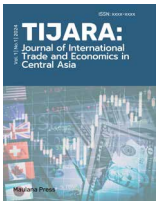

Tijara: Journal of International Trade and Economics in Central Asia

Vol. 1 No. 1 2025

ISSN: xxxx-xxxx

Website : https://maulanapress.com/index.php/tijara

Financial performance indicators and market value of listed firms

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Article information

DOI : xxx

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Submission Track

Submission : February 14, 2025
Final Review : February 28, 2025
Accepted : March 2, 2025
Available online : April 5, 2025

Keywords

Earnings per share, market value, financial performance, panel data regression, efficient market hypothesis, Ohlson Valuation Theory

Abstract

This study examined how financial performance indicators affect the market value of listed manufacturing firms in Nigeria, using an ex-post facto research design. Panel data regression was applied to secondary data from 40 purposively and randomly selected firms listed on the Nigerian Exchange (2015–2024). The dependent variable, market value, was modeled against five explanatory variables: Tobin's Q, Return on Assets, Return on Equity, Earnings Per Share, and Firm Size. The model achieved an R-squared value of 0.3734, indicating that 37.34% of the variation in market value was explained by the predictors. The overall model was statistically significant, with a Wald chi-square of 88.19 ($p < 0.01$), confirming the joint explanatory power of the regressors. EPS emerged as the most significant determinant ($\beta = 0.6055$, $p < 0.01$), supporting the signaling theory that earnings positively influence investor perception. Tobin's Q also showed a significant positive relationship with market value ($\beta = 0.6322$, $p = 0.016$), underscoring the role of growth opportunities in market valuation. Firm Size was positively significant ($\beta = 3.9726$, $p = 0.008$), suggesting that larger firms tend to attract higher market valuation. Return on Assets had a negative but marginally significant effect ($\beta = –0.0301$, $p = 0.081$), while Return on Equity was statistically insignificant ($\beta = 0.0052$, $p = 0.657$). The study recommended improved earnings management, strategic scaling of firm size, and reevaluation of traditional performance metrics in valuation models to better align with investor expectations and enhance market-based value.

INTRODUCTION

In recent years, financial performance indicators have gained prominence as critical determinants of firm valuation across both advanced and developing economies. Within transitional markets such as Nigeria, listed manufacturing firms have become focal points for understanding how market value responds to core financial metrics like Tobin's Q, Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS). Firm market value extends beyond mere accounting figures; it acts as a barometer for investor sentiment, strategic potential, operational credibility, and financial stability (Fama, 1970; Ohlson, 1995).

Tobin's Q, defined as the ratio of a firm's market value to the replacement cost of its assets, is widely considered a robust and forward-looking indicator of firm valuation. It integrates market-based assessments with underlying asset efficiency, making it especially relevant in economies where traditional accounting metrics may fall short. Tobin's Q captures investor expectations and the perceived ability of firms to generate intangible value beyond physical capital. In the context of the Nigerian manufacturing sector (marked by exchange rate volatility, structural inefficiencies, and periodic regulatory shifts) Tobin's Q offers a refined lens for

understanding fluctuations in firm valuation (Ajibola, 2025; Oke & Ajeigbe, 2024).

Accounting-based indicators such as ROA and ROE remain essential tools for assessing firm profitability and operational performance. ROA measures a company's capacity to convert asset investment into net earnings, offering insight into internal efficiency and management effectiveness (Aisyah & Utama, 2024). ROE, by contrast, focuses on returns to shareholders, indicating how well a firm leverages its equity base to generate profits (Irdiana, 2021). Although both indicators are widely used in valuation models, their empirical impact on market value appears inconsistent across different sectors and institutional contexts. Some studies (Agbata et al., 2021; Alvian & Munandar, 2022) highlight strong positive relationships between profitability and valuation, while others (Arhinful & Radmehr, 2023; Onah, 2025) suggest that external factors—such as policy interventions, debt burden, and industry-specific risks—moderate these associations.

Earnings per Share (EPS) is another critical performance indicator, commonly used by equity analysts and investors to assess firm profitability on a per-share basis. Ohlson (1995) underscored EPS as a vital predictor of firm value, particularly due to its implications for shareholder returns and dividend expectations. Although empirical findings in more mature markets affirm a strong linkage between EPS and valuation (Jihadi et al., 2021; Margono & Gantino, 2021), the Nigerian manufacturing sector poses unique challenges. Issues such as inconsistent disclosure, earnings manipulation, and weak regulatory enforcement (Healy & Wahlen, 1999) limit the reliability of EPS and call for more contextual analysis.

Firm size also plays an important role in shaping valuation. Larger firms typically enjoy greater market visibility, better access to financing, and operational economies of scale, all of which can amplify the market's responsiveness to performance metrics (Irdiana, 2021; Orazalin et al., 2024). In contrast, smaller firms often face valuation penalties due to perceived risks and limited transparency (Gautam & Bangshi, 2024; Alhassan & Islam, 2021).

The market value of firms serves as a critical indicator of investor perception, operational performance, and long-term corporate viability. In Nigeria's manufacturing sector (characterized by macroeconomic uncertainty, exchange rate volatility, and structural inefficiencies) understanding which financial indicators meaningfully influence market valuation is both essential and complex. Although extensive research has explored the relationship between financial performance and firm value, empirical findings remain inconsistent and highly context-dependent. Tobin's Q has emerged as a prominent market-based proxy for firm value (Ajibola, 2025), yet its sensitivity to traditional accounting measures like Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS) is still debated. While studies such as Firdaus et al. (2020), Agbata et al. (2021), and Hertina et al. (2021) report significant positive relationships between profitability ratios and firm valuation, others like Okeke et al. (2021) and Ayange et al. (2021) observe weak or statistically insignificant links, particularly within the Nigerian manufacturing landscape.

