

Tobin-Q Valuation Methodology of the Impact of Corporate Governance Structure on Organizational Performance: Evidence from Nigeria's Banking Sector

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Academic editor: Sheresheva M. | Received 18 August 2024 | Accepted 7 March 2024 | Published 2 April 2025

Citation: 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. <https://doi.org/10.3897/brics-econ.6.e134961>

Abstract

The paper investigates the relationship between corporate governance and organizational performance in Nigeria's banking sector between 1996 and 2023, using the Tobin-Q valuation and operating performance methodology (quantitative characteristics) of variables in analyzing data collected from secondary sources.

The internal mechanisms of corporate governance such as Returns on Assets (ROA), shareholder profit and Debt-Equity ratio had a negative impact on organizational performance. The study into forecast and long-term co-integration relationship between corporate governance mechanisms and organizational performance has shown that the enhancement of organizational performance by corporate governance mechanisms is likely to experience a steady increase after 2023.

Keywords

Nigeria's Banking Sector; Internal Mechanisms; External Mechanisms; Corporate Governance

JEL: G24, L25, M14, E47, G21.

1. Introduction

The notion of corporate governance has been interpreted in several ways based on different approaches. Monk and Minow (2011) conceptualized corporate governance as the analysis of governing structures and processes in corporations and business systems.

OECD (2004) defined corporate governance as a set of interactions between a company's management, board of directors, shareholders and other stakeholders through which organizational objectives are set, target indicators indicated and performance monitoring organized. In the same vein, corporate governance is said to include ways of devising strategies of a firm and defining key relationships among various interest groups (Čengić, 2001; Clarke, 2007).

Versic-Marusic (2004) maintains that cooperative governance has been established to increase the trust between the key stakeholders and their responsibility in order to enhance the firm's credibility.

It is important for attracting investments that result in benefits to the stakeholders of the business (Morck, 2002).

The effectiveness of corporate governance is determined by internal and external mechanisms. The internal ones are shareholders, lenders, internal control systems (ICS), composition of boards of directors, management policy, ownership mix and financial transparency; external mechanisms include the legal environment in which a firm operates, external audit, competitive markets and ownership rights protection. They determine or in some degree influence the principles of corporate governance and the ways of their implementation; therefore, they need to be taken into account when constructing an index for measuring the quality of corporate governance.

Organizational performance is viewed as the degree of achievement to which an employee fulfills the organizational objectives at a workplace (Cascio, 2006). Several researchers regard organizational performance as a measurement of efficiency and effectiveness of business transactions that contribute to meeting organizational goals (Barney, 1991). Essentially, organizational performance could be viewed as the capability of an organization to establish a perfect relationship with available business resources leading to the effective and efficient management of these resources (Daft, 2000).

The previous or intended performance assisted by equity-based returns forms the basis for effective management of the organization's resources, making it more productive and efficient. (Ricardo & Wade, 2001). In Nigeria, the impact of corporate governance on organizational performance requires particular attention because of numerous uncertainties, misappropriations and governance failures that have occurred in the country's major companies.

Corporate governance failures can be explained by lack of professionalism, inadequate management styles, conflicts of interests and other unethical practices that have caused financial troubles and eventual collapse of various business organizations. Since the country needs to maintain economic stability, it is imperative that a system

of efficient corporate governance be created; hence the research questions the present study aims to answer:

- i. Do the external mechanisms of corporate governance affect organizational performance in Nigeria's banking sector?
- ii. Do the internal mechanisms of corporate governance affect organizational performance in Nigeria's banking sector?
- iii. To what extent does corporate governance compliance affect organizational performance in Nigeria's banking sector?

