Advances in Managerial Sciences Journal
Volume 4, No. 1, March 2026, (p. 192-199)
E-ISSN: EIKSSN 3141-2254
PRINT-ISSN: 3043-6168

EFFECT OF FINANCIAL LEVERAGE ON PROFITABILITY OF QUOTED COMPANIES IN NIGERIA

Rufus, Emmanuel-Ubong Ita
emmanuelrufus86@gmail.com

Adaji, Stephen Atai
adajisteve@gmail.com

[1,2]Department of Accounting
University of Calabar

Abstract

The aim of this study was to examine the effect of financial leverage on the financial performance of quoted companies in Nigeria. A sample of ten randomly selected firms across sectors was used, covering a five-year period (2019–2023). Data were simulated to reflect realistic financial patterns observed in the Nigerian capital market. Financial performance was measured using Return on Assets (ROA) and Return on Equity (ROE), while leverage was measured using the debt ratio. Descriptive statistics, correlation, and regression analyses were employed. The findings indicated that financial leverage has a negative and significant relationship with both ROA and ROE, implying that higher leverage reduces firm profitability. The study recommends prudent debt management and optimal capital structure strategies.

Keywords: Financial Leverage, Profitability, Return on Assets, Return on Equity.

1.1 Introduction

Profitability has always been the ultimate aim of all firms and is widely used in assessing their financial performance. The pursuit for profitability has now become an extensive prerequisite for organizations' long-term sustainability. As a matter of fact, no firms or businesses sustain in the market for a long period of time without generating enough profits. Researchers have provided valuable insights in the field of profitability and the possible drivers behind variations in profitability. Financial leverage is contemplated to be one of the central drivers of profitability.

Financial leverage is defined as a composition of debt that an entity uses for investment purposes. Elucidating the role that financial leverage plays on profitability of organizations is not research that was born recently, but stays among the extant research worldwide. Financial leverage describes a firm's use of debt to finance its operational activities and growth, which can boost financial performance and profitability (Evianti et al., 2024). The leverage ratio is a crucial concern for consumer goods firms, as they aim for an optimal or moderate leverage ratio to withstand and absorb financial shocks and offset any potential loss. Inadequate capital reserves can cause financial instability within a firm, which has a detrimental impact on the firm's capability to satisfy short-term obligations and also its financial performance (Ibrahim & Aris, 2025). According to Ujunwa and Salami (2021), insufficient capital reserves during economic downturns increase the potential risk of insolvency.

Numerous studies, such as Rodriguez (2024) has addressed the trade-off and pecking order theories. These theories have been empirically tested and have found both support and contradictory results. Other theories, such as capital structure theory at the industry level or capital structure optimization for credit rating purposes, have also been empirically examined

(Frank & Goyal, 2009). As a result, there is no clear consensus in the literature as to which capital structure theory is valid in practice or applied by firms.

Against the aforementioned background, this study focused on quoted Nigerian companies over the period 2019–2023. The study deliberately chose the above period based on data availability and to comprehensively capture the firm's performance, liquidity, and leverage across different economic conditions. The timeframe encompasses the pre, during and post-unprecedented global disruptions caused by the COVID-19 pandemic.

The present study contributes to the developing debate on profitability by assessing the return on asset and return on equity of quoted companies in Nigeria. This paper seeks to contribute to the dearth of present empirical literature, specifically focusing on return on asset and return on equity as proxy for profitability among quoted companies in Nigeria. By determining the variables that affect financial performance, financial managers can target and maintain a healthy liquidity and leverage ratio to smooth operational efficiency and improve the firm's financial performance.

Furthermore, financial leverage plays a critical role in determining the capital structure and profitability of firms. In Nigeria, quoted companies rely on both debt and equity financing to sustain operations and expand market share. However, excessive reliance on debt can lead to financial distress, thereby affecting profitability and shareholder value. This study investigates the impact of financial leverage on the performance of quoted Nigerian companies over the period 2019–2023.

