

EFFECT OF FIRM'S TANGIBILITY ON THE FINANCIAL PERFORMANCE OF ACCESS BANK OF NIGERIA PLC

Isiaka Ahmed Bala, Hamza Muhammad, Muhammad Shafii and Mohammed Yanda Alfa

Department of Business Administration and Management, The Federal Polytechnic Bida. Niger State. Nigeria
ishaqbala82@gmail.com

ABSTRACT

Tangibility is a critical determinant of firm performance because fixed assets enhance collateral value, support borrowing capacity, and influence operational scalability, particularly in capital-intensive sectors such as banking. This study investigated the effect of a firm's tangibility on the financial performance of Access Bank Nigeria Plc from 2013 to 2025 to assess the effect of tangibility on financial performance, measured by Return on Assets (ROA), Return on Equity (ROE), and Total Assets. The study employed time-series data involving 13 annual observations. Tangibility was measured by the ratio of non-current assets to total assets utilizing an ex-post facto research design. Ordinary Least Squares (OLS) regression and diagnostic tests were conducted to ensure result robustness. The results indicated that the impact of firm tangibility on the financial performance of Access Bank Nigeria Plc is minimal and statistically insignificant. This suggests that the bank's investment in fixed assets does not lead to increased returns. It is recommended that the bank focuses on maximizing intangible resources, advancing technological skills, and boosting operational effectiveness instead of increasing investments in fixed physical assets.

Keywords: Financial Performance, Tangibility, Firms, Return on Assets, Return on Equity.

INTRODUCTION

Tangibility is an increasingly researched area in business and corporate finance due to its relationship with the financial performance of firms (Boasiako et al., 2022; Docherty et al., 2010). Both tangible and intangible resources are crucial to a company's financial performance. Tangibility is defined as a component of a company's fixed assets, including land, buildings, and equipment, in relation to total assets (Almeida & Campello, 2018; Rajan & Zingales, 1995). These assets facilitate production activities and enhance borrowing capacity. Financial performance, typically measured as Return on Equity (ROE) and Return on Assets (ROA), reflects a company's capacity to achieve operational objectives.

A company is deemed competitive if it effectively manages both intangible and tangible assets (Herciu et al., 2012). Tangible assets are easier to collateralize, reducing losses during bankruptcy. In Nigeria, initiatives to create favorable business environments have led to varied financial outcomes (Irungu et al., 2018). Some researchers contend there is a significant negative correlation between tangibility and financial performance (Aamir & Muhammad, 2021).

This study is supported by the Resource-Based View (RBV), propounded by Birger (1984) and popularized by

Barney (1991). The RBV posits that corporate resources play a major role in creating a competitive edge. Physical assets are strategic resources used to improve operational capabilities. Furthermore, tangible assets allow firms to borrow at lower costs (İltaş & Demirgüneş, 2020). However, large investments in tangible assets may reduce innovation and flexibility, particularly in service-oriented industries like banking (Deng, et al., 2021).

As the world shifts toward knowledge-based economies, emphasis is placed on intangible assets such as R & D, human resources, and brand value (Intara & Suwansin, 2024). Recent research suggests intangible assets favorably impact financial performance (Ebe et al., 2023; Jo & Nugroho, 2025; Nguyen-Anh et al., 2022; Piekola, 2024; Wang et al., 2022).

The examination of the effect of firm tangibility on the financial performance of Access Bank Plc is theoretically and empirically justified due to the bank's strategic position within the Nigerian banking industry and its substantial investment in tangible assets. Access Bank is among the largest Deposit Money Banks in Nigeria, with extensive investments in physical infrastructure, including branch network expansion, information technology systems, and digital banking facilities that support its operational efficiency and service delivery structure (Access Bank Plc, 2025).

From a financial theory perspective, tangibility is a critical determinant of firm performance because fixed assets enhance collateral value, support borrowing capacity, and influence operational scalability, particularly in capital-intensive sectors such as banking (Barney, 1991; Wernerfelt, 1984).

However, despite the strategic importance of tangible assets, empirical investigation into their effect on financial performance remains necessary because such investments may exert both positive and negative effects on profitability. On one hand, tangible assets can improve operational efficiency, customer service delivery, and long-term revenue generation (Mubyarto, 2020; Ramadan et al., 2022). On the other hand, excessive investment in fixed assets may reduce financial flexibility and profitability due to high depreciation charges, maintenance costs, and reduced liquidity positions (Tandra & Tjakrawala, 2020). This dual effect underscores the need for context-specific empirical analysis within the Nigerian banking environment.