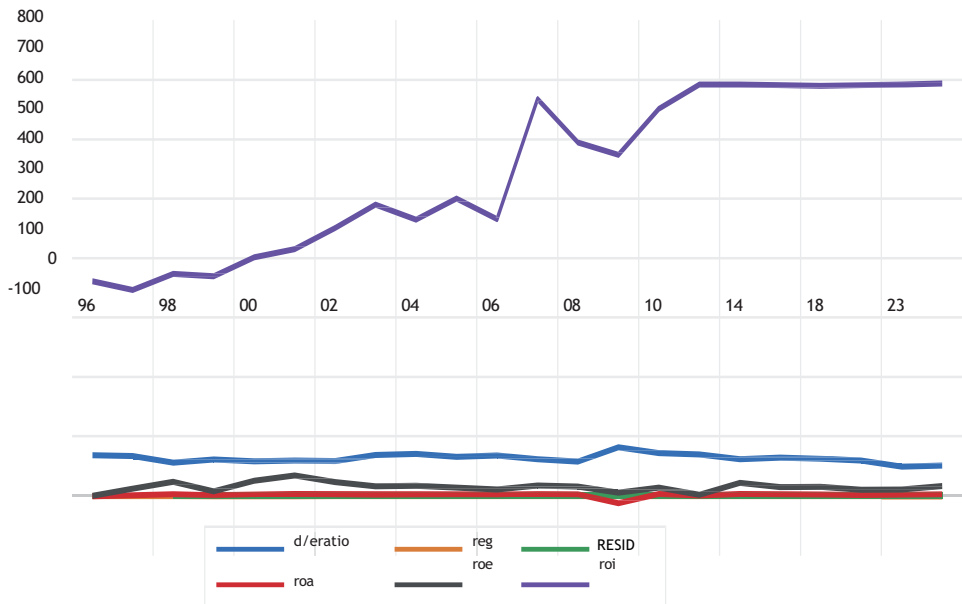


Figure 1. Trend of Corporate Governance Indicators in Nigeria, 1997-2023. *Source:* Authors Computations, (2024).

The primary aim of the study is to examine the relationship between corporate governance and organizational performance in Nigeria's banking sector. The specific objectives are as follows:

- i. Examine the effect of external mechanisms of corporate governance on organizational performance in Nigeria's banking sector.
- ii. Examine the effect of internal mechanisms of corporate governance on organizational performance in Nigeria's banking sector.
- iii. Investigate the overall effect of corporate governance structures on Nigeria's banking sector.

The research hypothesis includes the following propositions:

- i. Ho1: External mechanisms do not have any significant effect on organizational performance in Nigeria's banking sector.

ii. Ho2: Internal mechanisms do not have any significant effect on organizational performance in Nigeria's banking sector.

iii. Ho3: There is no significant relationship between corporate governance compliance and organizational performance in Nigeria's banking sector.

The scope of the study will be limited to the effect of corporate governance on the banking sector in Nigeria over the selected time periods between 1996 to 2020.

The remaining part of the paper is organized in the following way: Section Two presents a literature review, Section Three explains the research methodology, Section Four reports the results, and Section Five offers the author's conclusions and recommendations.

2. Literature review: theoretical perspectives

It is generally accepted that business owners in developed and emerging markets are always willing to pay for high standards of corporate governance that can be achieved by establishing an effective corporate governance system (Campos et al., 2002).

Macey (1998) and Gibson (2003) point out that assessment of performance or effectiveness of corporate governance systems and mechanisms could be misleading, so there is a need to investigate the impact of governance outcomes. This corroborated the work of Kaplan and Norton (2002) who came to the conclusion that, although corporate governance mechanisms vary across markets, their outcomes are similar.

In 2004, OECD formulated the core principles of corporate governance and introduced various corporate governance indexes which mostly focused on the characteristics of corporate governance mechanisms rather than their outcomes.

Macey (1998) highlighted three measures of corporate governance systems' performance. One should assess, first, the degree of investors' control (voting power); second, the possibility of company stocks to be bought by willing entrepreneurs in the capital market and, third, the effectiveness of internal and external markets needed for effective corporate control.

Gibson (2003) argued that management inefficiencies in corporate governance systems were to be dealt with through takeover schemes or appointments of new executives made by key stakeholders and institutional investors. Kaplan (1994) and Abe (1997) on their part believed that corporate governance systems could be evaluated by examining the nexus between CEO turnover rate and corporate performance. Their results show that in an effective corporate governance system the poorly performing managers are replaced.

