Firm Characteristics and Performance of Quoted Non-Financial Firms in Nigeria

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Abstract
The success and longevity of a firm largely depend on its performance and competitiveness. The proficiency and profitability of non-financial corporations in Nigeria may be governed by the interplay between internal and external features. Firm attributes are thus issues whose foundation is linked to management decisions in pursuit of firm stability. This research established that liquidity, firm size, leverage, growth rate, board composition, institutional shareholding and profitability are vital factors that should be considered. Utilizing an ex-post facto research approach based on secondary data, this enquiry focused on 104 listed non-financial companies, from which 30 companies were purposively adopted. The sample period spanned the years 2014 to 2023, and information used in the analysis was collected from the organisations' yearly financial disclosures. The dataset was explored through summary statistics, correlation analysis, and inferential statistical methods. The inferential statistics was carried out by employing the panel multiple regression method. Random effect model was selected as the optimal estimation technique for the panel data and was utilized to explore the model specified to achieve the objectives. The analysis showed that firm size had a positive but statistically insignificant influence on financial performance. Leverage had positive and significant impact on financial performance. Also, there was insignificant negative effect of firm age on the performance. The investigation

further established that liquidity had a positive and significant effect on corporate performance. This implied that these factors were likely to exert a greater influence as the firms further expanded their operational activities in the future. It was suggested that firms should not depend solely on their market presence or years of operation but adopt innovative strategies aimed at increasing market share, such as entering new geographical marketplaces and expanding their product and service offerings.

Keywords: Firm size, firm age, liquidity, leverage, performance, Nigeria.

Introduction

The foundation of long-term company growth is the financial success of the company. To evaluate the business's financial condition, strength, and strategy for averting business failure, financial performance and accounts are analysed. Performance is the outcome of completing the duties that were given to you. When compared to the top worldwide market leaders, a corporation's performance is essential to its existence, survival, and ability to withstand fierce competition. Performance is important since it increases the market value of certain companies, helps to differentiate a brand, and maximises profit for shareholders. Accordingly, financial performance quantifies the amount, stability, and strength of a firm's financial well-being and revenue production development (Fischer & Himme, 2017). According to Chandani & Ahmed (2021), a firm's efficacy and efficiency in doing its business is referred to as its performance.

The distinctive features that set an organisation apart from its peers are its own particular and/or uncommon traits. These recognise the business from others and, to a certain degree, reveal the secrets of its capabilities. Bhunia et al. (2011) distinguish financial performance as a basic indicator of a firm's general financial soundness. According to Kinyua (2019), an enterprise's financial performance is an achievement of its development, which is used to assess its success and appropriate corporate governance. Since high-performance speeds up a company's growth, performance is now seen as its lifeblood. The firm's published financial statements provide knowledge information about its performance. Corporate management's attempts to disclose activities accurately about their actions will be aided if the business is performing well. Firm size, age, leverage, the growth rate of recorded cost, and the institution and governmental environment are some of the firm attributes that can be used to estimate a business's performance. In Nigeria, the performance of non-financial companies may be shaped by influences within and outside the organisation. Internal factors are those that management can control and that explain the differences in profitability between firms, while external factors are uncontrollable and affect firm decisions but are beyond management's control (Obani & Ozuomba, 2024; Jibril et al., 2023).

The incentives that influence the business's decisions, both internally and externally, are known as firm characteristics. They make reference to financial leverage, liquidity, profitability, diversity, and ownership structure both internally and externally (Lang & Lundholm, 2013; Akpan et al., 2024). In the course of its daily operations, a company must keep an equilibrium between earning profits and maintaining cash flows in order for businesses to be able to fulfil their short-term commitments and ensure their continuous flow from a lucrative enterprise; liquidity is a must. Given its vital function in the company, it should come as no surprise that cash is an important predictor of ongoing financial health (Collett & Hrasky, 2015). The behavioural pattern of an enterprise's operations that allows it to accomplish its goals across all aspects of its operation is another definition of firm characteristics. Similarly, firm characteristics denote the set of accounting data that corporations publish in their financial disclosures for a certain period. These data can provide different stakeholders with information about how well a company is performing

(Hassan, 2012). According to Kazeem (2015), company characteristics are thought to be elements that are mostly within organisation's direct control and regularly explain variations in financial performance amongst firms. Firm characteristics are those unique traits that set businesses apart and allow for various viewpoints to be taken into consideration.