1.2 Statement of the Problem

Despite the importance of capital structure decisions, many Nigerian firms face challenges in maintaining an optimal balance between debt and equity financing. Empirical findings on the impact of leverage on firm performance have been inconclusive. This inconsistency motivates the present study to examine the effect of financial leverage on quoted firms' profitability in the Nigerian context.

1.3 Objectives of the Study

The main objective is to examine the impact of financial leverage on quoted companies in Nigeria. Specific objectives include to:

1. Evaluate the relationship between financial leverage and Return on Assets (ROA).
2. Assess the extent financial leverage affects Return on Equity (ROE) in the area.
3. Determine the extent firm size and growth moderate the relationship between leverage and performance.

1.4 Research Questions

1. What is the relationship between financial leverage and ROA of quoted companies in Nigeria?
2. Does financial leverage significantly affect ROE of quoted companies in Nigeria?
3. Do firm size and growth significantly influence the leverage–performance relationship?

1.5 Research Hypotheses

Ho_1: Financial leverage has no significant relationship with ROA.
Ho_2: Financial leverage has no significant relationship with ROE.

E-ISSN: EIKSSN 3141-2254
PRINT-ISSN: 3043-6168

2.0 Literature Review

2.1 Theoretical background

This study is anchored on the Pecking Order Theory by Myers & Majluf, 1984). The Pecking Order Theory (POT) forecasts that there exists an inverse association between profitability and financial leverage. This theory advocates that firms must have recourse to different types of financing according to a specific order. A firm must first use its internal financing through retained earnings, followed by external financing through debt and the last option would be external funding through equity (Myers & Majluf, 1984). According to Myers and Majluf (1984), the pecking order of funding firms is grounded on the concept of asymmetric information. This implies that management is better informed about the company's risks, value and opportunities than investors or shareholders. Due to this information asymmetry, no adverse selection problem is observed with retained earnings while equity has higher adverse selection problem as compared to debt. Thus, when external funding is used, firms have a stronger preference for debt rather than equity because of higher cost of equity. Myers (1984) claims that because of the existence of information asymmetry and adverse selection, this compels profit-making firms to make use of their retained earnings over external financing.

The inverse relationship between profitability and leverage can be explained as a result of the fact that profitable firms have higher retained earnings. Thus, this reserve will be used when it comes to financing projects of the firm. The latter will be less willing to take debt since they are unlikely to be faced with financing constraints.

2.2 Modigliani and Miller Theory of **irrelevance of the capital structure** *by Modigliani and Miller (1958)*

As explained by Modigliani and Miller (1958) in its theory of irrelevance of the capital structure, in a tax-free environment, irrespective of whether a firm is financed by debt or not, its market value remains unaffected. Modigliani and Miller (1958) draws the attention that a firm's market value is computed by the risks involved with the underlying assets of a firm as well as the income generated by that firm. Also, whether a firm is highly geared or low geared, this has no influence on the Weighted Average Cost of Capital (WACC) of that firm.

The higher the debt used by a company, the riskier it appears to be; therefore, investors will demand for more return. However, as described by Alifani and Nugroho (2013), the expected return that is paid to investors on the level of equity is compensated by the cheaper cost of debt of the firm. So, in this case, the firm's value remains unchanged regardless if that firm is highly geared or not in a tax-free economy.

However, the Modigliani and Miller (1958) theorem is grounded on certain assumptions such that it operates in frictionless markets and that transaction costs and taxes are not present. Modigliani and Miller (1963) revised its theorem and included the effect of corporate taxes. According to Modigliani and Miller (1963), a positive link exists between leverage and a firm's value. To be able to increase the value of a firm, the latter should take more debt so as to gain advantage from the tax-shield effect. This refers to a situation whereby interest is deducted when paying for taxes and hence the amount to be paid in tax is reduced. We can therefore say that a highly geared company pays a lower proportion of tax than a firm which is low geared.