The Nigerian banking sector is characterized by macroeconomic volatility, including persistent inflationary pressures, exchange rate fluctuations, and regulatory constraints imposed by the Central Bank of Nigeria. These conditions significantly affect asset utilization efficiency and financial performance outcomes of deposit money banks (Adekola & Obansa, 2017; Ajao & Akindele, 2020; Emecheta, & Ibe, 2014; Ogunleye & Adeleke, 2021; Owolabi & Adegbite, 2018; Sanusi, 2019). In such an unstable environment, the role of tangible assets becomes more complex, as banks must balance infrastructure expansion with liquidity management and profitability optimization.

In addition, recent corporate developments show that Access Bank Plc has actively pursued expansion through strategic acquisitions, including the acquisition of certain banking assets from Standard Chartered in countries such as Tanzania and Gambia. These cross-border expansion strategies have significantly strengthened the bank's asset

base and regional presence, while also increasing its exposure to diverse economic environments (Access Bank Plc, 2025). Such developments further reinforce the need to examine whether the expansion of tangible asset holdings translates into improved financial performance or introduces additional cost burdens. Therefore, investigating the effect of firm tangibility on the financial performance of Access Bank Plc is both timely and essential, as it provides empirical insight into how asset structure influences financial performance, in a rapidly evolving banking sector.

METHODOLOGY

The study employed a quantitative time series research design to examine how Access Bank Nigeria Plc's tangibility affected its financial performance from 2013 to 2025. A time series data is employed because it is thought to be appropriate for a single business observation, which allows for the examination of dynamic changes in financial performance as well as specific organizational characteristics (Stella and Eno 2024; Colma & Tale 2024). The study employed secondary data that was taken from 13 sets of annual observations found in Access Bank Nigeria Plc's audited annual reports and financial statement. That the sample size is rather small, is due to the fact that company time series investigations frequently function within associated inadequacies and that econometric estimate and diagnostic testing are used to achieve technique reliability.

To reduce omitted variable bias and improve model robustness, the following control variables were included: Firm Size (SIZE): natural logarithm of total assets, Financial Leverage (LEV): total debt divided by total assets and Inflation (INF): annual inflation rate (%). These variables are commonly used in corporate finance literature to control for macroeconomic and firm-specific influences on performance (Coad, et al., 2013; Majumdar, 1997).

Measurement and Operationalization of Variables.

The study employs ordinary least squares regression models of ROE and ROA as follows:

$$ROE_{it} = \beta_0 + \beta_1 TANG_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 INF_{it} + \epsilon_{it} \quad (1)$$

$$ROA_{it} = \beta_0 + \beta_1 TANG_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 INF_{it} + \epsilon_{it} \quad (2)$$

$$\text{Log}(\text{Total Assets}_{it}) = \beta_0 + \beta_1 \text{TANG}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{INF}_{it} + \epsilon_{it} \quad (3)$$

The following are the measurement of the variables as they were used in the study.

Dependent variables:

ROA = Return on Assets (Financial Performance)

ROE = Return on Equity (Financial Performance)

TOTAL ASSETS = logarithm of total assets (Financial Performance)

Independent variables:

TANG = Tangibility

β_0 = Expected value on ROE and ROA

SIZE_t = Firm size

LEV_t = Financial leverage

INF_t = Inflation rate

ϵ_t = stochastic error term

Table 1. Descriptive Statistics of Tangibility, Financial Performance Indicators, and Firm Size of Access Bank Nigeria Plc. (2013–2025)

S/N	Years	Tangibility = Fixed Assets/Total Assets (Tang)	ROE = PAT/Total Equity	ROA = PAT/Total Assets	Firms Size = Log of Total Asset (sz)
1	2013	0.0394	0.1488	0.0213	1,704,094,012
2	2014	0.03515	0.1599	0.02168	1,981,955,730
3	2015	0.03041	0.0482	0.0272	2,411,944,061
4	2016	0.0272	0.1572	0.0231	3,094,960,515
5	2017	0.02779	0.1103	0.01467	3,499,583,979
6	2018	0.2228	0.16696	0.0185	3,968,114,609
7	2019	0.0299	0.1299	0.01111	6,307,588,216
8	2020	0.0252	0.1224	0.01049	7,624,979,718
9	2021	0.020089	0.1300	0.0115	9,660,760,559
10	2022	0.01955	0.1559	0.0133	12,535,280
11	2023	0.01344	0.3497	0.0259	20,649,112
12	2024	0.01937	0.0765	0.0059	27,681,603
13	2025	0.02075	0.0582	0.0045	25,435,262

Source: Annual reports, 2025.