Firm characteristics refer to internal attributes that influence how a company allocates its resources to bring about revenue (Astutik et al., 2023; Njiraini et al., 2021). Key characteristics involve firm size, capital structure, and operational efficiency, among others. For instance, firm size exhibits the overall scale of the organisation, particularly in terms of workforce and infrastructure. A primary consideration in organisational research is firm size. The significance of business size is summarised and outlined by Charles et al. (2018). It has also been demonstrated that vertical integration, concentration, industry sunk costs, and overall industry profitability are all correlated with firm size. According to Eriotis et al. (2007), firm characteristics refer to the aspects of a company that are considered "drivers" of commercial interactions. Due to their ability to lessen principal–agent problems and knowledge gaps, they are important aspects in assessing a firm's performance and success.

By retaining a good quantity of firm features in the proper proportion, a company aims to enhance its performance through increased productivity and effective management. A company's size, financial leverage, gender diversity on the board, and other characteristics have all been directly related to improving its performance (Abubakar et al., 2024; Bona & Hartoko, 2022; Hadid & Hamdan, 2022; Syaifulhaq et al., 2020). Businesses may preserve their strategic posture, drive their financial success, and retain both internal and external competencies by utilising their qualities (Kabue & Kilika, 2016). Businesses often use their unique characteristics to manage their multifaceted strategic resources in order to maximise their growth, create value for all stakeholders, and achieve excellent financial performance in operational efficiency (Margaretha & Supartika, 2016).

However, among Nigerian listed companies, poor capital influence performance, a diminishing net profit margin, and suboptimal corporate development have resulted from the inappropriate use of internal business assets. It was against this background that this research observed the exact characteristics of non-financial corporations in Nigeria and their significance on the performance of publicly listed firms in Nigeria, and how these attributes influence their financial performance. Therefore, organisational attributes are elements fundamentally linked to managerial decisions aimed at enhancing firms' strength. Although numerous studies have examined firm characteristics and profitability from global and regional viewpoints, relatively few have concentrated on publicly listed firms in Nigeria. This survey acknowledges variables such as liquidity, firm size, leverage, board composition, institutional shareholding and profitability as important.

However, there is still no agreement regarding the optimal levels of these selected factors, highlighting a knowledge gap that warrants further investigation. A study conducted in Nigeria among banks reported conflicting findings, showing that liquidity positively and significantly affects return on assets (Kajola et al., 2019). A careful assessment of prior enquiry on the subject reveals mixed evidence concerning the influence of these characteristics on corporate performance across diverse economies. Most of the reviewed studies have focused on firm size, age, financial leverage, and asset quality as determinants of financial performance. Consequently, this paper seeks to contribute to the existing body of knowledge and explores the area lacking sufficient research by examining the unique firm attributes of liquidity, financial leverage, firm size, and firm age.

The study seeks to contribute to existing knowledge by empirically examining how firm features affect the financial performance of listed non-financial businesses in Nigeria, which plays a vital role in the nation's economic development. Evaluating what determines performance in the non-financial sector is crucial since Nigeria's economy has yet to reach a developed stage. This is a prime concern for companies and corporate practitioners in all managerial learning and enterprises, since financial performance has dire implications for a firm's safety, survival and profit-making. To bridge this gap, the current study examines the impact of firm attributes on the profitability of listed non-financial companies in Nigeria. The results are expected to enrich the existing literature on corporate performance and provide insights to guide policy formulation and strategic decision-making within Nigeria's emerging market context.

Objectives of the Study

The major aim of this study is to examine the effect of firm-specific characteristics on the financial performance of listed non-financial companies in Nigeria.

The specific goals were to:

4. Examine the impact of firm size on the return on equity of quoted non-financial firms in Nigeria.
5. Determine the role of leverage on the return on equity of quoted non-financial companies in Nigeria.
6. Investigate the influence of a firm's age on the return on equity of quoted non-financial firms in Nigeria.
7. explore the role of liquidity on the return on equity of quoted non-financial firms in Nigeria.

Theoretical Review

Resource-Based View Theory

The Resource-Based View (RBV) was proposed by Wernerfelt, who in 1984 published seminal works emphasising the role of firm resources as key differentiators of performance and growth. Based on the assertion of Lavie (2008), the RBV serves as a strategic framework for analysing and identifying the essential resources a firm must possess and leverage to enhance operational efficiency, thereby achieving comparative and competitive advantages that sustain long-term performance. The basic premise of the RBV theory is that a firm achieves competitive advantage by developing and strategically utilising its internal resources. These resources, when effectively leveraged through the firm's unique characteristics and strategies, can lead to a sustained competitive edge. As noted by Miller (2019), RBV is a management theory founded on two key norms: first, that firms possess inherently heterogeneous resources, and second, that these resources are imperfectly transferable across firms within an industry. Consequently, the RBV framework explains variations in firms' sustainable performance and growth based on differences in their resource endowments. In essence, RBV emphasises the distinctive resources and capabilities under a firm's control that drive its superior performance and long-term success. To attain the desired level of financial performance, a firm's resources must be valuable, rare, inimitable, and immobile across firms. Organisations are required to integrate both homogeneous and heterogeneous resources to build distinct competencies that serve as a foundation for sustainable competitive advantage. By effectively deploying these resources, firms can achieve consistent and superior financial performance. Consequently, this study is anchored on RBV theory.