EPS, often regarded as a crucial metric by investors, also presents mixed empirical evidence in emerging markets. Its reliability is frequently undermined by earnings management practices and inconsistent financial disclosures (Healy & Wahlen, 1999; Nwachukwu et al., 2025). These issues raise questions about the credibility of EPS as a standalone indicator of market value, especially in sectors prone to regulatory fluctuations and volatile cost structures.

While the Efficient Market Hypothesis (Fama, 1970) posits that stock prices reflect all available information, Nigeria's semi-strong market efficiency implies that firm-specific characteristics may still drive valuation outcomes (Edori & Egileoniso, 2024). This divergence across studies and market conditions underscores the need for more targeted, sector-specific

analysis.

The primary aim of this study is to investigate the impact of key financial performance indicators on the market value of listed manufacturing firms in Nigeria. Specifically, the study seeks to evaluate how Tobin's Q, Return on Assets (ROA), Return on Equity (ROE), and Earnings per Share (EPS) influence the market value of these firms. By examining each of these indicators, the study aims to determine the degree to which they affect the market value of listed manufacturing firms in Nigeria, providing valuable insights into the relationship between financial performance and firm valuation in this sector.

LITERATURE REVIEW

Tobin's Q and Market Value

Tobin's Q, defined as the ratio of a firm's market value to the replacement cost of its assets, serves as a crucial indicator of firm valuation and investment efficiency. A Tobin's Q greater than one implies that the market values the firm above the cost of its physical assets, signaling investor optimism and expectations of strong future performance. Unlike traditional accounting ratios, Tobin's Q captures intangible factors such as innovation, brand strength, and managerial competence, making it particularly relevant in assessing long-term value (Ohlson, 1995).

In emerging markets like Nigeria, where transparency and information flow may be limited, Tobin's Q provides a forward-looking perspective on firm valuation. Ajibola (2025) found a positive link between corporate governance and Tobin's Q in Nigerian banks, highlighting its role in signaling effective management practices. Oke et al. (2024) further reinforced Tobin's Q's predictive value when integrated with accounting indicators. Moreover, Orazalin et al. (2024) observed that environmental and sustainability initiatives enhance Tobin's Q, reflecting evolving investor preferences toward ESG factors. Okeke, Ezejiofor, and Okoye (2021) also noted that Tobin's Q is more sensitive in transparent, growth-oriented industries like manufacturing and energy.

H_{01}: *Tobin's Q has no significant influence on the market value of listed manufacturing firms in Nigeria.*

Return on Assets (ROA) and Market Value

Return on Assets (ROA) is a core profitability metric that evaluates a firm's ability to efficiently convert its total assets into net income. As a measure of internal operational effectiveness, ROA provides insights into how well a firm utilizes its resources to generate earnings. Theoretically, a higher ROA signals robust financial health and is expected to enhance investor confidence and firm valuation (Azaro, Djajanto & Sari, 2020).

In the Nigerian context, the relationship between ROA and market value has produced mixed empirical outcomes. For instance, Ebimobowei, Uche, and Young-Arney (2021) found a significant positive link between ROA and market price volatility in consumer goods firms, suggesting that asset-based profitability influences investor sentiment. Firdaus et al. (2020) also affirmed ROA's positive effect on firm value within the manufacturing sector.

However, other findings offer a contrasting view. Edori and Egileoniso (2024) reported that ROA had no significant effect on stock price changes among service firms, attributing this to market inefficiencies and limited financial transparency. Additionally, Azaro et al. (2020) argued that when firm size and book-to-market ratios are considered, ROA's impact weakens. Bahodirovich (2024) further observed that capital intensity and high leverage can distort ROA values. Thus, while ROA is a crucial indicator of firm performance, its effect on market value is shaped by firm-specific characteristics and broader macroeconomic conditions.

H_{02}: *Return on Assets (ROA) has no significant influence on the market value of listed manufacturing firms in Nigeria.*

Return on Equity (ROE) and Market Value

Return on Equity (ROE) is a key profitability ratio that assesses a firm's ability to generate net income from shareholders' equity. It captures how efficiently management utilizes equity capital to create earnings and is widely considered a measure of financial performance and value creation. Theoretically, a higher ROE signals strong internal efficiency and can enhance investor confidence, leading to increased market valuation (Fama, 1970).

Empirical studies, however, present mixed findings, particularly in emerging markets like Nigeria. Okeke, Ezejiofor, and Okoye (2021) reported a positive but statistically weak association between ROE and stock prices, suggesting that external influences—such as dividend policy and market perception—moderate the relationship. Hertina et al. (2021) highlighted that macroeconomic instability, including inflation and exchange rate volatility, often weakens the impact of ROE on firm valuation.

Conversely, Fasua et al. (2021) and Nwachukwu, Ugwu, and Agbo (2025) found that ROE significantly affects firm value, especially when used alongside other indicators like EPS and ROA. Munir, Akram, and Abbas (2024) also observed a positive link in construction and real estate sectors. However, Azaro et al. (2020) and Bahodirovich (2024) caution that high leverage can distort ROE, inflating returns without operational gains. Therefore, ROE's value in predicting market performance depends on firm context and financial structure.

H_{03}: *Return on Equity (ROE) has no significant influence on the market value of listed manufacturing firms in Nigeria.*

Earnings Per Share (EPS) and Market Value

Earnings Per Share (EPS) is a key profitability metric that reflects a company's net earnings attributable to each outstanding share, offering crucial insight into its value-generating capacity. In efficient markets, a higher EPS typically signals improved performance, leading to increased investor confidence and higher stock prices (Fama, 1970). Empirical studies support this notion across different contexts. Susanti, Samara, and Hakim (2022) found a strong positive relationship between EPS and firm value in Indonesia, while Uchenna and Osuji (2020) identified EPS as a major determinant of share price stability among high-cap firms in Nigeria. Similarly, Purnomo (2018) confirmed EPS's significant effect within the energy sector, emphasizing industry-specific relevance. Nwachukwu et al. (2025) further affirmed EPS's predictive strength, even alongside other financial ratios like ROA and debt-equity. Although EPS is a reliable indicator of market value, its effectiveness can be moderated by capital structure, firm size, and sectoral variations.

