equity, Return on Assets and Assets Turnover. Also Assets Turnover is significant to Return on Equity, Return to Assets and Net Profit Margin.

Abdul & Badmus (2017) assessed the relationship between leverage (equity) and debt ratio on return on assets of chemicals and paints firms quoted in the Nigerian stock exchange using the ordinary least square (OLS) on a sample of three firms from 2000 – 2009. They concluded that the equity finance had a significant and positive impact on ROA while the DR reported a negative and insignificant relationship on the performance measures. Therefore, firms in the sector should employ more equity finance and avoid more debt.

Akani & Kenn-Ndubuisi (2017) examined the effect of capital structure and board structure on firm performance in Nigeria using the Vector auto regression (VAR) test on forty listed companies in the Nigerian Stock Exchange (NSE) from 2008 to 2016. The result established that there exists a significant negative relationship between capital structures (DER) and the firm performance using ROA and ROE.

METHODOLOGY

Research Design

This study adopted ex-post facto research design. Ex-post facto research design involves the ascertaining of the impact of past factors on the present happening or event.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

The population of any study is the total number of elements under investigation. For the purpose of this study, the population comprises of the 52 manufacturing companies that are listed on the Nigerian Exchange Group (NGX) during the period 2017 to 2024. The judgmental/Stratified sampling method was used in selecting the sample for the study. The sample selected is deemed to satisfy the predetermined criteria for selection. This study will use this criteria in selecting 10 listed manufacturing firms.

The research work adopted the secondary source of data in obtaining all the data needed for the study. Extracted data from the audited financial statements of the sampled companies were meticulously examined and relevant data extracted from the period 2017-2024 for analysis. The descriptive statistics was used to summarize the collected data in a clear and understandable way using numerical approach. The multiple panel regression technique using Generalized least square regression (GLS) method was adopted in investigating the relationship between the dependent and independent variables. The study adopts the preliminary test for incidences of co linearity in the model are also necessary. To do this, the Dublin Watson, Variance Inflation Factor (VIF) statistics and the Tolerance level statistics were deployed to be used. The main advantage of these two statistics is that it filters out variables that might distort the result of regression analysis.

Therefore the following formula is stated:

$$\mathbf{ROA_{it} = \alpha + \beta_1 DER_{it} + \beta_2 CCR_{it} + U_{it}}$$

$$\mathbf{ROE_{it} = \alpha + \beta_1 DER_{it} + \beta_2 CCR_{it} + U_{it}}$$

$$\mathbf{EPS_{it} = \alpha + \beta_1 DER_{it} + \beta_2 CCR_{it} + U_{it}}$$

Where;

α = Constant

DER= Debt to Equity Ratio (The ratio of total debt to total equity of the firm at that time)

CCR = Cost Coverage Ratio (The ratio of interest on debt to profit after tax of the firm at that time) = Profit after tax/ Interest on debt.

ROA = Return on Assets (The ratio of profit after tax to total assets of the firm at that time)

ROE = Return on Equity (The ratio of profit after tax to total equity of the firm at that time)

EPS = Earnings Per Share (The reported earnings per share of the firms at a time)

it= Cross-section ($_i$) time ($_t$)

U = Error term used in the model.

β_1 – β_2= Beta coefficient of the independent variables.

Decision Rule

Accept the null hypothesis if the calculated value is greater than the significant level of 0.05.

RESULTS AND DISCUSSION

Data Presentation

The data extracted were estimated based on the regression analysis to determine the effect of the variables. Retun on asset (ROA), return on equity (ROE) and earnings per share (EPS) were used as the dependent variables while Debt to Equity Ratio (DER), and Cost Coverage Ratio (CCR) were used as the independent variable. The

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

adjusted R square which is the coefficient of determination and the F statistic was used to ascertain the significance of the overall model. Specifically, the probability of the F-statistic test was used to test the hypotheses of the study to determine the relationship between the variables.