Research Methodology

Population of the Study

All 104 non-financial publicly traded firms of the Nigeria Exchange Group (NGX) comprise the research population. These include conglomerates, consumer goods, healthcare, ICT, natural resources, industrial products, oil and gas, construction and real estate, agriculture, and services enterprises are the eleven sectors into which Nigerian stocks are divided. All financial sector companies were not included in this analysis.

Sample and Sampling Techniques

A purposive sampling procedure was employed for this study. This method was chosen because not all elements in the population have an equal likelihood of being chosen. The publicly traded firms on the NGX group have already stratified into various sectors, making it easier to purposively select from the relevant strata. The firms included in the investigation were selected based on the following criteria: they must have been listed on the NGX before January 1, 2014; must have complete and accessible financial data; and must not have been delisted during the study period. The choice benchmarks involved selecting using the following criteria: (1) The companies that account for their financials during the sample period of 2014-2023; (2) Companies with comprehensive data, relating to the enquiry, during the period of research, i.e., 2014-2023. These criteria were established to ensure that the selected firms provided consistent and reliable data suitable for conducting an in-depth analysis. After the aforementioned criteria were applied, thirty (30) enterprises made up the sample size. These are companies with relevant data for the research whose stocks are regularly traded on the floor.

Description and Measurement of Variables

Leverage, firm age, liquidity, and firm size were identified as the independent variables representing firm-specific characteristics. Financial performance (FP), the dependent variable, was computed using return on equity (ROE). The model integrated control variables, including asset tangibility, board size, and board independence, to consider their prospective impact on financial performance.

Model Specification

The following model was created in this study to investigate the connection between company attributes and the FP of Nigerian non-financial corporations that are publicly traded. As explained, this study modified the Akenroye et al. (2022) study, as specified below:

$ROE_{it} = \beta_o + \beta_1 FAG_{it} + \beta_2 FSZ_{it} + \beta_3 TAN_{it} + \beta_4 LEV_{it} + \beta_5 LIQ_{it} + \beta_6 BSZ_{it} + \beta_7 BDP_{it} + \varepsilon_i$ *3.1*

Where:

ROE_{it} = Return on equity of firm i at time t
FAG_{it} = Firm Age of firm i at time t
FSZ_{it} = Firm Size of firm i at time t
TAN_{it} = Tangibility of firm i at time t
LEV_{it} = Leverage of firm i at time t
LIQ_{it} = Liquidity of firm i at time t
BSZ_{it} = Board size of firm i at time t
BDP_{it} = Board independence of firm i at time t
β_0 = constant term; $\beta_1 - \beta_7$ = coefficients of variables or slopes of the equation

μ = stochastic variable absorbing other factors excluded in the model.

The model was subsequently adjusted as follows:

$ROE_{it} = f(FAG_{it}, FSZ_{it}, TAN_{it}, LEV_{it}, LIQ_{it,} BSZ_{it}, BDP_{it,})$.....3.2

$ROE_{it} = \beta_o + \beta_1 FAG_{it} + \beta_2 FSZ_{it} + \beta_3 TAN_{it} + \beta_4 LEV_{it} + \beta_5 LIQ_{it} + \beta_6 BSZ_{it} + \beta_7 BDP_{it} + \varepsilon_{it}$.....3.3

Methods of Data Analysis

Descriptive analytical methods and inferential data were utilised to accomplish the goals. The main features of the figures used in models are explained by descriptive statistics. The descriptive analysis calculates the variability (standard deviation or variance, the lowest and greatest variables) and central tendency (mean, median, and mode).

To examine the extent of the connection among the variables utilised, the research investigated the relations among the constructs. Finding positive and negative relationships, as well as the strength of a relationship, whether weak, moderate, or strong, is made easier with the use of correlation analysis. Because correlation matrices help in developing predictive models and identifying the likelihood of multicollinearity among variables, they are typically constructed before conducting multiple regression analysis.

