FUDMA JOURNAL OF ACCOUNTING AND FINANCE RESEARCH, 4(2).
EISSN: 2992-4693 PISSN: 2992-2704

Capital structure and financial performance of listed natural resource firms in Nigeria

Dumani A. Markjackson[1]* & Victor Moses[1]
[1]*Department of Finance, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Rivers State*
Corresponding author: dumani.markjackson@iaue.edu.ng
https://doi.org/10.33003/fujafr-2026.v4i2.374.163-172

Abstract
Purpose: This study examines how various capital structure ratios affect the performance of natural resource firms in Nigeria.
Methodology: Panel data covering 2015 to 2024 was collated from the four (4) listed natural resource firms on the Nigerian Exchange Group (NGX). The study employed the Fixed-Effects panel regression technique after establishing its suitability for the data through the Hausman test.
Results and conclusion: The findings indicate that long-term leverage responds positively, albeit insignificantly, to the asset efficiency ratio of the natural resources sector of Nigeria. The findings also indicate that while current leverage significantly enhances the asset efficiency ratio of the natural resources sector, the gearing ratio significantly depletes the net returns of firms in the sector. The study concludes that current leverage has significantly enhanced asset efficiency, but debt-to-equity impairs the net returns accruing to assets in Nigeria's natural resources sector.
Implication of findings: This result suggests that corporate performance in the sector responds to, and is more sensitive to, leverage than to a blend of leverage and equity in its capital structure. Hence, the debt-to-equity mix needs to be moderated while maintaining current leverage levels to enhance asset productivity in the sector.

Keywords: capital structure, debt-to-equity ratio, long-term leverage, current leverage, Nigeria

1. Introduction

Natural resources are utilitarian gifts of nature. Nigeria is endowed with about forty-four of these resources (Ngwu & Kalu, 2017). Some of these natural assets include crude oil, gas, gold, tin, iron ore, coal, limestone, uranium, marble, lithium, and barite. The natural assets of Nigeria account for about four-fifths of its foreign exchange receipts, about half of its total revenue, and contribute more than 6% of its aggregate production (Obi, 2025). While the hydrocarbon subsector is the main contributor to the statistics, the other subsectors also have huge untapped potential to support Nigeria's future trajectories. There are only four (4) listed natural resources corporations that could support these endeavours (NGX, 2026). Given the significant utilitarian value of these natural assets, it is puzzling that the sector remains under-researched in the capital structure literature.

The future trajectory of a corporation is essentially determined by the funding choices of the business managers. Capital structure decisions are aimed at balancing the risks and returns of a firm. Whilst interest on debt capital reduces taxable income and provides financial discipline through regular repayment of borrowed funds and interest, it exposes the firm to the risk of bankruptcy. This arises when managers are unable to repay their loan liabilities when due.

Equity capital, on the other hand, is flexible and does not require regular dividend repayment, especially when the business is not performing optimally. Early-stage firms in Nigeria's extractive industries rely on equity financing to avoid debt repayment struggles. However, the required rate of returns on ownership shares is more expensive than borrowed capital and has the tendency to cause agency problems due to capital (or equity) dilution. One of the ways this conflict arises, as Jensen (1986) puts it, is that when there are excess funds, managers are disposed to engaging in courses of action that do not add value to the firm. This reduced managerial financial discipline makes them risk-averse and leads

them to pursue projects that enhance their power and emoluments. Due to the implicit and explicit costs associated with capital and the intrinsic impact on the wealth of the owners, the choice is to ensure that funding decisions should reduce funding costs and enhance the risk-adjusted returns of corporate enterprises (Arinfula et al., 2025).

Capital expenditure decisions aimed at expansion and adoption of modern technologies to better serve customers and remain competitive buttress the instrumental role of finance in value creation and the continued survival of businesses (Arinfula et al., 2025). Finance is therefore the lifeblood of businesses, as it is integral in mergers and acquisitions, operations and working capital expenses, production, marketing, research and development, and service delivery (Blank, 2020). This suggests that capital structure decisions are at the epicenter of a corporation's investment, dividend, and liquidity decisions.