H_{04}: *Earnings per Share (EPS) has no significant effect on the market value of listed manufacturing firms in Nigeria.*

Firm Size as a Control Variable

Firm size is a critical control variable in explaining variations in stock prices and market value, as it often reflects a company's operational capacity, stability, and investor confidence. Larger firms typically enjoy economies of scale, greater access to capital, and broader market reach, which can enhance their market valuation and mitigate stock price volatility (Fama, 1970; Azaro, et al. 2020; Sinebe, 2021). Aggreh, Nworie and Abiahu, (2022) highlight that firm size significantly moderates the effect of financial ratios on stock price volatility. Similarly, Ayange, et al. (2021).) reveal that company size influences earnings performance, thereby indirectly impacting investor perception and share price. Berkman, Jona and Soderstrom, (2024) also note that firms with larger market capitalization experience less price fluctuation

due to stronger investor confidence. Thus, controlling for firm size is essential in isolating the true effects of financial performance indicators like ROA, ROE, and EPS on market value and stock performance.

Theoretical Review (Efficient Market Hypothesis (EMH) and Ohlson's Valuation Model)

This study is grounded in two foundational theories that explain firm valuation within financial economics: the Efficient Market Hypothesis (EMH) and the Ohlson Valuation Theory (1995). The EMH, advanced by Fama (1970), posits that stock prices reflect all publicly available information, making market value a reliable indicator of firm performance. Within this framework, financial indicators such as Tobin's Q, ROA, ROE, and EPS should be quickly absorbed into stock prices, enabling investors to make informed decisions. However, in emerging markets like Nigeria, persistent inefficiencies—such as weak disclosure standards, limited liquidity, and asymmetric information—can weaken the reliability of these indicators in predicting firm value (Ozili & Ndah, 2024; Opoku-Asante et al., 2022).

Conversely, Ohlson's (1995) valuation model offers an accounting-based approach, emphasizing the role of earnings, book value, and dividends in determining stock prices. It underscores the significance of firm fundamentals, particularly EPS, in explaining variations in market valuation. Studies such as Oke et al. (2024) validate this model's applicability in contexts like Nigeria, where market speculation is less dominant. Together, both theories provide a balanced lens—market-based and accounting-based—for evaluating the relationship between financial performance indicators and firm value.

Empirical Review

Purnomo (2018) examined the predictive impact of financial ratios—profit margin, financial leverage, current ratio, and quick ratio—on financial distress, a condition often preceding bankruptcy. Utilizing SPSS 17.0 for analysis, the study found strong positive correlations between the variables and financial distress: R = 0.933 in 2008 and R = 0.582 in 2009, indicating substantial predictive strength. The F-test values—40.962 in 2008 and 13.839 in 2009—exceeded the critical threshold of 2.922, confirming statistical significance. These results demonstrate that the selected financial ratios jointly and significantly influence financial distress, making them effective tools for early detection and informed financial intervention strategies.

Otekunrin et al. (2018) investigated the link between financial ratio analysis and share prices of selected quoted agriculture and agro-allied firms in Nigeria after adopting International Financial Reporting Standards (IFRS) from 2012 to 2016. Filling a gap left by studies based on Nigerian Accounting Standards, the research utilized multiple regression on data from financial statements. Key ratios analyzed included EPS, Net Assets per Share, Liquidity Ratio, Debt Ratio, ROA, and ROE. Results showed that EPS, Net Assets per Share, Debt Ratio, and ROA had significant positive effects on share prices, while Liquidity Ratio and ROE were statistically insignificant, underscoring selective ratio relevance.

Sinebe (2021) conducted a retrospective study examining the effects of Return on Assets (ROA), Firm Size (FS), and Age of Firm (AoF) on the capital structure of Nigerian banks before sector reforms. Using data from 14 listed banks over 2006–2016 and applying an ex-post facto design with OLS regression, the study found that equity financing had a positive impact on financial performance (ROA) of Deposit Money Banks (DMBs), while both short-term and long-term debts lacked significant influence. The study recommends a balanced capital structure incorporating equity and debt. For limited liability banks, an optimal mix should include equity and long-term debt instruments.

Gautam et al. (2024) examined how leverage, asset growth, market capitalization, and firm

age influence the profitability of Nepalese commercial banks. Utilizing data from 11 banks over 2012/13–2021/22 (110 observations), the study employed correlation and regression analyses with ROA and ROE as dependent variables. Results indicated that debt-to-equity, debt-to-assets, and short-term debt ratios positively affect ROE but negatively impact ROA. Long-term debt and asset growth negatively influenced both ROA and ROE, suggesting reduced profitability from excessive debt and rapid expansion. Market capitalization positively impacted ROA, while firm age improved both profitability measures, highlighting the performance advantage of older, established banks.

Edori et al. (2024) investigated how financial performance influences investment decisions among investors and stockbrokers in Nigeria. Grounded in the positivist paradigm, the study employed a survey design with purposive sampling, gathering responses from 172 participants. Pearson correlation analysis revealed that financial indicators—ROI, ROE, ROA, and NPM—significantly affect investment decisions, with p-values of 0.004, 0.000, 0.000, and 0.002, respectively. Strong positive correlations were noted, especially for ROI (0.868) and ROE (0.822), followed by ROA (0.780) and NPM (0.644). The study recommends enhancing ROI and ROE, asset efficiency, and cost control, concluding that solid financial performance drives investor choices in Nigeria's capital market.