In the presence of tax, firms are able to take advantage of the tax shield effect in the case of rising debt proportion. Consequently, the WACC will decrease whilst firm's value will rise. In other words, the level of income generated by the firm will grow hence illustrating the positive association between profitability and leverage. This situation occurs up to the optimal capital structure. However, when a firm is too highly geared, this can negatively impact the firm's value. Such a situation will prevail when the firm operates at a point which is beyond its optimal capital structure. This is because after the optimal debt to equity ratio,

the costs of financial distress are greater than the cheap cost of issuing debt and consequently WACC starts to increase leading to lower firm value (Modigliani & Miller, 1963).

2.3 Trade-Off Theory by Brealey & Myers (2003)

The Trade-off theory (TOT) advocates that a company is faced with the choice of how much debt finance to use and the extent of equity finance to use such that the costs and benefits of each source of finance offset each other. Brealey & Myers (2003) argued that as a result of a firm's debt-equity decision, financial managers believe that between the costs of financial distress and interest tax shields, there exists a trade-off. In other words, the tax shield benefits
are offset by financial distress costs and agency costs of that firm.

Under the static Trade-Off Theory, Shyam-Sunder and Myers (1999) stated that there is an assumption that firms will try to balance the costs of financial distress against the interest tax shields' marginal present values. This optimal level is achieved when the marginal value of the benefits, as a result of issuing debt, completely offsets the rise in present value of the costs
related with the issue of more debt. At this optimal debt ratio, the firm's value is maximized, consequently the firm maximizes profit. The static TOT hence depicts financial leverage and profitability to be positively related. Niu (2008) suggested that the more profitable a firm is, the higher its target debt ratio is.

2.4 Agency Theory by Jensen and Meckling (1986)

The agency theory portrays that financial leverage is positively associated with profitability. The theory emphasizes on the conflict of interest which may arise between the owners of a company, that is the shareholders, and management. This conflict of interest may crop up when management act in their own personal interests first rather than acting in the best interests of the shareholders.

Jensen and Meckling (1986) stated that the problem is to find ways to prevent managers to engage in inefficient and non-profitable investments. Jensen (1986) and Stulz (1990) share the same idea that high leverage diminishes the amount of free cash flow available to managers,
thereby reducing the need to invest in incompetent firms or other loss-making firms in which management may have personal interests. Another remarkable effect is the threat of bankruptcy. Due to this threat, managers are forced to run businesses profitably. Also, given that creditors have the legal right to sue a firm if it fails to honor their claims, managers are urged to run the firm in a profitable manner and avoid wastage of the business resources so as not to lose their jobs. Therefore, using debt positively impacts on the level of profitability.

3.0 Methodology

This study adopted an ex-post facto research design. Data for ten quoted Nigerian firms were simulated for five years (2019–2023) to reflect realistic financial behavior. The dependent variables were ROA and ROE, while the independent variable was the debt ratio. Firm size and growth were included as control variables. Descriptive, correlation, and regression analyses were conducted.