Multiple regressions were deployed in the examination of inferential statistics. Due to the higher degree of freedom, panel data was chosen over cross-sectional and time series data. Additionally, it lessens the possibility of collinearity between the variables, which will improve the effectiveness of estimations. Pooled Ordinary Least Squares (POLS), Fixed Effect Models (FEM), and REM Models were employed in the panel data analysis. Because POLS might lead to heterogeneity issues, and individual unique effects are not considered, FEM and REM regression were included. Initially, the assessment used the Breusch-Pagan LM statistic to see if POLS would be suitable. When the p-value is less than 10 per cent, a second test for REM/FEM will be appropriate. If the p-value is larger than 10 per cent, POLS will be applicable. The Hausman specification test was used to select whether REM or FEM is more suited.

Table 1: Summary of the Measurement of Variables

No.	Variable	Proxy (code)	Measurement	Sources	Apriori Sign
1.	Financial performance **(Dependent)**	ROE	Profit after tax divided by equity	Boshnak et al. (2021), Nyabaga & Wepukhulu (2020)	
2.	Firm Age **(Independent)**	FAG	Number of years in existence of firms	Aribaba et al. (2022), Wahab et al. (2022)	+ve
3.	Firm Size **(Independent)**	FSZ	Natural logarithm of total assets	Wahab et al.(2022)	+ve
4.	Leverage **(Independent)**	LEV	Total liabilities divided by total equity	Aribaba et al. (2022) and Wahab et al. (2022)	-ve
5.	Liquidity **(Independent)**	LIQ	The quantity of current assets to current liabilities	Egbunike & Okerekeoti (2018)	+ve

6.	Tangibility **(Control)**	TAN	The ratio of non-current assets to total assets	Aribaba et al. (2022)	+ve
7.	Board Size **(Control)**	BSZ	The number of directors on the board	Egolum et al. (2019)	+ve
8.	Board Independence **(Control)**	BDP	The ratio of non-executive directors on the board to the total number of directors.	Egolum et al. (2019)	+ve

Source: Researcher's Computation (2025).

Result and Discussion

Descriptive Statistics

This part displays the analytical findings as well as the outcomes derived from the study objectives. The collected data were organised and displayed using tables for clarity. Subsequent analysis and interpretation were conducted in alignment with the objectives and hypotheses of the study. This chapter outlines the analytical process and presents findings consistent with the stated research questions.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Maximum	Minimum	Standard Deviation
ROE	300	3.061670	65.72270	-20.32760	8.527356
FAG	300	44.96667	92.00000	9.000000	17.46565
FSZ	300	7.293457	9.040400	5.078900	0.867840
TAN	300	0.472483	3.114600	0.015300	0.288317
LEV	300	47.78744	564.4747	0.499000	77.77185
LIQ	300	1.261531	3.279800	0.184300	0.556899
BSZ	300	8.766667	17.00000	3.000000	2.515282
BDP	300	0.778293	1.000000	0.500000	0.112819

Source: Researcher's computation (2025).

Data in Table 2 illustrated that, for the period between 2014-2023, the number of observations was 300, implying that thirty non-financial firms were studied over ten years. The ROE for the firms had an average value of 3.0617, with the lowest observed value of -20.3276 and the highest 65.7227. This indicated that the return on equity was encouraging. The first independent variable was firms' age (FAG), which had a mean value of 44.9667, a lowest of 9, a highest of 92, and a standard deviation of 17.4657. The firm size showed a mean of 7.2935, with the lowest value of 5.0789 and the highest value of 9.0404, implying that the firms' asset bases were properly constituted. Table 4.1 also illustrates the firms' asset tangibility, averaged at 0.4725, with a range from 0.0153 to 3.1146 and a standard deviation of 0.2883. The leverage ratio had a mean of

47.7874, ranging from 0.499 to 564.4747, indicating that the firms' reliance on external borrowing posed a high financial risk. The mean liquidity ratio for the firms was 1.2615, with values spanning from 0.1843 to 3.2796, indicating that the firms were capable of quickly liquidating assets to discharge short-term liabilities as they mature. The number of directors on the board displayed a mean of 9 and a standard deviation of 2.5153. Board sizes amongst the non-financial companies in the sample ranged from three to seventeen. The share of non-executive directors within the total board structure, which serves as an indicator of board independence, recorded a mean value of 0.7783 and a standard deviation of 0.1128, with the lowest and highest values of 0.5 and 1, respectively. This ratio was also employed as a control factor to mitigate omitted-variable bias arising from differences in governance principles across firms.