Data Analysis

Table 4.1: Effect of financial leverage (debt to equity ratio & cost coverage ratio) on return on assets

Dependent Variable: ROA				
Method: Panel Least Squares				
Date: 06/17/26 Time: 23:03				
Sample: 2017 2024				
Periods included: 8				
Cross-sections included: 510				
Total panel (balanced) observations: 80				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.260764	0.010451	24.95118	0.0000
DER	-0.001871	0.002608	-0.717273	0.4745
CCR	-0.010272	0.004961	-2.070707	0.0403
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.982608	Mean dependent var		0.238661
Adjusted R-squared	0.981546	S.D. dependent var		0.292868
S.E. of regression	0.039785	Akaike info criterion		-3.548512
Sum squared resid	0.207356	Schwarz criterion		-3.359406
Log likelihood	257.3958	Hannan-Quinn criter.		-3.471665
F-statistic	925.1345	Durbin-Watson stat		0.771791
Prob(F-statistic)	0.000000			

Source: Author's E-view extraction

The panel data results shows the effect of financial leverage on return on asset (ROA) of listed manufacturing firmsin Nigeria. The coefficient of determination R-square of 0.983 implied that 98.3% of the sample variation in the dependent variable ROA is explained or caused by the explanatory variables financial leverage (Debt to equity ratio & coverage ratio) while 1.7% is unexplained. This remaining 1.7% could be caused by other factors or variables not built into the model. Consequently, the value of the adjusted R^2 is 0.982. This shows that the regression line which captures 98.2 per cent of the total variation in ROA is caused by variation in the explanatory variable specified in the model with 1.8 per cent accounted for the stochastic error term. The F-statistic was also used to test the overall significant of the model. The F-value of 925.1345 with p-value of 0.0000 is an indication that the model is statistically significant at 5 percent level of significant at degree of freedom df1= 1 and df2= 48.Finally, the test of autocorrelation using Durbin-watson shows that the Durbin-watson value of 0.771791 falls outside the conclusive region of Durbin-watson partition curve. Hence, we can clearly say that there is no sign of autocorrelation.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

The F-statistic with 925.1345 has probability of 0.0000 level of significance. Since the probability of the F statistics is less than 5% level of significance, we would reject the null hypothesis, H_0 and therefore conclude that financial leverage (Debt to equity ratio & coverage ratio) has a significant effect on return on assets of listed manufacturing firms in Nigeria.

Table 4.2: Effect of financial leverage (debt to equity ratio & cost coverage ratio) on return on equity

Dependent Variable: ROA				
Method: Panel EGLS (Cross-section random effects)				
Date: 06/17/26 Time: 01:37				
Sample: 2017 2024				
Periods included: 8				
Cross-sections included: 80				
Total panel (unbalanced) observations: 80				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.148391	0.077557	1.913312	0.0587
DER	4.17E-06	1.05E-05	0.397766	0.6917
CCR	1.69E-06	8.90E-06	0.190001	0.8497
	Effects Specification			
			S.D.	Rho
Cross-section random			0.345267	0.8176
Idiosyncratic random			0.163075	0.1824
	Weighted Statistics			
R-squared	0.002701	Mean dependent var		0.031832
Adjusted R-squared	-0.039291	S.D. dependent var		0.156174
S.E. of regression	0.159336	Sum squared resid		2.411848
F-statistic	0.064316	Durbin-Watson stat		1.138843
Prob(F-statistic)	0.992270			
	Unweighted Statistics			
R-squared	-0.000770	Mean dependent var		0.153873
Sum squared resid	11.68288	Durbin-Watson stat		0.235106

The panel data results shows the effect of financial leverage on return on equity (ROE) of listed manufacturing firms in Nigeria. The coefficient of determination R-square of 0.003 implied that 0.3% of the sample variation in the dependent variable ROE is explained or caused by the explanatory variables financial leverage (Debt to equity ratio & coverage ratio) while 99.7% is unexplained. This remaining 99.7% could be caused by other factors or variables not built into the model. The F-statistic was also used to test the overall significant of the model. The F-value of 0.064316 with p-value of 0.992270 is an indication that the model is statistically significant at 5 percent level of significant at degree of freedom df1= 1 and df2= 48.Finally, the test of autocorrelation using Durbin-watson shows that the Durbin-watson value of 1.138843 falls outside the

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

conclusive region of Durbin-watson partition curve. Hence, we can clearly say that there is no sign of autocorrelation.

The F-statistic with 0.064316 with p-value of 0.992270 level of significance. Since the probability of the F statistics is greater than 5% level of significance, we would accept the null hypothesis, H_0 and therefore conclude that financial leverage (Debt to equity ratio & coverage ratio) has no significant effect on return on equity of listed manufacturing firms in Nigeria.