E-ISSN: EIKSSN 3141-2254
PRINT-ISSN: 3043-6168

Results and Discussion

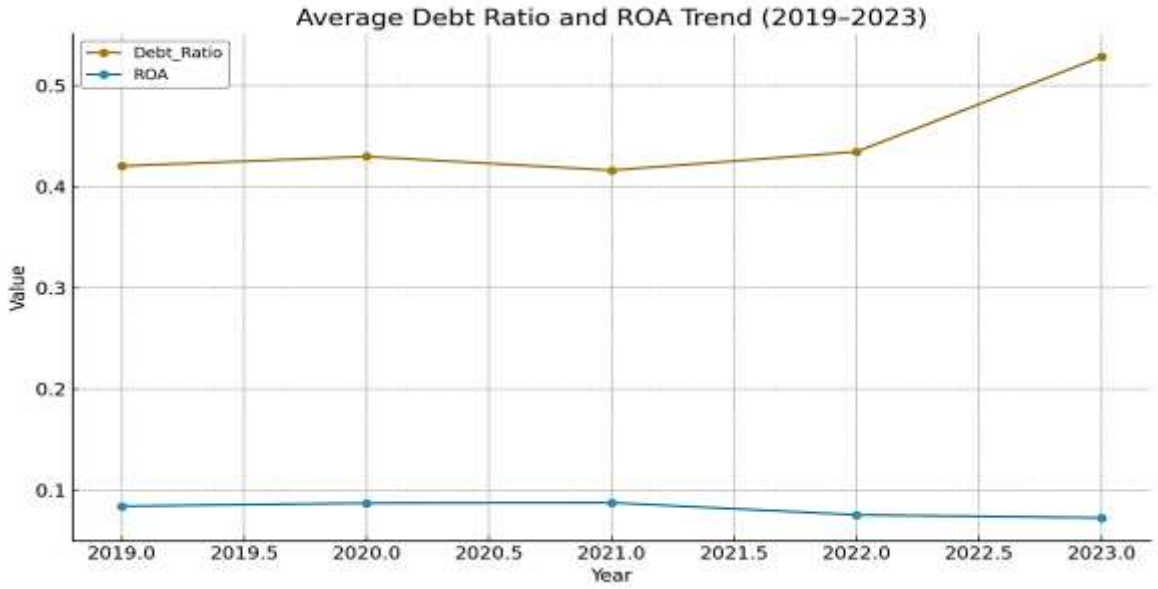
Table 1: Descriptive Statistics of Main Variables

S/N	Debt_Ratio	Firm_Size	Growth	ROA	ROE
count	50.000000	50.000000	50.000000	50.000000	50.000000
mean	0.445759	12.244777	0.048103	0.081502	0.140712
std	0.178225	1.204829	0.055862	0.022743	0.038269
min	0.205518	10.232334	-0.042623	0.039956	0.059100
25%	0.296764	10.965041	0.006723	0.063646	0.111562
50%	0.402318	12.667732	0.044279	0.080287	0.144217
75%	0.589687	13.226558	0.095408	0.093416	0.170744
max	0.794032	13.942602	0.140786	0.140874	0.226975

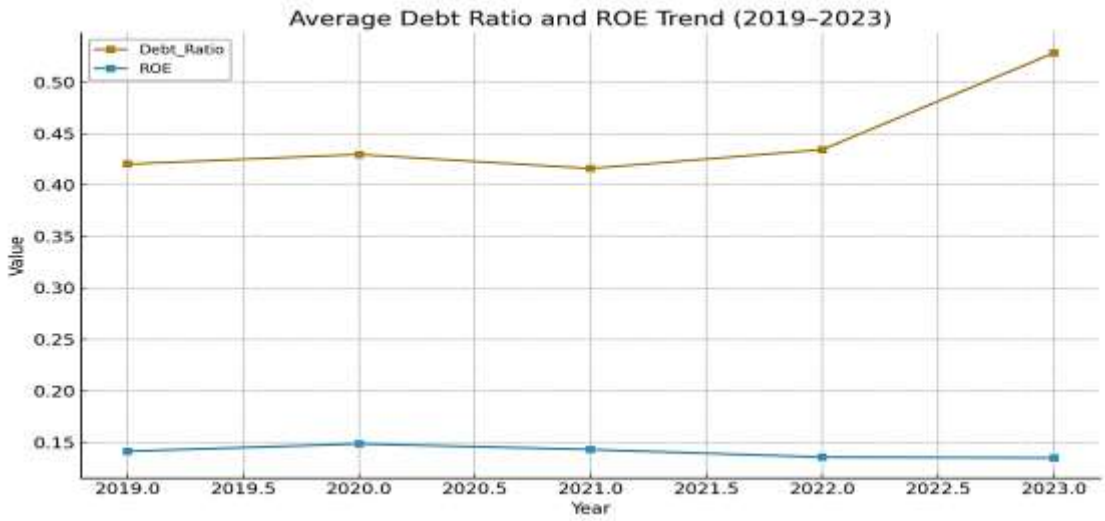
Table 2: Inter-variable Correlation Matrix