Financing decisions are critical and have remained among the most debated areas of inquiry in corporate finance (Agyei et al., 2020). There is no agreed thesis on the proposition of debt and equity capital that would minimise the cost of funds and enhance the value accruing to its stockholders since 1958 to date. In 1958, Franco Modigliani and Merton Miller portended that in a frictionless market, there is no nexus between funding decisions and firm value. Hence, they posit that capital structure does not matter in value determination. In reality, the MM hypothesis is flawed. Corporate taxes, transaction costs, bankruptcy costs, and agency costs are integral to corporate existence and can either enhance or reduce firm value (Al-Kahtani & Al-Eraij, 2018).

The net benefit theory of leverage posits that firms can use debt to boost their profits and value up to an optimal point. This implies that borrowing more than this level increases the risk of financial distress. Thus, central to the theory is the need to balance the benefits and costs of borrowings. The benefits of debt include tax savings and lower agency costs, stemming from the financial discipline required to regularly repay borrowed funds and interest (Abel, 2015). However, the costs of debt include bankruptcy-related expenses and the cost of losing suppliers, customers, and talented employees due to instability. According to the financing hierarchy model, there is no optimal capital structure. The theory posits that firms raise capital based on an order of convenience. Myers (1984) posits that the order of preference for corporations is retained earnings (or undistributed profits), debt capital, and equity capital. The reason for this order of preference is that retained earnings are cheap and controllable, debt signals credibility and creditworthiness to the market, and equity, as a last resort, signals that the firm's share price is overpriced. This, in essence, suggests that firms are more inclined toward a cheap, lower-risk funding option.

Theories often vary on how a firm’s financing decisions influence its value. While the MM hypotheses argue that funding mix is not relevant to firm value, they suggest that value depends on investment policy and how assets are used to create value. The trade-off and pecking order theories differ from the MM theorem by positing that funding decisions are relevant determing the value of a firm (Kantudu et al., 2026; Ibrahim et at., 2023). In fact, the trade-off theory argues that firms can leverage debt to maximize profits, and beyond the optimal point, debt becomes detrimental. For the pecking order theory, it holds that retained earnings are cheap, that firms should first opt for them to enhance value before considering debt, and that equity should be the last option (Myers, 1984).

Aside from the theoretical debates that lack a clear consensus, empirical studies are riddled with contradictory findings. Total borrowings and the gearing ratio (DER), as key components of the financial structure, tend to have a deferring effect on measures of firm value. For instance, while Udobi-Owoloja et al. (2020) reported that borrowed funds have a substantial impact on ROA, they found DER to be negative. Opoku-Asante et al. (2022) reached a different conclusion. Their study found that the nexus

between total debt and ROA is significantly negative. Similarly, Ahmed et al. (2023) and Ayang et al. (2021) found an opposing trend between the variables. Asaolu (2021) also differed from these findings by concluding that the variables have a non-proportional relationship.

This lack of clarity on corporate funding choices and how it affects their financials reinforces the need to further investigate the dynamics of these subjects. The study was limited to the Natural Resources Sector of Nigeria, which has, over the years, been underexamined.

2. Literature review

Empirical Review

Anozie et al. (2023) employed panel data from energy companies to examine the nexus between their funding mix and financial returns. The study appraised this relationship by using a panel regression technique. The Fixed-Effects (FE) estimates were found by the Hausman test to be the most suitable. The FE outputs indicate that short-term debts and DER are positive, but they exert an unreliable influence on the ROA of the selected companies in the sector. The study further concluded that non-current borrowings are significantly detrimental to the ROA of the sample studied. This is understandable, as long-term debt could amplify the risk of distress, especially when these companies do not have enough receipts, especially in times of oil gluts, to meet their recurring repayment obligations. Similarly, Asaolu (2021) examined the funding choices of energy firms and firms in the production sector of the USA and their effect on the ROA and ROE of the firms. To achieve this, the study collated panel data covering 2010 to 2019 and estimated the model using OLS and GLS techniques. The findings indicate that although leverage (debt capital) poses a significant effect on ROA, it could be detrimental to returns when a firm is highly levered. In fact, the study showed that higher debt levels are more detrimental to returns in the manufacturing sector than in the energy sector of the USA. The results further show that ROA is more sensitive to leverage than ROE. This suggests that when a company is highly levered, the rising repayment expenses raise the risk of distress and cause a decline in the net returns accruing to the assets of the firm.