Balami and Koirala (2024) explored the relationship between capital structure and profitability, assessing the moderating role of firm size. Employing multiple regression and dummy variable analysis, the study found that capital structure has little to no effect on return on equity (ROE). However, debt ratio significantly and positively influenced return on assets (ROA), while the debt-to-equity ratio had a significant negative impact on ROA. Firm size did not moderate the capital structure-profitability relationship. Though lacking a unified theory, the study offers empirical insight into how different capital structure components affect profitability and calls for further research to deepen understanding.

Munir et al. (2024) examined factors influencing stock prices in Pakistan's non-financial sectors, analyzing 100 listed firms on the Pakistan Stock Exchange. The study focused on dividend metrics and financial performance indicators, revealing a negative relationship between dividend yield and stock prices—implying that high yields may signal risk or low growth. Conversely, a positive link between dividend payout ratio and stock prices suggests that stable, generous dividends attract investors. Profit after tax and earnings per share significantly influence investor sentiment, while return on equity showed no notable effect. The study offers insights into how dividend policies and financial performance shape stock price behavior.

Okoye and Idodo (2025) examined the influence of asset management on firm value among listed oil and gas firms in Nigeria, using Tobin's Q as a performance indicator. Analyzing data from nine firms between 2014 and 2023 through regression analysis, the study assessed the effects of current, fixed, and total asset turnover ratios. Findings revealed that current and fixed asset turnovers positively, though insignificantly, influence firm value, while total asset turnover shows a negative but also insignificant effect. The study concludes that asset efficiency has limited statistical impact on value in this sector and recommends enhancing current asset management and optimizing working capital.

Nwachukwu et al. (2025) explored the effect of earnings predictability on stock prices in Nigeria's food and beverage manufacturing sector. Employing an ex-post facto design, the study analyzed data from eight randomly selected listed firms between 2014 and 2023. Using multiple regression, results showed that Dividend per Share (DPS) ($r = 0.565856$; $p < 0.05$) and Return on Assets (ROA) ($r = 0.766455$; $p < 0.05$) both significantly influence stock prices. This indicates that steady dividend payouts reflect financial stability, while high ROA signals strong

earnings potential. The study recommends consistent dividend policies and efficient asset management to boost investor confidence and drive stock price growth.

Although numerous studies have examined the link between financial performance indicators and market value, most have focused on single variables or specific sectors, often overlooking the combined influence of key profitability measures—ROA, ROE, EPS, and Tobin's Q—in a unified framework. Additionally, much of the existing research is concentrated in developed markets, with limited attention to emerging economies like Nigeria, where market inefficiencies and volatility may affect these relationships. Few studies also account for firm heterogeneity using control variables like firm size. This study fills these gaps by analyzing the integrated effect of financial indicators on market value in Nigerian manufacturing firms, incorporating firm size for robustness.

METHODOLOGY

The study employed an ex-post facto research design and panel data regression analysis, using secondary data from 40 purposively and randomly selected listed manufacturing firms on the Nigerian Exchange with complete, continuous data. The analysis covered a ten-year period, spanning from 2015 to 2024. This approach allowed for a comprehensive examination of firm-specific variables over time, facilitating a robust assessment of trends and relationships within the manufacturing sector. The use of panel data enhanced the study's analytical depth by capturing both cross-sectional and time-series dimensions, while the selection of firms with consistent data ensured reliability and validity of the findings.

Model Specifications

The model for this study is stated in econometrics terms below as;

Market Valuation = f(Financial Ratios)

$MARKET\ VALUE_{it} = f(TOBINSQ, ROA, ROE, EPS, FSIZE)$ - - - *eq.i*

$MARKETVAL_{it} = \alpha_0 + \beta_1 TOBINSQ_{it} + \beta_2 ROA_{it} + \beta_3 ROE_{it} + \beta_4 EPS_{it} + \beta_5 FSIZE_{it} + \varepsilon_t$ *eq.ii*

Where;

MARKETVAL	Market Value	measured as how much an asset is worth on the financial market, according to market participants.
TOBINSQ	Tobin's Q	measured as market capitalization plus total liabilities minus cash divided by total asset
ROA	Return on assets	measured as profit after tax divided by total asset (%)
ROE	Return on equity	measured as profit after tax divided by total equity (%)
EPS	Earnings Per Share	measured as net profit after tax divided by number of ordinary shares
Fsize	Firm size	Measured as natural log of total asset

f = Stochastic error term capturing other unexplanatory variables

ί = firm identifier (40 firms)

t = time variable (10 Years)

ε_t = error term

αo is the intercept of the regression.

β_1 β_2, and β_3 are the co-efficient of the regression equation.

The Apriori expectation: β_1 β_2 and β_3 is lesser or greater than 0.

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 1: Summary of Descriptive for MARKETVAL TOBINSQ ROA ROE EPS and FSIZE

VARIABLES	OBS	MEAN	STD. DEV	MIN	MAX
MARKETVAL	400	2.986593	6.987807	-4.86	75.57
TOBINSQ	400	.86515	1.398098	.001	18.692
ROA	400	3.891043	13.56487	-179.9173	29.1591
ROE	400	6.609375	73.99698	-989.38	480.55
EPS	400	2.133483	6.110592	-7.32	57.63
FSIZE	400	16.85325	2.111393	12.064	22.094

Source: Regression Output, 2025.