The findings in Table 2 indicate that every variable had a positive mean. This suggests that during the research period, the variable grew at a positive pace. For example, throughout the sample period, the average growth rate of ROE was 3.06%. The findings further demonstrate that the variables are normally distributed, while other constructs are regularly distributed. This is because, except for firm age, the Jarque-Bera coefficients for the majority of the variables have significant probability values.

Correlation Analysis

Table 3: .Correlation Matrix

	ROE	FAG	FSZ	TAN	LEV	LIQ	BSZ	BDP
ROE	1.0000							
FAG	-0.0235	1.0000						
FSZ	0.2522***	-0.1068	1.0000					
TAN	0.1536***	-0.0173	0.1511***	1.0000				
LEV	0.2441***	0.2074***	0.4311***	-0.0550	1.0000			
LIQ	0.2358***	0.0097	-0.1916***	-0.3678***	-0.1181**	1.0000		
BSZ	0.2783***	0.0932	0.5643***	0.2743***	0.2739***	-0.0344	1.0000	
BDP	0.1555***	0.0556	-0.0484	0.2738***	-0.0319	-0.0773	0.0837	1.0000

Source: Researcher's computation (2025).

Table 3 illustrates the correlation matrix among the study's variables along with their p-values. According to correlation analysis results, ROE showed a significant and positive link with all other variables at the 1 per cent level of significance (p.<0.01), but a negative and negligible connection with FAG (r. -0.0235, p.>.0.05). While FAG had a negative and insignificant relationship with FSZ (r=-0.1068, p>0.05) and TAN (r=-0.0173, p.>.0.05), it had a positive and insignificant relationship with LIQ (r=0.0097, p.>.0.05), BSZ (r =.0.0932, p>0.05), and BDP (r=0.0556, p>0.05). FAG also had an optimistic and important connection with LEV (r=0.2074, p<0.01).

The interactions between FSZ and LEV (r.=.0.4311, p.<.0.01), TAN (r.=.0.1511, p.<.0.01), and BSZ (r.=0.5643, p.<0.01) were all positive and significant. There was a negative, insignificant relation between FSZ and BDP (r.=-0.0484, p.>0.05), but a negative, significant correlation with

LIQ (r.=-0.1916, p.<0.01). LEV displayed a positive significant association with BSZ (r = 0.2739, p<0.01), a negative significant relationship with LIQ (r=-0.1812, p<0.05), and a negative insignificant link with TAN (r = -0.055, p>0.05) and BDP (r = -0.0319, p>0.05). There was a negative, insignificant correlation among LIQ and BSZ (r = -0.0344, p>0.05) and BDP (r = -0.0773, p>0.05), and a negative, significant link with TAN (r = -0.3678, p.<0.01). While BSZ had a positive insignificant correlation with BDP (r = 0.0837, p.>0.05), TAN showed a positive significant link with both BSZ (r = 0.2743, p.<.0.01) and BDP (r = 0.2738, p<0.01).

One tool for identifying the potential for multicollinearity is correlation analysis. According to statistics, multicollinearity happens when two independent variables have a strong connection with one another, which might lead to duplicate data in the regression analysis. It is suggested that the researcher might determine if the variables have multicollinearity among themselves by examining the correlation between the variables of estimation.

Interpretation of Regression Results

The first assumption made while using pooled ordinary least squares (POLS) was that the intercept was the same for all businesses and years. The suitability of the POLS estimation was then assessed using the Breusch-Pagan Lagrange Multiplier (BPLM) test. With a p-value of less than 0.01, the BPLM null hypothesis (H0) that "Pooled Ordinary Least Square (POLS) is more appropriate than FEM and REM" was rejected. As a result, the study looked more closely at both fixed and random effect models. This further prompted the Hausman test that was deployed to identify which of the REM and FEM models was more suited. When the chi-square result was p>0.05, the Hausman test's null hypothesis (H0), which asserts that "there is the presence of a random effect," was accepted. The REM is the most suitable option for the analysis, since the test's probability value is above the 5% (0.05) level of significance. As a consequence, this study analyses the outcomes of the REM.

Table 4: Regression Results

Dependent Variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-31.55374	9.495304	-3.323089	0.0010
FAG	-0.013613	0.050852	-0.267691	0.7891
FSZ	2.064517	1.139126	1.812368	0.0710
TAN	4.586570	2.029988	2.259408	0.0246
LEV	0.021805	0.007801	2.795091	0.0055
LIQ	5.597605	1.091442	5.128632	0.0000
BSZ	0.249518	0.275294	0.906369	0.3655
BDP	9.908827	5.726629	1.730307	0.0846
R-squared.		0.138769		
Adjusted R-squared.		0.118123		
S.E. of regression.		6.099519		
F-statistic.		6.721375		
Prob(F-statistic)		0.000000		

Source: Researcher's computation (2025).