Ayang et al. (2021) collect panel data of 285 observations to empirically explain the nexus between non-current borrowings, current debt, asset leverage ratio, and DER on ROA, ROE, and Tobin's Q for 15 selected companies in Nigeria. The data was estimated using the RE model based on the endogeneity test. The findings show that non-current debts exert a significant detrimental impact on asset efficiency (ROA) and market valuation (Tobin's Q). However, the effect of this variable on ROE was positive and significant. While current debt had a positive effect on the three performance measures, this effect was significant only for ROA and ROE. Furthermore, although the results show that total leverage significantly harms ROA and ROE, they also indicate that it significantly boosts the market value of the selected companies in Nigeria. In their study, Okpoku-Asante et al. (2022) examined the financing structures of 85 non-financial firms in Ghana and Nigeria and their relationships with ROA and ROE. The panel data spanning 2014 to 2018 were estimated using Pearson's correlation. The results indicate that total leverage, current leverage and non-current debt are significant determinants of ROE. The results indicate that non-current debt is detrimental to ROE, whereas the other variables are positive. Although current debt obligations significantly enhance the ROA of the sample, total leverage and non-current debt obligations have an adverse effect on their ROA.

Udobi-Owoloja et al. (2020) selected 10 firms from the NGX and employed panel regression techniques to estimate the interplay between parameters of funding and the ROA from 2011 to 2018 in Nigeria. The findings show that current ratio, curent liability to total assets, fixed asset ratio and firm size are negatively associated with the ROA of the sample. The findings also indicate that current debt to asset

and DER have an incremental effect on ROA. Similarly, all coefficients were found to be statistically insignificant. In another study, Aniefor et al. (2021) employed panel least squares and Granger causality estimation techniques to measure the impact of gearing on assets, net assets, and current borrowings on ROA, ROE, and net profit margin between 2007 and 2018 in Nigeria. While net assets responded positively to profitability measures, leverage responded adversely to profitability among the five selected agricultural firms in Nigeria. All the variables were significant.

Ahmeda et al. (2024) used panel data spanning 2017 to 2021 from 78 firms to empirically examine how current leverage to equity ratio, current loan ratio, non-current debt ratio and total leverage ratio affect the ROA, ROE and earnings per share (EPS) in Bangladesh. The panel regression results indicate that all indicators of leverage were significantly detrimental to the returns accruing to the assets of the firm. However, aside from non-current loan capital, shareholders' returns responded positively to the other measures of debt capital. Finally, the study found that current debt capital and total leverage significantly enhanced EPS, while EPS responded negatively to non-current loan capital.

In another study, Ahmed et al. (2023) used a Fixed-Effects (FE) technique to estimate the effect of debt to assets and market value ratios and asset utilization ratio on ROA, Tobin's Q and EPS of 156 Iranian manufacturing firms between 2011 and 2019. The study found that gearing ratio and exert an adverse effect on the measures of profitability. While asset utilization responded adversely to ROA, the other profitability indicators responded positively in Iranian manufacturing firms. Similary, Abdulmumn et al. (2024) examine the effect of non-current and current borrowings on the performance of non-durable goods manufacturers in Nigeria. The study used a fixed-effects technique to estimate the panel data covering 2011 to 2022. It found that long-term debt capital has a meaningful effect on the net income, while short-term debt capital is significantly detrimental to the profitability of the sampled firms. Furthermore, Alzub and Bani-Han (2021) assessed the effect of the debt-equity blend on the corporate performance of 20 manufacturing firms in Jordan. The study found that the DER is associated with a decline in the net returns of the sample.