Table 1 presents the descriptive statistics for the key variables used in this study: The average market value of firms is 2.99, with a relatively high standard deviation of 6.99, indicating considerable dispersion across firms. The minimum market value is negative (–4.86), possibly due to losses or market underperformance, while the maximum value is notably high (75.57), reflecting substantial valuation for some outlier firms. This wide range suggests market value volatility among Nigerian listed firms. Tobin's Q has a mean of 0.87, implying that, on average, firms are valued slightly below the replacement cost of their assets. This may reflect investor caution or undervaluation in the Nigerian capital market. However, the maximum value of 18.69 indicates the presence of growth-oriented firms commanding high market premiums. The average ROA is 3.89%, but with a large standard deviation (13.56) and an extreme minimum of –179.92%, indicating severe operational inefficiencies or losses in some firms. Similarly, ROE displays a wide variation, with a mean of 6.61%, but a massive standard deviation of 73.99% and a range extending from –989.38% to 480.55%, reflecting volatile equity returns and potentially aggressive earnings management or high financial leverage. EPS averages 2.13, with values ranging from –7.32 to 57.63, again suggesting significant heterogeneity in earnings performance. Lastly, firm size (FSIZE) is relatively stable, with a mean of 16.85 and a tighter standard deviation of 2.11, showing less variability in firm scale compared to performance indicators.

Normality Test

Table 2: Shapiro-Wilk W test for normal data (MARKETVAL TOBINSQ ROA ROE EPS FSIZE)

VARIABLES	OBS	W	V	Z	PROB>Z
MARKETVAL	400	0.38625	168.963	12.206	0.00000
TOBINSQ	400	0.47723	143.917	11.824	0.00000
ROA	400	0.63146	101.459	10.992	0.00000
ROE	400	0.38094	170.426	12.226	0.00000
EPS	400	0.46428	147.482	11.882	0.00000
FSIZE	400	0.98753	3.432	2.934	0.00167

Source: Regression Output, 2025.

Table 2 presents the Shapiro-Wilk W test results for assessing normality across the study variables. A p-value below 0.05 signifies a significant departure from normal distribution. The results indicate that all variables except Firm Size (FSIZE) exhibit strong violations of normality. Specifically, Market Value, Tobin's Q, ROA, ROE, and EPS all have very low W values (ranging from 0.38 to 0.63), with highly significant z-values exceeding 10 and p-values of 0.00000. These findings lead to a rejection of the null hypothesis of normality at the 1% significance level, indicating that these variables are non-normally distributed. ROA and ROE, in particular, may

suffer from skewness or leptokurtosis, likely driven by extreme values, as previously noted in the descriptive statistics. Contributing factors may include accounting volatility, firm-specific shocks, or earnings management practices prevalent in emerging markets. In contrast, FSIZE shows a W value of 0.9875 and a p-value of 0.00167, suggesting only a mild deviation from normality. These widespread deviations justify the application of robust estimation techniques such as panel-corrected standard errors (PCSE) or generalized least squares (GLS) in subsequent analyses.

Correlation Analysis

Table 3: Summary of Spearman Correlation MARKETVAL TOBINSQ ROA ROE EPS FSIZE, stats (rho p) star (0.05)

	MARKET~L	TOBINSQ	ROA	ROE	EPS	FSIZE
MARKETVAL	1.0000					
TOBINSQ	0.6105* 0.0000	1.0000				
ROA	0.5007* 0.0000	0.4917* 0.0000	1.0000			
ROE	0.4442* 0.0000	0.4282* 0.0000	0.5700* 0.0000	1.0000		
EPS	0.4067* 0.0000	0.4054* 0.0000	0.7733* 0.0000	0.4211* 0.0000	1.0000	
FSIZE	0.3097* 0.0000	0.1993* 0.0000	0.4140* 0.0000	0.2681* 0.0000	0.5870* 0.0000	1.0000

Source: Regression Output, 2025.

Table 3 displays the Spearman rank-order correlation matrix, which evaluates the strength and direction of monotonic relationships among the study variables. Spearman's rho is appropriate here due to the non-normal distributions identified in the Shapiro-Wilk test. The results show a strong, positive correlation between Market Value and Tobin's Q ($\varrho = 0.6105$, $p < 0.01$), suggesting that firms with higher growth prospects are more highly valued by investors, thus affirming Tobin's Q as a valid market-based performance indicator. Return on Assets (ROA) and Return on Equity (ROE) also show significant positive correlations with Market Value ($\varrho = 0.5007$ and $\varrho = 0.4442$, respectively), indicating that firms generating higher returns tend to be more attractive to investors. Earnings Per Share (EPS) is positively associated with Market Value ($\varrho = 0.4067$, $p < 0.01$), supporting signaling theory, which posits that higher EPS conveys strong firm performance. Firm Size ($\varrho = 0.3097$) also shows a moderate positive relationship with Market Value. However, strong correlations among ROA, ROE, and EPS—particularly between ROA and EPS ($\varrho = 0.7733$)—raise potential multicollinearity concerns in regression analyses.

Result for Multicollinearity Test

Table 4: VIF Test Result

VARIABLE	VIF	1/VIF
EPS	1.51	0.664268
ROA	1.30	0.769872
FSIZE	1.28	0.780610
TOBINSQ	1.18	0.848119
ROE	1.03	0.968340
Mean VIF	1.26	

Source: Regression Output, 2025.

Table 4 presents the Variance Inflation Factor (VIF) results, which assess the degree of multicollinearity among the explanatory variables in the regression model. Multicollinearity can inflate standard errors and compromise the reliability of coefficient estimates. Typically, VIF values above 10 indicate severe multicollinearity, while values between 5 and 10 suggest moderate concern. However, all VIF values in this analysis are well below 2, with a mean VIF of 1.26—far below the threshold of concern. This indicates that the predictors do not exhibit problematic multicollinearity and can be confidently used within the same model. EPS shows the highest VIF at 1.51, which is notable given its strong correlation with ROA observed in the Spearman analysis. Nevertheless, the low VIF suggests that their linear dependency is not severe enough to distort regression outcomes. ROA (VIF = 1.30) and FSIZE (VIF = 1.28) also exhibit low values, confirming minimal collinearity. Overall, the VIF results affirm the statistical reliability and robustness of the regression estimates.