Table 4.3: Effect of financial leverage (debt to equity ratio & cost coverage ratio) on earnings per share of listed manufacturing firms in Nigeria

Dependent Variable: EPS				
Method: Panel EGLS (Cross-section random effects)				
Date: 06/17/26 Time: 23:26				
Sample: 2017 2024				
Periods included: 8				
Cross-sections included: 10				
Total panel (balanced) observations: 80				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.353907	0.260229	1.359983	0.1761
DER	-0.165015	0.028196	-5.852534	0.0000
CCR	0.700856	0.051844	13.51852	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section random			0.623785	0.6764
Idiosyncratic random			0.431415	0.3236
	Weighted Statistics			
R-squared	0.602984	Mean dependent var		0.237850
Adjusted R-squared	0.597189	S.D. dependent var		0.678330
S.E. of regression	0.430519	Sum squared resid		25.39244
F-statistic	104.0373	Durbin-Watson stat		1.143531
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.712774	Mean dependent var		1.556286
Sum squared resid	67.58450	Durbin-Watson stat		0.429641

Source: Author's E-view extraction

The panel data results shows the effect of financial leverage on the earnings per share (EPS) of listed manufacturing firms in Nigeria. The coefficient of determination R-square of 0.603 implied that 60.3% of the sample variation in the dependent variable EPS is explained or caused by the explanatory variableFinancial

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

leverage (Debt to equity ratio & coverage ratio) while 39.7% is unexplained. This remaining 39.7% could be caused by other factors or variables not built into the model. Consequently, the value of the adjusted R^2 is 0.597. This shows that the regression line which captures 59.7 per cent of the total variation in EPS is caused by variation in the explanatory variable specified in the model with 40.7 per cent accounted for the stochastic error term. The F-statistic was also used to test the overall significant of the model. The F-value of 104.0373 with p-value of 0.0000 is an indication that the model is statistically significant at 5 percent level of significant at degree of freedom df1= 1 and df2= 48.Finally, the test of autocorrelation using Durbin-watson shows that the Durbin-watson value of 0.429641 falls outside the conclusive region of Durbin-watson partition curve. Hence, we can clearly say that there is no sign of autocorrelation.

The F-statistic with 104.0373 has probability of 0.0000 level of significance. Since the probability of the F statistics is less than 5% level of significance, we would reject the null hypothesis, H_0 and therefore conclude that financial leverage (Debt to equity ratio & coverage ratio) has a significant effect on earnings per share of listed manufacturing firmsin Nigeria.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The decision on financing of a corporation is very crucial. Debt financing has been revealed to have a notable implication for corporations as far as its operations is concerned. Debt financing can lead to better performance of a corporation and expansion as well as failure of a corporation. As such, financial managers of a corporation got to be careful while making financial decisions. Financial leverage used by corporation is usually meant to earn more as far as fixed charges on funds is concerned than on costs. Financial leverage entails variations of shareholders' income in response to change in operating profits which result from financing a corporation's assets with preferences stocks or debt. Financial leverage is very important external financing modes. Financial leverage shows that a business needs finance to purchase a new asset, enhance their production or operational activities, financial leverage is one of the best way for organization to achieve its goal, with the help of the financial leverage a company can not only achieve its goals but also maximize the value of its shareholders. Finance is very important for any business however a business is new and ongoing, financial or non-financial institute need funds to operate its daily activities.

Recommendations

Based on the summary of findings, the following are recommended;

(i) The amount of debt finance in the financial mix of the firm should be at the optimal level so as to ensure adequate utilisation of the firms' assets.

(ii) The separation of ownerships and management in modern day corporation (companies) demands that agents must act in ways that are in line with the objectives of the principal in order to achieve enhanced earnings per share for the firm owners.

(iii) More often than not, it is rare for any firm to depend solely on equity finance, thus, management may seek other sources of funding which may not be in the interest of equity holders. Therefore, managers should employ financial leverage in a way that enhances value for their company owners' i.e leading to an increase in returns to equity holders.