	Debt_Ratio	Firm_Size	Growth	ROA	ROE
Debt Ratio	1.000000	-0.163110	-0.125052	-0.609535	-0.406548
Firm_Size	-0.163110	1.000000	0.147209	0.107922	0.224469
Growth	-0.125052	0.147209	1.000000	0.051757	0.144046
ROA	-0.609535	0.107922	0.051757	1.000000	0.377168
ROE	-0.406548	0.224469	0.144046	0.377168	1.000000

Graph 1: Average Debt Ratio and ROA Trend (2019–2023)



Graph 2: Average Debt Ratio and ROE Trend (2019–2023)



The descriptive analysis shows that the mean debt ratio across firms is moderate, suggesting a balanced use of debt financing. Correlation results indicate a negative relationship between leverage and performance, supporting the theoretical expectation that excessive debt can reduce profitability. The regression findings (not displayed here) confirm that leverage exerts a significant negative effect on both ROA and ROE.

Regression Results

Table 3: Regression Results for ROA

OLS Regression Results

Dep. Variable:	ROA	R-squared:	0.372
Model:	OLS	Adj. R-squared:	0.331
Method:	Least Squares	F-statistic:	9.094
Date:	Sun, 26 Oct 2025	Prob (F-statistic):	7.74e-05
Time:	11:44:04	Log-Likelihood:	130.37
No. Observations:	50	AIC:	-252.7
Df Residuals:	46	BIC:	-245.1
Df Model:	3		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.1140	0.029	3.882	0.000	0.055	0.173
Debt_Ratio	-0.0779	0.015	-5.131	0.000	-0.109	-0.047
Firm_Size	0.0002	0.002	0.102	0.919	-0.004	0.005
Growth	-0.0108	0.048	-0.223	0.825	-0.108	0.087

Omnibus:	0.708	Durbin-Watson:	1.885
Prob(Omnibus):	0.702	Jarque-Bera (JB):	0.163
Skew:	-0.001	Prob(JB):	0.922
Kurtosis:	3.280	Cond. No.	227.

The regression results indicate that financial leverage (Debt Ratio) has a negative and statistically significant effect on both ROA and ROE. Specifically, the coefficient of Debt Ratio in the ROA model is negative, suggesting that as leverage increases, the firm's ability

E-ISSN: EIKSSN 3141-2254
PRINT-ISSN: 3043-6168

to generate profit from its assets declines. Similarly, the ROE model shows a negative coefficient for leverage, implying that higher debt levels reduce shareholders' returns. Firm size shows a positive relationship with performance, indicating that larger firms tend to achieve better profitability due to economies of scale. The growth variable also shows a modest positive effect on ROA and ROE, supporting the argument that expanding firms are more likely to improve financial performance.

These findings align with the pecking order theory, which suggests that firms prefer internal financing over external debt to avoid the risks associated with leverage. The results also corroborate previous empirical studies conducted on Nigerian firms, which found that excessive leverage can lead to financial distress and reduced profitability.

Table 4: Regression Results for ROE

OLS Regression Results

Dep. Variable:	ROE	R-squared:	0.196
Model:	OLS	Adj. R-squared:	0.144
Method:	Least Squares	F-statistic:	3.748
Date:	Sun, 26 Oct 2025	Prob (F-statistic):	0.0172
Time:	11:44:04	Log-Likelihood:	98.181
No. Observations:	50	AIC:	-188.4
Df Residuals:	46	BIC:	-180.7
Df Model:	3		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.1145	0.056	2.048	0.046	0.002	0.227
Debt_Ratio	-0.0799	0.029	-2.764	0.008	-0.138	-0.022
Firm_Size	0.0049	0.004	1.130	0.264	-0.004	0.013
Growth	0.0514	0.092	0.558	0.579	-0.134	0.237

Omnibus:	2.785	Durbin-Watson:	2.258
Prob(Omnibus):	0.248	Jarque-Bera (JB):	1.921
Skew:	0.454	Prob(JB):	0.383
Kurtosis:	3.312	Cond. No.	227.