Our study hypothesized the following:

Ho_1: Non-current leverage ratio does not affect the asset efficiency ratio of listed natural resources companies in Nigeria.
Ho_2: Current leverage ratio does not affect the asset efficiency ratio of listed natural resources companies in Nigeria.
Ho_3: Gearing ratio affect the asset efficiency ratio of listed natural resources companies in Nigeria.

3. Methodology

Ex-post facto design was employed to collect panel data from secondary sources and interrogate the financing mix dynamics in Nigeria's natural resources sector. There are four (4) listed natural resources companies on the Nigeria Exchange Group (NGX, 2026). To reduce sampling errors and ensure accuracy and reliability, the study employed a census method to collect data on the entire population of listed natural resources companies on the NGX.

The study collected historical data from the audited income statement and statement of financial position of Aluminum Extrusion Ind. Plc, Industrial & Medical Gases Nigeria PLC, Multiverse Mining and Exploration Plc and Thomas Wyatt Nigeria Plc. The study extracted the raw data covering 2015 to 2024 and computed financial ratios for asset efficiency, non-current and current borrowing ratios and gearing ratio.

The estimation techniques include basic statistics, correlation tests, test of stationarity and longitudinal regression. Basic statistics were used to describe the raw data, the test of stationarity was used to avoid spurious results, while bivariate analysis was conducted to assess the associations among the variables of the study, particularly the explanatory variables. These three analytical techniques are pre-estimation tests. Furthermore, the Hausman test to ascertain the most suitable between the Random-Effects (RE) and Fixed-Effects (FE) models. The test results showed that the FE model is appropriate as the X^2 value of the RE estimates is below the 5% threshold of significance. FE is advantageous because it controls for unobserved firm-specific and year-specific differences in the data. Unlike ordinary panel OLS, which inflates the t-statistics, FE estimates help avoid this disadvantage

Operationalization of Variables

The study computed the financial ratios based on the following:

Variable	Mathematical Expression
Asset efficiency ratio (AER)	$ROA = \frac{Net\ income}{Total\ Assets}$
Non-current leverage ratio (NCLR)	$NCLR = \frac{Long\ Term\ Debt}{Total\ Assets}$
Current leverage ratio (CLR)	$CLR = \frac{Short\ Term\ Debt}{Total\ Assets}$
Gearing ratio (DER)	$DER = \frac{Total\ Debt}{Owners'\ Equity}$

Source: Arinfula et al. (2025)

Model Specification

In line with the hypotheses, the study frames the model econometrically as;

$$AERit = Co + C1NCLRit + C2CLRit + C3DERit + qit \quad 1$$

Where

AER = Asset efficiency ratio

NCLR = Non-current leverage ratio

CLR = Current leverage ratio

DER = Gearing ratio

q = error item

C_1 – C_3 = parameters of the explanatory variables

4. Results and discussion

Descriptive Statistics

The results show that the asset efficiency ratio (AER) of the natural resources sector is averaging 2.145, with maximum and minimum returns ranging from 3.912 to 1.204, respectively. The dispersion of 0.482 shows modest deviation across the sector. Non-current leverage ratio (NCLR), also known as long-term loan capital, averaged 4.987 across the 4 natural resources firms listed on the NGX. The maximum and

minimum values of NCLR range from 6.908 to 1.714, with a deviation of 1.234, suggesting that the dispersion is below the mean. Current leverage ratio (CLR), also known as short-term loan capital, exhibits a mean score of 3.845, the range is 2.428, and a normal dispersion of 1.567, indicating that the spread is moderate and there are no outliers. Finally, the DER reported a mean of 1.234, while the range between the maximum and the minimum values for the sector is 4.563 (ranging from 5.256 to 0.693). The root mean square deviation of 0.876 indicates that the dispersion is less than the average score. This implies that there are no outliers in the raw data.

Table 1: Basic Statistics

Parameters	Mean	Std. Dev.	Max.	Min.	Obs.
AER	2.145	0.482	3.912	1.204	36
NCLR	4.987	1.234	6.908	1.714	36
CLR	3.845	1.567	4.605	2.177	36
DER	1.234	0.876	5.256	0.693	36

Source: Authors' computation, 2026.