Abe (1997) also maintained that organization performance measures could be market based, or accounting based. The accounting-based measures point to a stronger relationship between CEO turnover and financial performance with extreme levels of stock price changes (volatility) affecting CEO turnover in both

developed and emerging markets (Warner et al, 1988). Campbell and Keys (2002) and Aviazian et al (2005) argued that poor performance is associated with a higher CEO turnover in emerging markets, which means that corporate governance systems in emerging markets tend to be ineffective.

Ownership structure is also seen as an important factor of corporate governance through its nexus with organizational performance. For instance, Denis et al. (1997), Huson et al (2004), and Volpin (2002) found that a firm's ownership structure impacted corporate governance performance. Managers who own shares of their companies tend to hold their posts longer as higher ownerships insulates them from internal monitoring mechanisms. Brunello et al. (2003) suggest that poor corporate governance can be observed when top executives are controlling shareholders.

However, this runs contrary to the result obtained by Denis et al (1997) who argued that high managerial ownership in business concerns should be considered efficient when it serves the interests of both key shareholders and managers.

Kang and Shivdasani (1996) used an ownership structure model to investigate the effect of outside succession on organizational performance. Outside succession plans were seen as having positive relationship with ownership structures set by corporate stakeholders and non-executive directors. They were also found to be related to the size of the firm and the industry it operates in.

The analysis of existing literature has shown that different corporate governance models and their impacts on performance have been explored. Yet, it is not quite clear why accounting-based and market-based measurements produce different results: hence the need for further studies.

3. Comparative Review of the Impact of Corporate Governance Structure on Organizational Performance in Emerging Economies

To assess the relationship between corporate governance practices (CGPs) and organizational performance in India, Wasdani, Vijaygopal, Manimala, and Verghese (2021) collected data from a sample of 100 companies listed in India using an adapted version of the questionnaire designed by the Institute of Company Secretaries of India (ICSI). They sought to understand the in-depth the implications of reforms in the corporate sector of the economy undertaken in the first twenty years of this century, especially some of the major CG reforms. Their results received through Multilevel Factor Analysis (MFA) for scores along five CG subcategories showed four second-level factors and seventeen first-level variables. When the Compound Annual Growth Rate (CAGR) was used to quantify organizational performance, it was found that the first-level factor, which stands for corporate social responsibility and sustainability (CSRS), was a strong predictor of organizational performance.

This finding bears significance for the implementation of mandatory corporate social responsibility (CSR) rules under Indian CG legislation, which apply

to enterprises that meet specific profitability and turnover benchmarks. The results of the study shed light on obligatory and desirable rules in the Indian environment, as well as CG regulation. Instead of considering the CG practice of investing in CSR projects through purpose-led CSRS interventions as a mandated CG provision that results in short-term expenses, eligible Indian enterprises should concentrate on the long-term benefits of this practice.

Using the evidence from Chinese listed companies, Guluma (2021) examined the relationship between corporate governance (CG) measures and firms' performance and also the influence of managerial behavior on these relationships. The study considered internal CG mechanisms represented by the independent board, dual board leadership and ownership concentration, and external ones including debt financing and product market competition. The corporate earnings forecasts were used to gauge managerial overconfidence; Return on Assets (ROA) and Tobin-Q served to assess the company's performance.

The researcher examined panel data of 11,634 samples of Chinese listed companies from 2010 to 2018 using a Generalized Method of Moments estimating model to examine the assumptions that were put forth. Based on ROA and Tobin-Q, the study's results pointed to a positive and significant association between ownership concentration and product market rivalry on the one hand and company performance on the other.

Dual leadership has a negative correlation with TQ; debt financing has a strong negative correlation with both ROA and TQ, the two indicators of company success. Furthermore, the empirical findings showed that managerial overconfidence had a negative impact on the organization's performance in as it affected the influence of ownership concentration, dual leadership, and board independence. Also, it had a negative influence on the relationship between debt financing and operational firm performance. At the same time, measured by Tobin's Q, it was found to have a positive moderating effect on the impact of debt financing on firm performance.