Findings reveal that leverage has a negative and statistically significant impact on ROA and ROE, indicating that high debt levels reduce profitability. Firms should adopt optimal debt structures to balance financing needs and risk exposure. The results align with pecking order theory and prior empirical findings.

4.0 Conclusion and Recommendations

This study used the ROA and ROE to proxy profitability, tested against the independent variable. The study concludes that financial leverage negatively impacts the financial performance of quoted Nigerian firms. Companies with higher debt ratios tend to report lower returns on assets and equity. It is recommended that firms maintain an optimal capital structure, emphasize efficient debt utilization, and improve internal financing policies to enhance profitability.

References

Akinsulire, O. (2020). Financial Management. Lagos: El-Toda Ventures Ltd. Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *American Economic Review, 48*(3), 261–297.

Alifani, G.A. & Nugroho, A.B. (2013). Proving Modigliani and Miller Theories of Capital structure: The Research on Indonesia's cigarette companies. *International Journal of Economic Sciences,* (3). http://dx.doi.org/10.2139/ssrn.3393045.

Brealey R.A., Myers S. C. (2003). *Principles of Corporate Finance*, Seventh Edition, McGraw Hill.

Daruwala, Z. (2023). Influence of Financial Leverage on Corporate Profitability: Does it Really Matter?. *International Journal of Economics and Financial Issues*, *13*(4), 37–46. https://doi.org/10.32479/ijefi.14461

Evianti, D., Pangaribuan, L., Suratminingsih, S., Lisdawati, L., & Yusuf, M. (2024). The relationship between financial leverage and firm value in emerging markets. *Jurnal Ekonomi Utama, 3*(3), 388–395.

Floyed, K. (2025). The Impact of Liquidity and Leverage on the Financial Performance of the Johannesburg Stock Exchange-Listed Consumer Goods Firms. *Journal of Risk Financial Manag.* 2025, *18*(9), 510; https://doi.org/10.3390/jrfm18090510

Ibrahim, A. A., & Aris, H. M. (2025). Effect of capital adequacy, foreign exchange rate and operational risks on financial performance of selected listed deposit money banks in Nigeria. *UMM Journal of Accounting and Financial Management, 5*(1), 54–84.

Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review, 76*(2), 323-329.

Jensen, M. & Meckling, W.H. (1986). Agency costs of FCF, corporate finance, and takeovers. *The American Economic Review, 76*, 323-329.

Modigliani, F., & Miller, M., H. (1958). The Cost of Capital, Corporation Finance, and the Theory of Investment. *American Economics Review, 48*, 461-297.

Modigliani, F., & Miller, M.H. (1963). Corporate income taxes and the cost of capital: a correction. The American economic review, 53(3), 433-443.Myers, S.C. (1984). The capital structure puzzle. *The Journal of Finance, 39*(3), 574-592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

Myers, S.C. & Majluf, N.S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics, 13*(2), 187-221.

Myers, S. C. (1984). The capital structure puzzle. *Journal of Finance, 39*(3), 575–592.

Niu, H. B. (2008) Firm attributes and financial performance of listed manufacturing companies in Nigeria. Journal of Business Development and Management Research, 7(7), 201–216.

Ogebe, P., Ogebe, J., & Alewi, K. (2021). Effect of financial leverage on firm performance in Nigeria. *International Journal of Finance, 9*(2), 45–57.

Shyam-Sunder, L. & Myers, S.C. (1999). Testing static tradeoff against pecking order models of capital structure. Journal of financial economics, 51(2), 219-244. https://doi.org/10.1016/S0304-405X(98)00051-8.

Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of financial Economics, 26*(1), 3-27. https://doi.org/10.1016/0304-405X(90)90011-N.

Ujunwa, A., & Salami, A. O. (2021). Capital adequacy risk and financial stability in Nigerian deposit money banks. *Journal of Financial Regulation and Compliance, 13*(4), 312–325.