Other Diagnostic Tests

Table 5: Breusch and Pagan Lagrangian Multiplier test

Breusch and Pagan Lagrangian Multiplier test	
Decision rule	If p-value is statistically significant, then reject Ho and accept HA
Result	chibar2(1) = 53.08, Prob > chibar2 = 0.0000

Source: Regression Output, 2025.

Table 5 presents the result of the Breusch and Pagan Lagrangian Multiplier (LM) which determines whether a random effects model is more appropriate than a simple pooled ordinary least squares (OLS) regression. The null hypothesis (H_0) assumes no panel effects (i.e., pooled OLS is sufficient), while the alternative hypothesis (H_1) suggests the presence of significant panel-level variance justifying a random effects specification. The test output shows a chi-bar^2 statistic of 53.08 with a p-value of 0.0000, indicating strong statistical significance. Based on the decision rule, the null hypothesis is rejected in favor of the alternative. This implies that random effects are present and that a panel data model is more suitable than pooled OLS. Therefore, this result justifies the use of panel estimators such as random effects, fixed effects, or PCSE in the study's regression analysis.

4.6 Levin-Lin-Chu Panel Unit Root Test

Table 6: Diagnostic Tests Results for all the variables

Variable	Statistics		P-value	Remarks	Implication
MARKETVAL	Unadjusted t	-26.4810			stationary
	Adjusted t*	-24.4786	0.0000	1(0)*	
TOBINSQ	Unadjusted t	-17.4714			stationary
	Adjusted t*	-14.5600	0.0000	1(0)*	
ROA	Unadjusted t	-11.5978			stationary
	Adjusted t*	-5.2249	0.0000	1(0)*	
ROE	Unadjusted t	-11.5433			stationary
	Adjusted t*	-5.6003	0.0000	1(0)*	
EPS	Unadjusted t	-13.5307			stationary
	Adjusted t*	-7.7960	0.0000	1(0)*	
FSIZE	Unadjusted t	-15.9358			stationary
	Adjusted t*	-8.4693	0.0000	1(0)*	

Source: Regression Output, 2025.

Table 6 presents the Levin-Lin-Chu (LLC) panel unit root test results, which evaluate the stationarity of the variables used in the regression analysis. The test shows that all variables—Market Value, Tobin's Q, ROA, ROE, EPS, and FSIZE—have highly significant p-values

(0.0000), with both unadjusted and adjusted t-statistics being large, negative, and statistically significant at the 1% level. These results lead to the rejection of the null hypothesis of non-stationarity, confirming that all variables are stationary at level, or integrated of order zero (I(0)). Stationarity is critical in panel data analysis, as non-stationary variables can produce misleading relationships, spurious regression results, and invalid statistical inferences. The confirmed stationarity of all variables validates the use of level-form regression models and eliminates the need for differencing or cointegration techniques. This strengthens the credibility of the panel-corrected standard errors (PCSE) models employed in the study, ensuring robust and reliable empirical results based on statistically sound foundations.

Hypotheses Testing for Model

Table 7: Linear regression of MARKETVAL TOBINSQ ROA ROE EPS DFSIZE

	Panel-corrected			
Correlated Panels Corrected Standard Errors (PCSEs)				
MARKETVAL	**COEF.**	**STD. ERR.**	**z**	**P>|z|**
TOBINSQ	.6322314	.2623209	2.41	0.016
ROA	-.0300589	.0172021	-1.75	0.081
ROE	.0052397	.0118036	0.44	0.657
EPS	.6054593	.0919558	6.58	0.000
FSIZE	3.972603	1.489795	2.67	0.008
_CONS	.7670001	.3721398	2.06	0.039
N				400
R-squared				0.3734
Wald chi2(5)				88.19
Prob > chi2				0.0000

Source: Regression Output, 2025

Table 7 reports the results of the linear regression analysis using Panel-Corrected Standard Errors (PCSE), an estimation technique appropriate for panel data with heteroscedasticity and contemporaneous correlation across entities. This method produces more efficient and reliable standard errors than traditional panel models, particularly when autocorrelation is absent and the panel is balanced. The dependent variable is MARKETVAL, with Tobin's Q, ROA, ROE, EPS, and FSIZE as explanatory variables. The model yields an R-squared value of 0.3734, indicating that approximately 37.34% of the variation in market value is explained by the selected predictors. The Wald chi-square statistic of 88.19 ($p < 0.01$) confirms the model's overall statistical significance.

EPS stands out as the most significant determinant, with a coefficient of 0.6055 and z-value of 6.58 ($p < 0.01$), suggesting that a one-unit increase in EPS raises market value by roughly 0.61 units, reinforcing signaling theory. Tobin's Q also shows significance ($\beta = 0.6322$, $p = 0.016$), indicating that firms with strong growth prospects command higher valuations. FSIZE is likewise significant ($\beta = 3.9726$, $p = 0.008$), reflecting investor preference for larger, stable firms. ROA has a negative coefficient ($\beta = –0.0301$, $p = 0.081$), marginally significant, while ROE ($\beta = 0.0052$, $p = 0.657$) is statistically insignificant, suggesting its limited role in explaining market value when other variables are considered.