The study by Guluma is indeed important. First, it contributes to the body of knowledge on the relationship between CG and the firm's performance using the evidence about the Chinese CG structure; second, it shows how managerial behavioral bias interacts with CG mechanisms to impact the performance of the company; third, its findings add to the theoretical perspective by shedding light on the role that managerial behavior plays in the relationship between CG practices and firm performance in an emerging market economy.

Aguilar and Marciel (2024) empirically analyzed the financial contribution of corporate governance mechanisms to the value creation in listed Latin American family firms. They have shown that important factors include the size of the board of directors, degree of independent directors' participation and the CEO's dual role. They are significant for an economy in which there are many family firms with their traditional concentration of power, legal and regulatory weaknesses, and uncertain market conditions.

Systems of corporate law, corporate governance procedures and governments' monitoring policies in India and the countries of the Gulf Corporation Council (GCC) are briefly discussed by Al-Ahdal, Al-Samhi, Tabash, and Farhan (2019). These authors examine the impact of corporate governance practices on the financial results of listed companies in the GCC and India. 53 non-financial listed firms from India and 53 non-financial listed companies from the GCC countries make up the study's sample, which spans the years 2009–2016. They found that the performance of enterprises as determined by ROE and Tobin's Q was not significantly impacted by Board Accountability (BA) or the Audit Committee (AC). Similarly, the firms' performance as determined by Tobin's Q was negatively impacted by transparency and disclosure (TD) in a negligible way. Based on the national dummy results, the paper showed that Indian companies were outperforming those in the Gulf in terms of financial outcomes and corporate governance. The study was regarded as a foundation for future research in the areas of corporate governance and financial performance of listed corporations in India and the GCC.

4. Methodology

To investigate the relationships between corporate governance and organizational performance in Nigeria's banking sector, the present study employed a Tobin-Q methodology based on quantitative characteristics of the variables to analyze the data collected from secondary sources. The market value of a firm or index is compared to its book or replacement value using the economic ratio known as Tobin's Q formula, which can be applied to gauge the relative worth of the market as a whole or the shares of a firm. Financial analysts and industrial organizations' economists frequently use the firm level Tobin's q , which is commonly understood as the market value of a company divided by its book value. Yet, the differences in measurements, applications, and interpretations are significant enough to raise doubts about its applicability (Zaleski, 2024).

The relationships between governance variables and firm performance of the banking sector in Nigeria were analyzed using econometric software packages. This study used secondary data obtained from audited account statements of quoted manufacturing companies in Nigeria.

The time series data covering the period 1996 to 2023 are used to design a model that can help investigate the impact of corporate governance on organizational performance in Nigeria. It is a Tobin-Q model that serves to assess operating performance using internal and external factor variables such as Return on Equity (Proxy for shareholders profit), Regulatory index, Debt Holder's perspective (Debt-Equity Ratio), Return on Asset (Proxy for corporate governance), and Return on Investment as Proxy for Organizational Performance.

Financial performance is gauged by a company's return on equity (ROE). To compute its value, we divided the net income by the equity held by shareholders.

With the corporate debt taken into account, the company's assets are smaller than its shareholders' equity so ROE is a measure of a company's return on its net assets. The company's profitability and efficiency are both measured by return on equity. The better its return on equity (ROE), the more effective is its management in producing revenue and expanding operation through its equity financial resources.

The regulatory index (REG), a measure of financial soundness, is computed with risk-weighted assets as the denominator, and total regulatory capital as the numerator. It gauges depositors' capital sufficiency. It is a crucial factor because financial institutions' resilience to the shocks their balance sheets may suffer is determined by their capital's availability and sufficiency.

By dividing a company's total liabilities by its shareholder equity, we established the debt-to-equity ratio (D/E ratio), which is used to assess a company's financial leverage. The D/E ratio is a crucial corporate finance measure. It indicates the share of a company's activities funded by debt as opposed to internal resources and can be used to determine the gearing.