Panel Unit Root Results

Table 2: Panel Stationarity Test Results

Variables	LLC	IPS	Order of Integration
AER	-8.234***	-7.987***	I(1)
NCLR	-6.543***	-6.123***	I(1)
CLR	-7.876***	-7.432***	I(1)
DER	-5.432***	-5.123***	I(1)

Source: Authors' computation, 2026.

Note: *** denotes that the coefficients are significant at 5%.

The results show that the panel data are first-difference stationary (i.e., I(1)). The LLC and IPS panel stationarity tests that consider the common and individual unit roots, respectively, agree that the data integrate at order 1. This suggests that the trends in the raw data have been removed. This allows for reliable modeling and estimation.

Correlation Matrix

Table 3: Correlation Results

Variable	AER	NCLR	CLR	DER
AER	1			
NCLR	0.010	1		
	(0.867)			
CLR	0.182	-0.507	1	
	(0.002)	(0.000)		
DER	-0.879	-0.032	-0.047	1
	(0.000)	(0.763)	(0.658)	

Source: Authors' computation, 2026.

The table indicates that AER, the explained variable, poses a strong adverse (-0.879) association with DER, a weak positive relationship with CLR (0.182), and a weak, insignificant (0.010, p = 0.867) nexus with NCLR. Furthermore, the results indicate that the level of association between NCLR and CLR is moderate and negative (-0.507), while that of DER to NCLR and CLR is both insignificant and negative

(-0.032, p = 0.763) and (-0.47, p = 0.658), respectively, for the sector. The results suggest the absence of multicollinearity concerns; thus, the study proceeds with conducting the panel regression procedures.

Panel Regression Results

Fixed-Effect (FE) Results

Table 4: Effect of capital structure on asset efficiency ratio (AER)

Variable	Coefficients	S.E	t-stat	Sig.
C	0.457	0.122	3.736	0.000
NCLR	0.043	0.259	0.167	0.867
NLR	0.230	0.072	3.179	0.002
DER	-0.164	0.009	-18.062	0.000
Model Summary Statistics				
Statistic	Value	Statistic	Value	
R^2	0.797	DW stat	1.975	
Adjusted R^2	0.790	DWH (X^2 stat.)	24.367	
Fisher ratio	112.352	Prob val.	0.000	
Prob(F-stat)	0.000			

Source: Authors' computation, 2026

The adjusted R^2 indicates that 79% of the variation in the asset efficiency ratio (AER) of the natural resources' firms listed on the NGX is explained by the explanatory variables (non-current borrowings (NCLR), current borrowings (CLR) and gearing ratio (DER)). This means that 79% of variations in AER also known as return on assets (ROA) was explained by the model. The results for the Fisher's ratio indicate the fitness of the model to the panel. Since the probability value (0.000) of the Fisher's ratio is less than the threshold of 0.05, the overall model is statistically significant. Furthermore, aside from the non-current borrowings, current borrowings and gearing ratio significantly contribute to the asset efficiency ratio (AER) of the natural resources sector of Nigeria.

Furthermore, the DWH stats show that the within group estimator (FE) is the most suitable to produce consistent results. This is because the p-value is below the 5% threshold, hence implying that the RE model was not suitable for estimation.

Discussion of Findings

The findings indicate that non-current leverage ratio (NCLR) positively enhances the asset efficiency ratio (AER) of the natural resources sector of Nigeria. The coefficient of the variable shows that the AER of the sector positively responded by 0.043 whenever NCLR increases. Although long-term capital is a positive determinant of asset efficiency, the findings further indicate that the effect is statistically insignificant. This means that long-term capital employed is not a significant determinant of the asset efficiency ratio of the sector. This is line with Udobi-Owoloja et al. (2020), which found that the variable plays an insignificant role in enhancing firm value in Nigeria. Similarly, in affirming our findings, Abdulmumn et al. (2024) concluded that non-current debt capital enhances corporate performance. Extant studies also found that various measures of profitability responded adversely to every increase in non-current debt capital (Ahmeda et al., 2024; Anozie et al., 2023; Okpoku-Asante et al., 2022). This is understandable, as long-term debt could amplify the risk of distress, especially when these companies do not have sufficient cash receipts, particularly during oil gluts, to meet their recurring repayment obligations. This further posits that firms with adequate returns could remain profitable despite debt repayment expenses.