DISCUSSION OF FINDINGS

The results of the panel-corrected standard errors (PCSE) regression model provide valuable insights into the determinants of market value among listed firms, using *Tobin's Q, ROA, ROE, EPS,* and *Firm Size* as predictors. Tobin's Q exhibited a positive and statistically

significant influence on market value, affirming its usefulness as a proxy for market perception and firm valuation. This aligns with Oke et al (2024), and Ajibola (2025), who suggest that Tobin's Q captures investor expectations and the firm's growth potential better than traditional accounting measures. Earnings per share (EPS) also demonstrated a robust positive effect on market value, reflecting investor sensitivity to profitability metrics that directly influence shareholder wealth. This finding resonates with the assertions by Ohlson (1995) and Jihadi et al. (2021), who emphasize EPS as a critical determinant in equity valuation due to its forward-looking implications. Interestingly, firm size significantly affects market value positively, corroborates prior evidence from Irdiana (2021), Margono et al. (2021), and Orazalin et al. (2024) that larger firms enjoy economies of scale, better access to capital markets, and enhanced investor confidence, thereby attracting higher valuations. However, ROA reported a marginally negative effect, suggesting that its impact on market value may not be as pronounced in the sample or may be influenced by capital-intensive sectors where asset efficiency is variable. This contradicts some earlier works (e.g., Aisyah et al. 2024; Onah, 2025) but may highlight the contextual differences in firm structures or investment strategies. ROE was statistically insignificant, implying limited influence on market value in the Nigerian context. This diverges from theoretical expectations and studies like Agbata et al. (2021) but may reflect volatility in retained earnings, policy inconsistencies, or shareholder preference for cash-based performance indicators such as EPS.

CONCLUSION

Conclusion

This study examined the impact of Tobin's Q, ROA, ROE, EPS, and FSIZE on the market value of listed manufacturing firms in Nigeria. The results revealed that Tobin's Q, EPS, and Firm Size significantly and positively influence market value, highlighting their importance as key drivers of firm valuation. Tobin's Q reflects investor expectations and growth prospects, while EPS serves as a direct measure of profitability and shareholder value. Firm Size also enhances valuation, likely due to scale advantages and market confidence. On the other hand, ROA showed a weak negative effect, and ROE was statistically insignificant, indicating that traditional profitability ratios may offer limited explanatory power in this context. These findings emphasize the greater relevance of market-based and structural indicators in determining firm value and suggest the need for more comprehensive valuation models in emerging markets like Nigeria.

Recommendation

Based on the findings and in alignment with the study's objectives, the following recommendations are proposed:

1. Enhance Market-Based Value Strategies: Given the significant positive impact of Tobin's Q on market value, listed manufacturing firms should prioritize strategies that boost investor confidence and market perception. This includes improving transparency, corporate governance, and aligning operational performance with long-term growth expectations to sustain high Tobin's Q ratios.
2. Reevaluate the Use of ROA and ROE in Valuation Models: The marginal and insignificant influence of ROA and ROE suggests that firms and analysts should be cautious in relying solely on these ratios for valuation purposes. Instead, they should be complemented with other indicators like EPS and Tobin's Q that better capture market sentiment and firm value.
3. Improve Earnings Management Practices: Since Earnings Per Share (EPS) demonstrated

a strong positive influence on market value, firms should focus on improving profitability through efficient cost management, innovation, and product diversification. Accurate and timely financial reporting should also be maintained to ensure EPS remains a reliable metric for investors.

4. Leverage Firm Size Advantages: Firm size significantly impacts market value, indicating that scaling operations, expanding market reach, and enhancing capital access can drive valuation. Therefore, firms should pursue strategic mergers, acquisitions, and expansions to capitalize on economies of scale and investor appeal.

REFERENCES

Adamu, I., & Hamidah, H. (2024). Assessing The Impact of Capital Structure on Firm Value: A Quantitative Study of Financial Ratios and Stock Prices of Nigeria Food and Beverage Companies. *The Indonesian Journal of Accounting Research*, *26*(3), 483-516.

Agbata, A. E., Osingor, A. S., & Ezeala, G. (2021). Effect of financial ratios on firm performance: Study of selected brewery firms in Nigeria. *International Journal of Trend in Scientific Research and Development*, *5*(5), 1664-1671.

Aggreh, M., Nworie, G. O., & Abiahu, M. F. C. (2022). Debt structure and financial performance: evidence from listed construction firms in Nigeria. *Journal of Banking*, *10*(2), 145-195.

Ajibola, A. (2025). Tobin-Q Valuation Methodology of the Impact of Corporate Governance Structure on Organizational Performance: Evidence from Nigeria's Banking Sector. *BRICS Journal of Economics*, *6*(1), 35-52.

Aisyah, S., & Utama, A. N. B. (2024). Improving Company Performance Analysis Based on Return on Assets and Return on Equity Ratio. In *IECON: International Economics and Business Conference 2*, (1), 296-305.

Alhassan, I., & Islam, K. A. (2021). Liquidity management and financial performance of listed oil and gas companies in Nigeria. *International journal of accounting & finance review*, *8*(1), 15-25.

Alvian, R., & Munandar, A. (2022). The influence of debt-to-equity ratio, net profit margin, and cash ratio on firm value. *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, *4*(7), 2682-2690.

Arhinful, R., & Radmehr, M. (2023). The effect of financial leverage on financial performance: evidence from non-financial institutions listed on the Tokyo stock market. *Journal of Capital Markets Studies*, *7*(1), 53-71.

Azaro, K., Djajanto, L., & Sari, P. A. (2020). The influence of financial ratios and firm size on firm value (an empirical study on manufacturing companies sector consumers goods industry listed in Indonesian stock exchange in 2013–2017). In *1st Annual management, business and economic conference (AMBEC 2019)* (pp. 142-147). Atlantis Press.

Ayange, A., Emmanuel, N. C., Rosemary, I. H., Ndudi, U. C., & Samuel, U. E. (2021). Effect of capital structure on firms' performance in Nigeria. *Universal Journal of Accounting and Finance*, *9*(1), 15-23.

Balami, S., & Koirala, P. (2024). Capital Structure and Profitability: Moderating Role of Firm's Size. *Nepalese Journal of Management Science and Research*, *7*(1), 179-197.

Bahodirovich, K. B. (2024). Financial leverage ratios and analysis. *Ethiopian International Journal of Multidisciplinary Research*, *11*(11), 418-426.