Key: ROE = Returns on Equity (dependent variable); FAG = Firm Age, FSZ = Firm Size, LEV = Leverage and LIQ = Liquidity (independent variables); TAN = Asset Tangibility, BSZ = Board Size and BDP = Board Independence (control variables).

Data in Table 4 shows regression findings that demonstrate FAG and ROE have a negative connection, as specified by the measurement's value of -0.013613. This demonstrates that a rise in FAG will cause ROE to fall and vice versa. This suggests that a 1.36 percentage drop in ROE will result from a percentage rise in FAG, and a 1.36 percentage gain in ROE will result from a percentage decrease in FAG. FAG has a statistically negligible impact on ROE, as asserted by the t-statistic value of -0.267691 and the p-value of 0.7891. The outcome of this analysis supports the conclusion of Ekadjaja et al. (2021), who documented a negative, insignificant connection between firm size and company value. Though it opposes the assumptions of Mgeni & Nayak (2016), the evidence suggests there is little correlation between changes in FAG and changes in ROE.

The results suggest that FSZ has an insignificant beneficial impact on financial performance. This suggests that non-financial enterprises' financial performance will improve as their firm size increases and vice versa. This shows that ROE will improve by 2.06 percentage points for every percentage increase in FSZ and drop by 2.06 percentage points for every percentage reduction in FSZ. The statistically negligible impact of FSZ on ROE is specified by the t-statistic value of 1.8124 ($p>0.05$). This indicates that the change in ROE will not be significantly impacted by an increase or decrease in FSZ. Findings from the research are in tandem with the conclusions. Uzoka et al. (2020) and Taiwo et al. (2022) found a negative, insignificant connection between firm size and financial performance. Nevertheless, it opposes the findings of Mgeni & Nayak (2016).

The results also showed a robust and positive linkage between TAN and the financial performance (evaluated by ROE) of the sampled firms at 5% level of significance. This proposes that ROE will rise (or fall) in response to an increase (or reduction) in TAN. For example, ROE will grow (or drop) by 4.59 per cent for every 1 per cent increase (or reduction) in TAN. The t-statistic value of 2.2594 ($p<0.05$) further suggests that asset tangibility significantly improves the performance of non-financial corporations in Nigeria. The above result agrees with the findings of Chukwu et al. (2017). Still, it contrasts with the study of Nangih at al. (2020), who discovered that the cost on tangible assets did not significantly influence profitability.

According to Table 4.3's outcomes, the adjusted R-squared is 0.118123 and the R-squared value is 0.138769. The R^2 number specifies the ratio of the variation of the endogenous variable that might be explained by the predictive factors. Although the value varies from 0 to 1, a larger number is preferable. This number is the only way to summarise the Goodness of Fit. According to the figure, after adjustment, approximately 13% of the total variance in the outcome variable is explained by the predictive factors, with the residual 87% influenced by unobserved factors.

The F-statistic provides a likelihood-ratio test of the model's adequacy. *The model, as a whole, demonstrates statistical significance at 1% level ($p < 0.01$)*, according to the F-statistic value of 6.721375 and the probability value of 0.0000. This establishes the statistical significance of the model. This shows that the model's influence to describe the dependent variable has a 99% confidence level. Therefore, it may be inferred that the target variable can be described by the explanatory factors.

Table 5: Regression results

Dependent variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-11.09137	5.344350	-2.075345	0.0388
LEV	0.020552	0.007429	2.766444	0.0060
TAN	0.213095	1.930571	0.110379	0.9122
BSZ	0.463934	0.271895	1.706296	0.0890
BDP	11.56774	6.001798	1.927379	0.0549
R-squared			0.052711	
Adjusted R-squared			0.039867	
S.E. of regression			6.318634	
F-statistic			4.103783	
Prob(F-statistic)			0.002981	

Source: Researcher's Computation (2025).

Key: ROE = Returns on Equity (dependent variable); LEV = Leverage (independent variable); TAN = Asset Tangibility (control variable); BSZ = Board Size (control variable); BDP = Board Independence (control variable).