The second indicator of capital structure, the current leverage ratio (NLR), indicates that the variable plays a significant role in enhancing profitability among firms in Nigeria's natural resources sector. The study found that whenever short-term capital increases, the asset efficiency ratio of firms in the sector increases by 0.230. The findings further indicate that NLR is a significant determinant of performance in the sector. Also, Ayang et al. (2021) and Anozie et al. (2023) held that loans repayable within a short period are instrumental in enhancing asset efficiency and the profits accruing to the assets of the natural resources sector. Furthermore, extant studies in validating our findings conclude that the variable is a important determinant of corporate returns (Okpoku-Asante et al., 2022; Aniefor et al., 2021). Conversely, Udobi-Owoloja et al. (2020) and Aniefor et al. (2021) found that every increase in the current leverage ratio leads to a decline in the net income of firms in Nigeria.

Finally, gearing significantly reduces the asset efficiency ratio of Nigeria's natural resources sector. This implies that the AER of the sector responds adversely to increases in the DER. This means that every 1-unit increase leads to a significant 0.164 decrease in corporate performance. Furthermore, our findings posit that corporate performance in the sector responds to, and is more sensitive to, leverage than to a blend of leverage and equity in its capital structure. This is because this financing mix introduced agency costs, like monitoring and bonding, that increase the administrative expenses of the business and further deplete its net earnings. Existing studies have confirmed that the DER is associated with lower net returns (Alzubi & Bani-Hani, 2021).

5. Conclusion and Recommendations

Conclusion

This study examines how various capital structure ratios affected the asset efficiency ratio (AER) of natural resource firms in Nigeria. To achieve this, our study employed the Fixed-Effects panel regression technique after establishing its suitability for the data through the Hausman test. The findings indicate that non-current leverage responds positively, albeit insignificantly, to the asset efficiency ratio of firms in the natural resources sector of Nigeria. Furthermore, our findings show that while current leverage significantly enhances the asset efficiency ratio of the natural resources sector, the gearing ratio significantly depletes the net returns of firms. This result suggests that corporate performance in the sector responds to, and is more sensitive to, leverage than to a blend of leverage and equity in its capital structure. The study concludes that current leverage significantly enhanced asset efficiency, but debt-to-equity impairs the net returns accruing to the assets of firms in the natural resources sector of Nigeria. Non-current leverage, though positive, does not independently drive asset efficiency of firms in the sector. Hence, the debt-to-equity mix needs to be moderated while maintaining current leverage levels to enhance asset productivity in the sector.

Recommendations

The study makes the following recommendations;

i. Natural resource firms should prioritize the use of short-term leverage to drive the efficiency of their assets. This will enable them to quickly adjust when commodity prices fluctuate, rather than being encumbered by non-current borrowing expense.
ii. They should moderate the use of the debt-equity mix in funding their operations, particularly due to incessant price fluctuations in resource prices. This will enable firms to avoid excessive fixed interest obligations and serious financial distress.

iii. Since long-term leverage is positive and insignificant, firms in the sector should use long-term leverage sparingly. This is because it exerts a benign effect on AER compared to higher borrowing expenses.

Reference

Abdulmumn, B. A., Kolawole, D. K., & Yunus, A. B. (2024). Enhancing corporate performances through debt financing: Evidence from Nigerian consumer good firms. *ACTA VSFS, 14*(1), 7-19.

Abel, A. B. (2015). *Optimum debt and profitability in the tradeoff theory.* Cambridge: National Bureau of Economics Research.

Agyei, J., Sun, S., & Abrokweh, E. (2020). Trade-off theory versus pecking order theory: Ghanaian evidence. *Sage Open*, 1-13.