Table1 clearly depicts various figures obtained from Access Bank's Annual reports for both firm's Tangibility

(IV) and Financial Performance (DV) used in this research work.

Table 2. Operational Definition of Variables, Measurement Proxies, and A Priori Expectations

S/N	VARIABLES	FORMULAR	VARIABLE (s)	APRIOPRI EXPECTATIONS
1	Total assets	Logarithm of Total Assets	Financial Performance (IV)	(Asad and Cheema, 2017;Purwohandoko,2017).
2	Return on Equity	Profit After tax/Total Equity	Financial Performance (IV)	(Irungu, <i>et al.</i> ,2018).
3	Return on Assets	Profit after Tax/Total Assets	Financial Performance (IV)	(Irungu, <i>et al.</i> ,2018).
3	Tangibility	Fixed Asset/Total Assets by 100	Tangibility (DV)	(Aamir, <i>et al.</i> ,2021; Irungu Muturi, <i>et al.</i> ,2018).

Table 2 shows measurement of variables. i.e. IV and DV as adapted by previous scholars such as Asad and

Cheema (2017); Purwohandoko (2017); Irungu *et al.* (2018) and Aamir, *et al.* (2021).

RESULTS AND DISCUSSION

Table: 3. Result of Analysis on Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on Equity (PAT/Total Equity)	13	.0482	.3497	.139535	.0743106
Return on Assets (PAT/Total Assets)	13	.0045	.0272	.016088	.0074061
LN of Total Assets	13	16.344	22.991	20.45262	2.558693
Tangibility (Fixed Assets/Total Assets)	13	.8671	.9788	.922792	.0287833
Valid N (listwise)	13				

This study examined the effect of firm tangibility on the financial performance of Access Bank Plc, using Return on Assets (ROA), Return on Equity (ROE), and the logarithm of total assets (LNTA) as indicators of financial performance. Firm tangibility was measured as the ratio of fixed assets to total assets. The descriptive statistics reveal that Access Bank Plc maintained a relatively high level of tangible assets, with an average tangibility ratio of 0.923 and a standard deviation of 0.029. The bank

recorded an average Return on Equity (ROE) of 0.140 with a standard deviation of 0.074, while Return on Assets (ROA) averaged 0.016 with a standard deviation of 0.007, indicating moderate profitability relative to shareholders' equity and total assets. Furthermore, the logarithm of total assets averaged 20.45 with a standard deviation of 2.56, reflecting substantial growth and accumulation of assets during the study period.

Table: 4. Correlations Analysis

		Tangibility (Fixed Assets/Total Assets)	Return on Equity (PAT/Total Equity)	Return on Assets (PAT/Total Assets)	LN of Total Assets
Tangibility (Fixed Assets/Total Assets)	Pearson Correlation	1	.086	.146	.060
	Sig. (2-tailed)		.781	.635	.845
	N	13	13	13	13
Return on Equity (PAT/Total Equity)	Pearson Correlation	.086	1	.480	-.209
	Sig. (2-tailed)	.781		.097	.493
	N	13	13	13	13
Return on Assets (PAT/Total Assets)	Pearson Correlation	.146	.480	1	.212
	Sig. (2-tailed)	.635	.097		.487
	N	13	13	13	13
LN of Total Assets	Pearson Correlation	.060	-.209	.212	1
	Sig. (2-tailed)	.845	.493	.487	
	N	13	13	13	13

The correlation analysis revealed weak positive relationships between firm tangibility and the selected indicators of financial performance, namely Return on Assets (ROA) ($r = 0.146$, $p = 0.635$), Return on Equity (ROE) ($r = 0.086$, $p = 0.781$), and total assets ($r = 0.060$, $p = 0.845$). These findings imply that increases in fixed

assets are associated with only marginal improvements in the financial performance of Access Bank Plc. However, the relationships were statistically insignificant, suggesting that firm tangibility does not significantly explain variations in the bank's financial performance indicators.

TABLE 5. Analysis on Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.146 ^a	.021	-.068	.0076531

a. Predictors: (Constant), Tangibility (Fixed Assets/Total Assets)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.000	1	.000	.238	.635 ^b
	Residual	.001	11	.000		
	Total	.001	12			

a. Dependent Variable: Return on Assets (PAT/Total Assets)

b. Predictors: (Constant), Tangibility (Fixed Assets/Total Assets)

Regression results reinforce the correlation findings.