REFERENCES

1. Abdul, J. & Badmus, O. (2017), Effect of leverage on firm performance in Nigeria: A case of listed chemicals and paints firms in Nigeria. Global Journal of Management and Business Research: D Accounting and Auditing, 17 (2), 2249-4588.
2. Abor, J. (2018), Determinants of the capital structure of Ghanaian Firms. African Economic Research Consortium AERC Research Paper, 3(2)34-43.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

3. Abubakar, A. (2016), Financial leverage and firms' performance: A study of quoted companies in the Nigerian stock exchange. Conference Paper.
4. Adenugba, A., Ige, A. & Kesinro, O. (2016), Financial leverage and firms' value: A study of selected firms in Nigeria. European Journal of Research and Reflection in Management Sciences, 4 (1), 2056-5992.
5. Akani, H. & Kenn-Ndubuisi, J. (2017), Effects of capital structure and board structure on corporate performance of selected firms in Nigeria. Indian Journal of Finance and Banking, 1(2), 2574-6081.
6. Akbarian, S. (2023), The investigation effect of financial leverage and Environment Risk on performance firms of listed companies in tehran Stock Exchange. Arabian Journal 8(3), 249- 255.
7. Akinmulegun, S. (2022), The effect of financial leverage on corporate performance of some selected companies in Nigeria. Canadian Social Science, 8(1), 85-91. 7.
8. Akhtar, S., Javed, B., Maryam, A. & Sadia, H. (2022), Relationship between Financial Leverage and Financial Performance: Evidence from Fuel &Energy Sector of Pakistan. European Journal of Business and Management, 4(11)23-34.
9. Dawood, M., Moustafa, E. & El-Hennawi, M. (2021), The determinants of capital structure in listed Egyptian corporations. Middle Eastern Finance and Economics, 9(1), 83-99.
10. Damouri, D., Khanagha, J. & Kaffash, M. (2023), The relationship between changes in the financial leverage and the values of the Tehran listed firms. Research Journal of Finance and Accounting, 1(2), 23-33.
11. Deloof, M. (2023), Does working capital management affect profitability of Belgian firms? Journal of Business Finance and Accountancy, 30(3), 12-25.
12. Dilpreet, S. & Harish S. (2018), Study on impact of financial leverage and liquidity on financial performance: A case study on DLF Ltd.; Construction & contracting- real estate company in India. International Journal of Research in Management, Economics and Commerce, (8)1, 60-64.
13. Enekwe, C.. Agu, C. & Eziedo, K. (2024), The effect of financial leverage on financial performance: evidence of quoted pharmaceutical companies in Nigeria. IOSR Journal of Economics and Finance, 5(3), 17-25.
14. Enuju, Y. & Soocheong, J. (2025), The effect of financial leverage on profitability and Risk of Restaurant firms. Journal of Hospitality Financial Management, 13(1), 1-18.
15. Ezeamama, M. (2020), Fundamentals of Financial Management: A practical guide. Enugu: Ema press Ltd.
16. Falope, O. & Ajilore, O. (2019), Working capital management and corporate profitability: Evidence from panel data analysis of selected quoted firms in Nigeria. Research Journal of Business Management, 3(3), 73-84.
17. Fama, E. (1980) Agency problems and the theory of the firm. Journal ofPolitica1 Economy, 88(1), 288-307.
18. Ferri, M. & Jones, W. (2019) Determinants of financial structure: A new methodological approach. The Journal of Finance, 34(3), 631-644.
19. Galai, D. Masulis, R. (2016) The option pricing model and the risk factor of stock. Journal of Financial Economics, 3(1), 53-81.
20. Gibbs, P. (2023), Determinants of corporate restructuring: The relative importance of corporate governance, takeover threat, and free cash flow. Strategic Management Journal, 14, Special Issue: Corporate Restructuring, 12(2), 51-68.
21. Gujarati, D. & Sangeetha, S. (2017), Basic Econometrics: 4th Ed. New Delhi. Tata McGraw: Hill publisher. Co. Ltd.
22. Gweyi, M. & Karanja, J. (2024), Effect of financial leverage on financial performance of deposit taking savings and credit co-operative in Kenya. International Journal of Academic Research in Accounting, Finance and Management Sciences, 4(2), 176-184.
23. Haim L. & Marshall, S. (2018), Principle of financial management. Brooking Papers on Economic Activity, 1-51.
24. Hasanzadeh, B., Torabynia, S., Esgandari, K. & Kordbacheh, S. (2023), Evaluating effects of financial leverage on future stock value at Stock Exchange. Research Journal of Recent Sciences, 2(2), 81-84.
25. Haugen, R. & Senbet, L. (2018) Bankruptcy and Agency Costs: Their significance to the theory of optimal capital structure. The Journal of Financial and Quantitative Analysis, 23(1), 27-38.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XV, Issue VII, July 2026