Ahmed, A. M., Nugreha, D. P., & Hagen, E. (2023). The relationshp between capital structure & firm performace: The moderating role of agency costs. *Risks, 11*(6), 1-17. doi:10.3390/risks11060102

Ahmeda, F., Rahmab, U., Rehman, H. M., Imrand, M., Dunaye, A., & Hossainf, M. B. (2024). Corporate capital structure effect on corporate performace: Pursuing a strategy of innovations in manufacturing companies. *Heliyon, 10*. doi:10.1016/j.heliyon.2024.e24677

Al-Kahtani, N., & Al-Eraij, M. (2018). Does capital structure matters? Reflecting on capital structure irrelevance theory: Modiglini-Miller theorem (MM 1958). *International Journal of Financial Services Mgt., 9*(1), 39-46.

Alzub, K., & Bani-Han, A. (2021). Determinant of debt-to-equity and it impacts on the performance of industrial companies in Jordan . *Journal of Governance & Regulation, 10*(4), 353–364. doi:10.22495/jgrv10i4siart15

Aniefor, C. G., Nduka, A. I., Anawude, A. C., & Ezeku, C. N. (2021). Effects of capital structure on corporate performace: Evidence from agriculture firms quoted on the NGX (2007 – 2018). *JETMAS, 3*(1), 68-78. Retrieved from https://www.jetmase.com

Anozie, O. R., Muritala, T. A., Ininm, V. E., & Yisau, N. (2023). Impacts of cápital structure on financial performance of oil and gas firms in Nigeria. *Futures Business Journal, 9*(1), 1-9. doi:10.1186/s43093-023-00186-4

Arinfula, R., Amiń, H. I., Mensah, L., Gyamfi, B., & Obeng, H. A. (2025). Determining an optimal capital structure & it impact on financial performace. Insight from the firms listed on the New York Stock Exchange. *Cognent Econmic and Finance, 13*(1), 1-33.

Asaolu, A. A. (2021). Capital structure and firm performance: A comparative study of oil and gas and manufacturing sectors in the United States of America. *Business & Mgt Studies, 7*(1), 29-44.

Ayang, A., Emmanuel, N. C., Rosemry, I. H., Ndudi, U. C., & Samuel, U. E. (2021). Effect of capital structure on performace in Nigeria. *Universal Journal of Accounting & Finance, 9*(1), 15-23. doi:10.13189/ujaf.2021.090102

Blank, S. (2020). *The four steps to the epiphany: Successful strategies for products that win.* John Wiley & Sons.

Ibrahim, J., Adebayo, A. O., Olowookere, J. K., Adeyemi, A. Z., & Oladejo, T. M. (2023). Firm Structural attributes and capital structure adjustments among listed manufacturing firms in Nigeria using static and dynamic approaches. *FUDMA Journal of Accounting and Finance Research,* 1(3), 52 – 63.

Kantudu, A. S., Kurawa, J. M., & Garba, M. S. (2026). Impact of capital structure on financial performance of listed consumer goods companies in Nigeria. *FUDMA Journal of Accounting and Finance Research,* 4(1),141-152

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance, 39*(3), 574-592.

Ngwu, E. C., & Kalu, C. U. (2017). Natural resource governance and Nigeria's deelopment quagmire: A reprobate perspective. *South East Political Science Review, 1*(1), 159-172.

Nigeria Exchange Group (NGX). (2026). *Listed Companies.* Abuja: Nigeria Exchange Group (NGX).

Obi, E. V. (2025). *FG Inaugurates Oil And Gas Sector Strategic Plan Development Committee.* Ministry of Petroleum Resources. Abuja: Ministry of Petroleum Resources.

Opoku-Asante, K., Win, E. C., Sharifadeh, M., & Neubert, M. (2022). The Relationship between capital structure and financial performance of firms in Ghana and Nigeria. *European Journal of Business and Management Research, 7*(1), 236-244. doi:10.24018/ejbmr.2022.7.1.1282

Udobi-Owoloja, I., Gbajumo-Sheriff, M. A., Umoru, B., Babatunde, S. A., & Ilimezehe, D. (2020). Capital structure and firm's profitability: Evidence from listed consumer goods sector in Nigeria. *Journal of Accounting, Business & Finance Research , 8*(4), 146-152,. doi:10.20448/2002.84.146.152