Tangibility accounts for:

-2.1% of the variation in ROA ($R^2 = 0.021$, $F = 0.238$, $p = 0.635$)

0.7% of the variation in ROE ($R^2 = 0.007$, $F = 0.081$, $p = 0.781$)

0.4% of the variation in total assets ($R^2 = 0.004$, $F = 0.040$, $p = 0.845$)

The coefficients of tangibility are positive but not statistically significant in any model (ROA $\beta = 0.037$, $p = 0.635$; ROE $\beta = 0.221$, $p = 0.781$; Total Assets $\beta = 5.341$, $p = 0.845$), confirming that tangibility does not significantly influence the bank's financial performance.

The result shows that firm's tangibility has a weak and positive effect on the Return on Assets, Return on Equity and Total Assets of the bank and this is consistent with the following findings (Majumdar, 1997; Gleason, et al., 2000; Tian & Zeitun, 2007). These findings are however, the expected in the banking sector where non-physical resources like loan portfolios, technological infrastructure and human resources usually contribute more to profitability than tangible assets (Arianpoor, 2021; Villalonga, 2004; Jeet & Aspal, 2021). In contrast to manufacturing or industrial companies, which rely heavily on fixed assets for production (Margaritis & Psillaki, 2010; Zeitun & Tian, 2007; Simerly & Li, 2000), Banks primarily improve their performance through service quality, loan management, and operational effectiveness. The minor influence of tangibility suggests that Access Bank's allocation toward fixed assets does not result in proportionately greater returns on equity or total assets. Viewing this from a managerial angle, these findings imply that a strategic focus should be directed

toward maximizing intangible assets, boosting technological advancements, and refining operational processes rather than increasing investments in fixed assets.

The findings indicate that although tangibility is a critical component of the bank's assets, it does not significantly influence the Return on Assets, Return on Equity, and Total Assets of Access Bank Nigeria Plc. Future studies might investigate how intangible assets and technological advancements influence financial performance, particularly within the context of Nigeria's banking industry.

CONCLUSION AND RECOMMENDATIONS

The study investigated how the tangible assets of Access Bank Nigeria Plc influence its financial results. From 2013 to 2025, the descriptive analysis reveals that Access Bank consistently holds a significant amount of tangible assets, with a tangibility ratio averaging 0.923 ($SD = 0.029$). The return on equity (ROE) for the bank had an average of 0.140 ($SD = 0.074$), and the return on assets (ROA) averaged 0.016 ($SD = 0.007$), indicating a moderate level of profitability in terms of both equity and assets. The total assets, represented in logarithmic format, had an average of 20.45 ($SD = 2.56$), demonstrating considerable growth in asset accumulation throughout the period.

While, Correlation results indicate a weak, positive relationship between tangibility and financial performance indicators: ROA ($r = 0.146$, $p = 0.635$), ROE ($r = 0.086$, $p = 0.781$), and total assets ($r = 0.060$, $p = 0.845$). These coefficients signify that increases in fixed assets are only minimally associated with increase in

financial performance. Importantly, the relationships are not statistically significant, indicating that tangibility alone does not strongly explain variations in the bank's performance metrics.

Furthermore, the regression result also reinforces the correlation findings. Tangibility accounts for: 2.1% of the variation in ROA ($R^2 = 0.021$, $F = 0.238$, $p = 0.635$), 0.7% of the variation in ROE ($R^2 = 0.007$, $F = 0.081$, $p = 0.781$) and 0.4% of the variation in total assets ($R^2 = 0.004$, $F = 0.040$, $p = 0.845$)

The following are the summary of research findings:

1. Firm tangibility exerts a weak and statistically insignificant influence on the financial performance of Access Bank Plc.
2. The insignificant effect of firm tangibility on the financial performance of Access Bank Plc indicates that the bank's investment in fixed assets does not substantially contribute to improvements in return on assets (ROA), return on equity (ROE), or growth in total assets.

The following recommendations are proposed based on the findings of the study:

1. Access Bank Plc and other financial institutions should prioritize the optimization of intangible resources, technological capabilities, and operational efficiency rather than concentrating excessively on investments in fixed assets.
2. Intangible assets such as software technology, human capital, and loan portfolios exert a more significant influence on profitability and financial performance than tangible assets within the banking sector. Unlike manufacturing and industrial firms, which depend substantially on fixed assets for production activities, banks primarily enhance their performance through efficient service delivery, effective credit management, and operational efficiency.
3. Future research should examine the comparative effects of intangible resources and technological investments on financial performance, particularly within the Nigerian banking industry, in order to provide deeper empirical insights into the determinants of banking sector performance.