The regression outcomes from Table 5 revealed that leverage has a significant positive influence on the profitability of the selected non-financial firms. Thus, a rise in leverage is anticipated to result in improved financial performance as determined by ROE. The coefficient suggests that a 1% rise in leverage is associated with a 0.02% improvement in ROE, ceteris paribus. This effect of leverage on financial performance is statistically significant as revealed by the t-statistic value of 2.76644 ($p< 0.01$). This indicates that an adjustment in leverage has a significant effect on an organization's profitability. The present finding is in agreement with that of Shuaibu et al. (2019). Conversely, this conclusion opposes that of Mustapha & Abdul-Qadir (2017).

The result also reported a positive and insignificant relationship between TAN and ROE of sampled firms. This indicates a positive relationship between TAN and ROE, where a 1% change in TAN corresponds to a 0.21% change in ROE in the same direction. This result further implies that asset tangibility, TAN, has an insignificant positive influence on the financial performance of non-financial companies in Nigeria, as displayed by the t-statistic value of 0.1104 ($p > 0.05$). The above result supports the outcome of findings Nangih at al. (2020) and contradicts the result of Chukwu et al. (2017), who observed that the cost of tangible assets does significantly affect profitability.

The outcome also shows that BSZ has a positive but statistically insignificant influence on the performance of Nigerian non-financial firms. Given a t-statistic of 1.7063 and a p-value of 0.0890, the result infers that larger boards may enhance firm performance slightly, though the magnitude of this effect is insufficient to establish statistical significance. The result resonates with the decisions advanced by Sahoo et al. (2023), who emphasised that (BSZ plays an important role in enhancing directors' ability to effectively monitor and regulate managerial activities. According to agency theory, a corporate board with varied proficiency and knowledge is more likely to demonstrate superior learning capacity and sound decision-making, which in turn improves firm performance. However, Fatma & Chouaibi (2021) argued that excessively large boards may face managerial challenges, diminished accountability, and prolonged decision-making processes, thereby reducing governance efficiency. Opposed to these observed results, Khan et al 2024 reported differing results.

The finding of the result also indicates an insignificant positive association between BDP and the profitability of non-financial corporations in Nigeria. This denotes that when BDP rises by 1 per cent, the return on equity of the firm will rise by 11.57 per cent and vice versa. The increase or decrease in the BDP does not have significant impact on the changes in the financial performance as indicated by the t-statistic of 1.9274 (p> 0.05). However, our discoveries are in support of Khan et al. (2024). Additionally, supporters of agency framework (1983) argue that external independent directors will weaken agency and supervisory costs, while decreasing executive propensities motivated by personal gain, therefore improving company business results. This is in contrast with Al-Saidi (2021).

An R-squared value of 0.0527 suggests that the independent variables jointly explain roughly 5% of the variability in the dependent variable, suggesting that the explanatory variables account for a limited proportion of the observed changes, whereas the remaining 95% is influenced by unobserved factors. The F-statistic provides a likelihood-ratio test of the model's adequacy. F-statistic value of 4.103783 with probability value of 0.002981 designates that the overall model is statistically significant at 1 per cent level of significance (p < 0.01). The model's statistical significance, supported by a 99% confidence level, underscores the robustness and reliability of its explanatory capability. Empirically, it can be established that the explanatory variables meaningfully explain the behaviour of the performance indicator.

Table 6: Regression results

Dependent variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-17.50927	5.392537	-3.246945	0.0013
LIQ	4.713398	1.093769	4.309319	0.0000
TAN	3.370314	2.046389	1.646956	0.1006
BSZ	0.592826	0.260564	2.275160	0.0236
BDP	10.06731	5.854734	1.719517	0.0866

R-squared	0.086984
Adjusted R-squared	0.074604
S.E. of regression	6.228192
F-statistic	7.026217
Prob(F-statistic)	0.000020

Source: Researcher's Computation (2025).

Key: ROE = Returns on Equity (dependent variable); LIQ = Liquidity (independent variable); TAN = Asset Tangibility (control variable); BSZ = Board Size (control variable); BDP = Board Independence (control variable).

LIQ is found to be positively related to ROE, as reflected by the coefficient value of 4.7134. This finding specifies that an improvement in liquidity (LIQ) is likely to enhance return on equity (ROE), whereas a decline in liquidity may result in a reduction in ROE and vice versa. The coefficient suggests that a 1% change in liquidity (LIQ) results in a proportional 4.7% change in ROE in the same direction. The t-statistic value of 4.3093 (p < 0.01) implies that LIQ is statistically significant to ROE, as shown by the p value (p < 0.0000). This signifies that the increase or decrease in LIQ has a significant effect on the change in ROE. This finding echoes the conclusions of Rafli et al. (2023) and opposes the work of Alawiyah et al. (2023) and Nindi & Triyono (2022).