26. Horne, J. (2022), Financial Management and Policy. Pretence – Hall Ltd, India. Jensen, M. (1986) Agency costs of free cash flow, corporate finance, and takeovers. American Economic Review, 76(3), 323-339.
27. Jensen, M. (1989) The eclipse of the public corporation. Harvard Business Review, 67(1) 61-75.
28. Jensen, M. & Meckling, W. (1976), Theory of the firm: Management behaviour agency costs and capital structure. Journal of Financial Economics, 3(1), 305-360.
29. Jelinek, K. (2017), The effect of leverage increases on earnings management. Journal of Business and Economic Studies, 13(2), 24-46.
30. John-Akamelu, R., Iyidiobi, F. & Ezejiofor, A. (2017), Leverage and financial performance: Evidence from Nigerian food production firms. European Journal of Research and Reflection in Management Sciences, 5(4), 2056-5992.
31. Karaduman, H., Akbas, H., Caliskan, A. & Durers, S. (2021), The relationship between working capital management and profitability: Evidence from an emerging market. International Research Journal of Finance and Economics, 62(2), 61 – 67.
32. Kenn-Ndubisi, I. & Nweke, C. (2019), Financial Leverage and firm financial performance in Nigeria: A panel data analysis approach. Global Journal of Management and Business Research Corporate Finance, 19(4), 14-22.
33. Kraus, A. & Robert, L. (1973), A state-preference model of optimal financial leverage. Journal of Finance, 33(3), 911-922.
34. Lazaridis, I. & Tryfonidis, D. (2016), Relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. Journal of Financial Management and Analysis, 19(5), 26-35.
35. Maghanga, E. & Kalio, A. (2022), Effects of leverage on the financial performance of parastatals: A case study of Kenya Power. International Journal of Science and Research, 3(10), 990-994.
36. Mesquita, J. & Lara, J. (2023), Capital structure and profitability: The Brazilian case. Academy of Business and Administration Sciences Conferences, 2(3), 43-52.
37. Muhammad, W. (2023), Affect of financial leverage on firm performance. Empirical evidence from Karachi Stock Exchange. Online at http://mpra.ub.unimuenchen.de/50383/ MPRA Paper No. 50383.
38. Nazir, M. & Saita, H. (2023), Financial leverage and agency cost: An empirical evidence of Pakistan. International Journal of Innovative and Applied Finance, 19(1), 1-16.
39. Obradovich, J. & Gill, A. (2023), The impact of corporate governance and financial leverage on the value of American firms. Faculty Publications and Presentations, Paper 25.
40. Orajaka, U. (2017), The Impact of leverage financing on financial performance of some manufacturing industries in Nigerian Stock Exchange. Saudi Journal of Business and Management Studies, 2(7), 716-726.
41. Rajin, S. (2022), Impact of financial leverage on shareholders returns and market capitalization: empirical evidence of telecommunication sector Companies India. International Journal of Research in IT, Management and Engineering, 2(12), 23-35.
42. Raza, M. (2023), Effect of financial leverage on firm performance. Empirical evidence from Karachi Stock Exchange. Online at https://mpra.ub.uni muenchen.de/50383/
43. Rehman, S, (2023), Relationship between financial leverage and financial performance: Empirical Evidence of listed sugar companies of Pakistan. Global Journal of management and Business Research finance, 13(8), 33-40.
44. Shehu, U. (2021). Determinants of Capital Structure in the Nigerian Listed Insurance Firms. International Conference on Management (ICM) Proceeding697 Shin, H. & Soenen, L. (2000), Liquidity management on profitability is there room for Both? AFP Exchange, 20(2), 46-49.
45. Singh, J. & Pandey, S. (2018), Impact of working capital management in the profitability of Hindalco industries Limited. The IUP Journal of financial Economics, 6(4), 62-72.