Berkman, H., Jona, J., & Soderstrom, N. (2024). Firm-specific climate risk and market valuation. *Accounting, Organizations and Society*, *112*, 101547.

Ebimobowei, A., Uche, O. J., & Young-Arney, T. (2021). Liquidity and Profitability Ratios on Growth of Profits of Listed Oil and Gas Firms in Nigeria. *African Journal of Accounting and Financial Research*, *4*(3), 1-14.

Edori, D. S., & Egileoniso, D. J. (2024). Financial performance and investment decision: Evidence from investors and stockbrokers in Nigeria. *World Journal of Finance and Investment Research*, *8*(1), 49-63.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, *25*(2), 383.

Fasua, K. O., Abubakar, I. A., Ojo, L. O., & Umana, M. F. O. N. (2021). Ownership structure and capital structure: Evidence from listed agricultural firms in Nigeria. *International Journal of Social Science*, *5*(10), 50-67.

Firdaus, F., Mahbub, A. F., Octaviani, L. T., Afrizal, R., & Hendiarto, S. (2020). The Effect of Financial Ratios on the Firm Value. *Solid State Technology*, *63*(4), 4820-4829.

Gautam, N., & Bangshi, A. (2024). Effect of Leverage, Assets Growth, Market Capitalization and Firm Age on Profitability of Nepalese Commercial Banks. *The Harvest*, *3*(1), 57-78.

Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting horizons*, *13*(4), 365-383.

Hertina, D., Pratidina, Z. O., Debora, S., & Sinaga, O. (2021). Analysis Of Financial Ratio to Company Value. *Review of International Geographical Education Online*, *11*(7).

Irdiana, S. (2021). Impact of company size on capital structure and profitability as intervening variable. In *Proceeding International Conference on Economics, Business and Information Technology 3*, 308-312.

Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(3), 423-431.

Margono, F. P., & Gantino, R. (2021). The influence of firm size, leverage, profitability, and dividend policy on firm value of companies in Indonesia stock exchange. *Copernican Journal of Finance & Accounting*, *10*(2), 45-61.

Munir, Q., Akram, B., & Abbas, S. A. (2024). Understanding Stock Price Dynamics with Dividend-Related Metrics and Financial Indicators in Pakistan's Non-Financial Sectors. *Journal of Business and Economic Options*, *7*(1), 1-9.

Nwachukwu, B. C., Ugwu, T. C., & Agbo, E. O. (2025). Earnings predictability and stock price: an investigation of food and beverage manufacturing companies in Nigeria. *Research journal of Accounting and Finance*, *13*(2), 35-47.

Okeke, L. N., Ezejiofor, R. A., & Okoye, N. J. (2021). Leverage and cash ratio: an empirical study of conglomerates firm in Nigeria. *American Journal of Contemporary Management Sciences Research*, *5*(7), 76-84.

Okoye, P. V., & Idodo, M. (2025). Asset management and firm value of listed oil and gas firms in Nigeria. *Journal of Global Accounting*, *11*(2), 24-45.

Onah, K. A. (2025). Effect of IFRS adoption on financial performance of construction firms in Nigeria: A study of return on assets (ROA) and net profit margin (NPM). *Research journal of Accounting and Finance*, *13*(2), 1-16.

Oke, O. O., & Ajeigbe, K. B. (2024). Evaluating the Relationship between Accounting Variables, Value-Based Management Variables, and Shareholder Returns: An Empirical Approach. *Journal of Risk and Financial Management*, *17*(8), 371.

Okeke, L. N., Ezejiofor, R. A., & Okoye, N. J. (2021). Leverage and cash ratio: an empirical study of conglomerates firm in Nigeria. *American Journal of Contemporary Management Sciences Research*, *5*(7), 76-84.

Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary accounting research*, *11*(2), 661-687.

Opoku-Asante, K., Winful, E. C., Sharifzadeh, 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.

Orazalin, N. S., Ntim, C. G., & Malagila, J. K. (2024). Board sustainability committees, climate change initiatives, carbon performance, and market value. *British Journal of Management*, *35*(1), 295-320.

Otekunrin, A. O., Nwanji, T. I., Olowookere, J. K., Egbide, B. C., Fakile, S. A., Lawal, A. I., ... & Eluyela, F. D. (2018). Financial ratio analysis and market price of share of selected quoted agriculture and agro-allied firms in Nigeria after adoption of international financial reporting standard. *The Journal of Social Sciences Research*, *4*(12), 736-744.

Ozili, P. K., & Ndah, H. (2024). Impact of financial development on bank profitability. *Journal of Economic and Administrative Sciences*, *40*(2), 238-262.

Popoola, O. O., & Onmonya, L. O. (2024). Environmental Disclosure and Financial Performance: A Study of Listed Oil and Gas Firms in Nigeria. *African Journal of Accounting and Financial Research*, *7*(4), 230-245.

Purnomo, A. (2018). Influence of the ratio of profit margin, financial leverage ratio, current ratio, quick ratio against the conditions and financial distress. *Indonesian Journal of Business, Accounting and Management*, *1*(1), 9-17.

Sinebe, M.T. (2021). Retrospective Analysis on The Return on Asset, Firm Size (Fs) And Age of Firm on Capital Structure of Banks in Nigeria. Federal University, Otuoke, *Quarterly Journal of Contemporary Research. 9* (2) 240-253.

Susanti, M., Samara, A., & Hakim, M. Z. (2022). Pengaruh Earning Per Share (DTE), Dividen Payout Ratio (DPR) Dan Return on Aset (ROA) terhadap Nilai Perusahaan (Tobins' Q) pada Perusahaan Sektor Consumer Non-Cyclicals di Indonesia. *Journal of Accounting, Finance, Taxation, and Auditing (JAFTA)*, *4*(1), 29-55.