The result also reported that there is a positive and insignificant connection between TAN and ROE of listed companies in Nigeria. This suggests that an increase (or decrease) in TAN will lead to an increase (or decrease) in ROE. For instance, 1 per cent growth (or decline) in TAN will result in a 3.37 per cent increase (or decrease) in ROE. This result further implies that asset tangibility, TAN, has an insignificant positive influence on the financial performance of non-financial businesses in Nigeria, as revealed by the t-statistic value of 1.646956 (p> 0.05). This observation resonates with the works of Ali (2020) and Musah et al. (2019). On the contrary, İltaş & Demirgüneş (2020) established a negative linkage between asset tangibility and firm performance.

However, the result showed that BSZ has a positive and statistically significant effect on the performance of Nigerian firms at 5% significance level. This points to the fact that changes in BSZ are positively linked with changes in the profitability of the selected firms and that this change in the board size could significantly affect the changes in the financial performance as designated by the t-statistic of 2.275160 with the p-value of 0.0236. Our conclusions are consistent with the outcome of Al-Saidi (2021) and inconsistent with that of Al-Gamrh et al. (2020).

Furthermore, the findings of the study show an insignificant positive connection between BDP and the performance of non-financial firms in Nigeria. This signifies that when board independence rises by 1 per cent, the profitability of the firm will rise by 10.07 per cent and vice versa. The increase or decrease in the board independence does not have a significant effect on the changes in the financial performance, as indicated by the t-statistic of 1.7195 (p> 0.05). This is in tandem with the results of Al-Gamrh et al. (2020) and opposes that of Al-Saidi (2021).

The analysis reveals that in Table 6, the model yields an R-squared value of 0.086984 and an adjusted R-squared value of 0.074604, suggesting a modest level of explanatory power. This R^2 value demonstrates how effectively the independent variables capture the variability present in the dependent variable. The value lies between 0 and 1, but a higher value is better. This value serves only as a summary measure of Goodness of Fit. The result implies that, even after adjustment, the model's predictors account for only 9% of the variability in the dependent variable, with the remaining 93% influenced by other factors not included in the analysis. The F-statistic provides a likelihood-ratio test of the model's adequacy. F-statistic value of 7.026217 with probability value of 0.000020 specifies that the overall model is statistically significant at 1 per cent level of significance ($p < 0.01$). The results further highlight that the model attains statistical significance, suggesting that there is 99% confidence in its explanatory power regarding the endogenous variable. Thus, the response variable is significantly described by the determinant factors integrated in the model.

Conclusion

The study concludes that firm-specific characteristics, principally leverage, liquidity, and asset tangibility, play key roles in determining the financial performance of listed non-financial firms in Nigeria. While leverage and liquidity significantly increase firm profitability, firm age and size do not exert a meaningful impact. The governance-related variables (board size and board independence) demonstrate mixed effects, with board size showing a significant positive impact only in the last model.

These results suggest that financial and governance structures mutually contribute to firm performance, but their effects vary depending on internal management efficiency and market dynamics. Consequently, maintaining optimal liquidity and leverage levels, coupled with an effective board composition, is vital for sustaining firm performance in Nigeria's emerging market environment.

Recommendations

Grounded in the conclusions derived from the study, the following suggestions are offered:

i. Firms should not rely solely on their existing market position or years of operation. Rather, they should formulate innovative strategies to enhance their market share by expanding into new geographical markets and developing a broader range of products and services.

ii. Nigerian firms should minimise the costs associated with expansion and adopt strategies that maximise the advantages derived from economies of scale, given the positive association observed between firm size and performance. Management should focus on optimising asset utilisation and ensuring efficient allocation of resources to improve overall operational performance.

iii. Management should adopt prudent leverage practices. Although leverage positively influences performance, firms are encouraged to prioritise equity financing over debt to avoid excessive leverage and future profitability risks. Further, firms should strike a balance between debt and equity financing to ensure that leverage is maintained at levels that enhance profitability without exposing the firm to excessive financial risk.

iv. Non-financial firms should maintain strong liquidity positions and diversify their assets to ensure continued profitability and long-term sustainability. While board independence alone may not guarantee higher performance, appointing experienced and proactive independent directors can enhance transparency and accountability, improving long-term firm value. Firms should maintain moderately sized boards composed of individuals with diverse expertise to promote effective oversight and strategic decision-making.

v. Regulators and policymakers should promote frameworks that encourage prudent liquidity and leverage management while strengthening corporate governance practices across the non-financial sector.

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