The efficiency of a company's operations and profitability of its assets are assessed using the operating Return on Assets (ROA). Analysts and investors, who prefer to ignore the cost of acquiring assets, be it debt or equity, and the impact of taxes that differs across countries, sometimes employ the ROA. In our analysis, we use the ROA as a proxy of Corporate Governance; to compute it, we divided the Average Total Assets by Earnings Before Interest and Taxes (EBIT).

Investment profitability or efficiency can be assessed, and so the efficiency of several distinct investments can be compared using Return on Investment (ROI), a performance metric for Organizational Performance. ROI can help to quantify the return on a given investment. The initial investment amount, maintenance expenses, and the cash flow produced by an investment are important variables affecting the return on investment (ROI), which is calculated by dividing investment gains by its cost.

Our model's implicit form,

$$\text{Log ROI} = f(\text{ROA}, \text{ROE}, \text{DE}, \text{REG}) \quad (1),$$

is then transformed into an error correction parsimonious model:

$$\begin{aligned} \text{Log ROI} &= \alpha_0 + \beta_1 \text{ROA} + \beta_2 \text{D/E} + \beta_3 \text{REG} + \beta_4 \text{ROE} + \\ &= \beta_5 \text{Log}(\text{ROI}_{t-1}) + \beta_6 \text{Log}(\text{ROI}_{t-2}) + \varepsilon_t \end{aligned} \quad (2),$$

where ROI represents Returns on Investment, the dependent variable and proxy for Organizational Performance, ROA represents Returns on Asset as a proxy for corporate governance, ROE represents Return on Equity, DE represents the debt-equity ratio of the companies, i.e. their leverage or gearing ratio. REG represents the regulatory index.

5. Presentation of Result

5.1. Descriptive Statistics

Table 1. Descriptive Statistics

	Log ROI	D/E ratio	REG	ROA	ROE
Mean	6.392079	63.22853	-0.917441	1.271913	14.75462
Median	6.403136	62.11260	-0.884014	2.064105	14.71915
Maximum	6.635697	81.37260	-0.659629	3.260710	34.09250
Minimum	6.025624	49.17720	-1.351967	-12.82980	0.144851
Std Deviation	0.227720	7.293000	0.207080	3.300359	7.800951
Skewness	-0.244150	0.270668	-0.788315	-3.771582	0.318364
Kurtosis	1.500030	3.319729	2.385829	16.66135	3.378119
Jarque-Bera	2.280984	0.362332	2.624386	223.2376	0.502696
Probability	0.319662	0.834297	0.269229	0.000000	0.777752
Observation	24	24	24	24	24

Source: Author's Computation (2024).

The analysis, summation, and presentation of our findings regarding our dataset derived from the research sample or entire sample population is referred to as "descriptive statistics." There are three main categories of descriptive statistics: measures of central tendency, measures of variability, and frequency distribution. Data visualization through descriptive statistics makes data both meaningful and intelligible, thus facilitating a simplified interpretation of the dataset in question.

The descriptive statistics provide a summary of the essential properties of a dataset, allowing us to understand the distribution of the data, detect patterns and make informed judgments. The dataset's central tendency is represented by the mean, which has large values for the D/E ratio, ROE, REG, ROA and Log ROI, and low, negative, and positive distributions for the other variables.

The data's dispersion or spread about the mean is represented by the standard deviation; a high standard deviation denotes a large spread, while a low standard deviation denotes a narrow spread. Our dataset has a low spread for ROE and log ROI and a large spread for D/E ratio, ROE and ROA. By examining whether most of the values are concentrated on one side or the other, the skewness measure detects any asymmetry in the data. Our data is N-shaped and exhibits good asymmetry.

5.2. Unit Root Testing

The Unit Root Test enables a researcher to test a series for non-stationarity. Specifically, it does an Augmented Dickey-Fuller (ADF) test of the null hypothesis holding that a time series has a single root, which will violate the fundamental assumptions of many statistical models.