REFERENCES

Aamir, N., Azam, M., & Khalid, M. U. (2021). Debt Financing and Firm performance: Empirical evidence from the Pakistan Stock Exchange.

Asian Journal of Accounting Research, 6(3), 324–334. <https://doi.org/10.1108/AJAR-03-2019-0019>

Aamir, N., Muhammad, A., & Muhammad, U. K. (2021). Debt financing and firm Performance: evidence from the Pakistan Stock Exchange.6 (3), 324-334. DOI: [10.1108/AJAR-03-2019-0019](https://doi.org/10.1108/AJAR-03-2019-0019)

Access Bank Plc. (2025). *Corporate press releases and strategic expansion updates*. <https://www.accessbankplc.com/media/press-releases>

Access Holdings Plc. (2026). *Annual report and consolidated financial statements 2025*. <https://www.accessbankplc.com>

Adekola, A., & Obansa, S. A. J. (2017). *Inflation and bank performance in Nigeria: Evidence from selected deposit money banks*. *African Journal of Economic Review*, 5(2), 45–62.

Ajao, O. S., & Akindele, R. I. (2020). Exchange rate volatility and performance of commercial banks in Nigeria. **Journal of Banking and Financial Economics*, 8(1), 33– 49.

Almeida, H., & Campello, M. (2018). Asset tangibility, cash holdings, and financial development. *Journal of Corporate Finance*, 50, 223–242. <https://doi.org/10.1016/j.jcorpfin.2018.03.008>

Arianpoor, A. (2021). The impact of intangible assets on firm performance: Evidence from an emerging economy. *Iranian Journal of Accounting, Auditing & Finance*, 5(2), 61–77. <https://doi.org/10.22067/ijaaf.2021.40337>

Asad, H., & Cheema, F. K. (2017). An empirical assessment of the Q-factor model: Evidence from the Karachi Stock Exchange. *Lahore Journal of Economics*, 22(2), 117–138. <https://doi.org/10.35536/lje.2017.v22.i2.a5>

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.

- Birger, W. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180.
- Boasiako, K. A., Manu, S. A., & Antwi-Darko, N. Y. (2022). Does financing influence the sensitivity of cash and investment to asset tangibility? *International Review of Financial Analysis*, 80, 102055. <https://doi.org/10.1016/j.irfa.2022.102055>
- Coad, A., Segarra, A., & Teruel, M. (2013). Like milk or wine: Does firm performance improve with age? *Structural Change and Economic Dynamics*, 24, 173–189. <https://doi.org/10.1016/j.strueco.2012.07.005>
- Colma, E., & Tale, L. M. (2024). Firm characteristics and corporate social responsibility of listed consumer goods sector firms in Nigeria. *Global Journal of Arts, Humanities and Social Sciences*, 12(3), 63–76.
- Docherty, P., Chan, H., & Easton, S. (2010). Tangibility and investment irreversibility in asset pricing. *Accounting & Finance*, 50(4), 809–827. <https://doi.org/10.1111/j.1467629X.2010.00348.x>
- Deng, S., Mao, C. X., & Xia, C. (2021). Bank geographic diversification and corporate innovation: Evidence from the lending channel. *Journal of Financial and Quantitative Analysis*, 56(3), 1065–1096.
- Ebe, C. O., Salawu, R. O., & Agugum, T. A. (2023). IAS 38 intangible assets and firm performance: Empirical evidence from selected consumer goods manufacturing companies listed in Nigeria. *International Journal of Innovative Research and Scientific Studies*, 6(3), 620–631. <https://doi.org/10.53894/ijirss.v6i3.1607>
- Emecheta, C., & Ibe, R. C. (2014). Impact of macroeconomic variables on bank performance in Nigeria. *International Journal of Finance and Accounting*, 3(6), 288–300.
- Gleason, K. C., Mathur, L. K., & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *Journal of Business Research*, 50(2), 185–191.
- Herciu, M., Ogorean, C., & Belascu, L. (2012). Leveraging tangible and intangible assets by using a possible firm competitiveness index. *Global Business and Economics Review*, 14(1/2), 115–124.
- Intara, P., & Suwansin, N. (2024). Intangible assets, firm value, and performance: Does intangible-intensive matter? *Cogent Economics & Finance*, 12(1), 2375341. <https://doi.org/10.1080/23322039.2024.2375341>
- İltaş, Y., & Demirgüneş, K. (2020). The effect of asset tangibility on financial performance. *Journal of Business and Economic Research*, 4(1), 12–25.
- Irungu, A. M., Muturi, W., Nasieku, T., & Ngumi, P. M. (2018). Effect of asset tangibility on financial performance of listed firms in the Nairobi Securities Exchange. *Journal of Finance & Accounting*, 2(3), 55–74.
- Jeet, V., & Aspal, P. K. (2021). Empirical relationship of company's intangible resources and corporate financial performance: A panel data approach. *Universal Journal of Accounting and Finance*, 9(6), 1533–1543. <https://doi.org/10.13189/ujaf.2021.090630>
- Jo, A. A., & Nugroho, V. C. (2025). The impact of intangible assets on firm value and performance: Evidence from Asia-Pacific information technology companies. *Journal Ilmiah Manajemen Bisnis dan Inovasi*, 12(3). <https://doi.org/10.35794/jmbi.v12i3.64997>
- Majumdar, S. K. (1997). The impact of size and age on firm-level performance: Some evidence from India. *Review of Industrial Organization*, 12, 231–241.
- Margaritis, D., & Psillaki, M. (2010). Capital structure,