The variance may be infinite overall if the system contains a unit root, making it problematic to use the data for additional study. Since the series has a unit root, the null hypothesis is that it equals zero, or $H_0:\alpha=0$ $H_1:\alpha<0$.

T-values from the sample statistics, $t\alpha=\alpha/\sigma\sqrt{\alpha}$ following OLS estimation, are used for evaluation. because both asymptotically and in sample, the ADF estimator's t-values are non-standard.

Table 2. Unit Root test Statistics

Variables	Augmented Dickey-Fuller (ADF)			Phillip-Perron		
	Level	First Difference	I(d)	Level	First Difference	I(d)
Log(ROI)	3.808546 ^{a***}	-4.571559 ^{b***}	I(1)	-3.012363 ^{a**}	-2.679735 ^a	I(0)
Log(D/E ratio)	2.646119 ^{a*}	3.261452 ^{a*}	I(0)	-3.788030 ^{a***}	-3.268973 ^b	I(1)
REG	-2.646119 ^{a*}	-4.571559 ^{b***}	I(1)	-2.646119 ^{a*}	-3.808546 ^c	I(0)
ROA	-3.788030 ^a	-4.498307 ^b	I(0)	-3.788030 ^b	4.498307 ^{b**}	I(1)
Log(ROE)	-3.788030 ^a	-4.532598 ^b	I(0)	-3.788030 ^a	-3.808546 ^c	I(0)

*Note that ***, ** and * implies significance at 1%, 5% and 10% respectively. Also, a' denotes model with constant, b' is for model with constant and trend and 'c' is the model without constant and trend. Source: Authors Computations, (2024).*

Usually, a modified version of the Phillips-Perron or Dickey-Fuller statistics is used as the test statistic. The statistic expresses the degree of apparent unit root in the time series. Under the null hypothesis that the time series has a unit root, the p-value indicates the likelihood of witnessing the test statistic (or a more extreme value).

We reject the null hypothesis and infer that Log ROI, REG and Log of ROE are stationary based on the p-value. Furthermore, using the Phillip-Perron Test, the results validate that the ROA and the Log D/E ratio are stationary at First Difference. Only Log ROI and REG are stationary after First Difference according to the Augmented Dickey-Fuller test.

5.3. Error Correction Regression Results

The industry standard for modeling time series equations is an Error Correction Model (ECM). The ECM distinguishes between the long and short terms and enables handling the nonstationary data series. Ad hoc assumptions about how the variables evolve over time are not made by ECM models.

Cointegration between y_t and x_t occurs if there is a linear combination of y_t and x_t that is stationary ($I(0)$). This suggests that the estimated residuals are stationary, too.

Accordingly, the Engle and Granger test is performed by first utilizing OLS to run the “co-integrating regression,” or the long-run relationship, and then determining if the residual in the estimated equation is stationary. A stationary cointegrating connection is present if it is stationary.

Table 3. ECM Model Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.086435	1.218703	0.891468	0.3889
LOG(D/E_RATIO)	-0.036019	0.206880	-0.174106	0.8645
REG	0.107397	0.094440	1.137196	0.2760
ROA	0.013065	0.006744	1.937139	0.0748
LOG(ROE)	-0.029482	0.032938	-0.895082	0.3870
LOG(ROI(-1))	0.266450	0.216311	1.231791	0.2398
LOG(ROI(-2))	0.618965	0.208935	2.962475	0.0110
C	1.086435	1.218703	0.891468	0.3889
R-squared	0.915837		F-statistic	23.57690
Adjusted R- squared	0.876992		Durbin-Watson stat	2.033354
Prob(F-statistic)	0.000003		P<0.05**	p<0.01***

Source: Authors Computation, (2024).

To incorporate both a short-term adjustment process and a long-term link between our variables, we used an error correction model, a form of econometric model. The model is expected to capture the long-term equilibrium and any short-term departures from it.

The first lagged value of ROI, second lagged value of ROI, and dependent variables REG, ROA, and second lagged value of ROI have a propensity to move toward their long-run equilibrium value, according to our error correction coefficients.