- equity ownership and firm performance. *Journal of Banking & Finance*, 34(3), 621–632.
- Mubyarto, N. (2020). Profitability, capital structure and firm value: Evidence from listed firms. *Journal of Finance Studies*.
- Nguyen-Anh, T., Chinh, H. D., Nguyen-Thi-Thuy, L., Vu-Tien, V., Nguyen-Dinh, U., & To-The, N. (2022). Do intangible assets stimulate firm performance? *Journal of Innovation & Knowledge*, 7(3), 100194. <https://doi.org/10.1016/j.jik.2022.100194>
- Ogunleye, T. S., & Adeleke, A. O. (2021). Central Bank of Nigeria regulations and lending behavior of deposit money banks. *Nigerian Journal of Banking and Finance*, 13(1), 77–92.
- Owolabi, S. A., & Adegbite, T. A. (2018). Inflationary pressure and financial performance of deposit money banks in Nigeria. *Asian Journal of Economics, Business and Accounting*, 7(3), 1–12.
- Piekkola, H. (2024). Organizational capital, allocation of intangibles, and firm performance. In *Intangible Assets, Productivity and Economic Growth*. Routledge.
- Purwohandoko (2017). The influence of firm's size, growth, and profitability on firm value with capital structure as the mediator: A study on the agricultural firms listed in the Indonesian Stock Exchange. *International Journal of Economics and Finance*, 9(8), 103–110. <https://doi.org/10.5539/ijef.v9n8p103>
- Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, 50(5), 1421–1460.
- Ramadhan, A., et al. (2022). Tangible assets and firm value: Evidence from emerging economies. *International Journal of Accounting and Economics Studies*.
- Sanusi, K. A. (2019). Exchange rate fluctuations and banking sector stability in Nigeria. *Journal of Monetary and Economic Integration*, 12(4), 55–70.
- Simerly, R. L., & Li, M. (2000). Environmental dynamism, capital structure and performance. *Strategic Management Journal*, 21(1), 31–49.
- Stella, T. E., & Eno, G. U. (2024). Firm characteristics and financial leverage of listed industrial goods firms in Nigeria. *Iconic Research and Engineering Journal*, 7(7), 295–311.
- Tandra, O., & Tjakrawala, F. X. K. (2020). The effect of firm size, profitability, tangibility, liquidity, and growth on capital structure of manufacturing firms listed on the Indonesia Stock Exchange. *International Journal of Business Studies*, 4(2), 67–78.
- Tian, G. G., & Zeitun, R. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal*, 1(4), 40–61.
- Villalonga, B. (2004). Intangible resources, Tobin's q, and sustainability of performance differences. *Journal of Economic Behavior & Organization*, 54(2), 205–230.
- Wang, X., Wang, D., Shah, S. G. M., Draghici, A., & Taucean, V. (2022). Do intangible assets provide corporate resilience? *Economic Modelling*, 110, 105806. <https://doi.org/10.1016/j.econmod.2022.105806>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>.
- Zeitun, R., & Tian, G. G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal*, 1(4), 40–61.