Conversely, the error correction coefficients in our findings indicate that the dependent variables, namely the log value of the D/E ratio and the log value of REG, have a propensity to deviate from their overall equilibrium values.

The long-run coefficients show how modifications to the independent variables have a lasting impact on the dependent variable that has a significant long-run link between the variables as indicated by coefficients. According to our

study, the dependent variable is permanently impacted by REG, the lagged value of the ROI and the second lagged value of the ROI.

In the Error Correction model, the uncertainty associated with each coefficient estimate is represented by the Standard Errors estimate; a smaller Standard Error denotes a more precise estimate, while a greater Standard Error denotes a less precise estimate. Our independent variables all have comparatively small standard errors, indicating the accuracy and dependability of both our long- and short-term estimations.

5.4. Cointegration Test Results

Table 4. Cointegration Test Results

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
LOG(ROI)	-4.652555	0.2773	-20.02107	0.3009
LOG(D/E_RATIO)	-3.845718	0.5611	-15.18248	0.7139
REG	-5.212845	0.1492	-20.22922	0.2829
ROA	-3.205966	0.8027	-13.83440	0.8009
LOG(ROE)	-4.341143	0.3746	-19.30770	0.3561
LOG(ROI(-1))	-8.022610	0.0033	-29.27636	0.0013
LOG(ROI(-2))	-3.540642	0.6857	-27.47680	0.0020

Source: Authors Computation (2024).

Using the null hypothesis that the variables are not cointegrated or that there is no long-term relationship, we applied the Engle-Granger (EG) Test to ascertain that two or more time series variables are long-run equilibrated or that they have a long-term relationship.

Under the null hypothesis, the test statistic—typically a p-value or an F-statistic—represents the likelihood of witnessing the test statistic. If the p-value falls below the 5% significance level, we reject H₀, suggesting that cointegration is present and that the variables are probably long-run equilibrated.

The variables might not be long-run equilibrated if we are unable to reject H₀ at the 5% significance level, which suggests that there is no evidence of cointegration.

Thus, the independent variables of Log ROI, REG, Log value of Lagged ROI and Log value of second Lagged ROI are the only variables having a long-run co-integrating effect on the dependent variable. The high critical values show that we reject the null hypothesis.

5.5. Pairwise Granger Causality Tests

Table 5. Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG(D_E_RATIO) does not Granger Cause LOG(ROI)	22	1.00159	0.3906
LOG(ROI) does not Granger Cause LOG(D_E_RATIO)		0.12269	0.8854
REG does not Granger Cause LOG(ROI)	22	0.20247	0.8189
LOG(ROI) does not Granger Cause REG		0.02428	0.9761
ROA does not Granger Cause LOG(ROI)	22	0.86972	0.4392
LOG(ROI) does not Granger Cause ROA		1.66674	0.2220
LOG(ROE) does not Granger Cause LOG(ROI)	22	0.26171	0.7732
LOG(ROI) does not Granger Cause LOG(ROE)		1.52088	0.2504
REG does not Granger Cause LOG(D_E_RATIO)	22	2.58211	0.1087
LOG(D_E_RATIO) does not Granger Cause REG		2.81052	0.0919
ROA does not Granger Cause LOG(D_E_RATIO)	22	0.07517	0.9279
LOG(D_E_RATIO) does not Granger Cause ROA		0.19617	0.8239
LOG(ROE) does not Granger Cause LOG(D_E_RATIO)	22	1.83719	0.1933
LOG(D_E_RATIO) does not Granger Cause LOG(ROE)		5.47171	0.0164
LOG(ROI(-1)) does not Granger Cause LOG(D_E_RATIO)	21	3.59637	0.0549
LOG(D_E_RATIO) does not Granger Cause LOG(ROI(-1))		1.75169	0.2094
LOG(ROI(-2)) does not Granger Cause LOG(D_E_RATIO)	19	0.77092	0.4826
LOG(D_E_RATIO) does not Granger Cause LOG(ROI(-2))		0.30270	0.7439
ROA does not Granger Cause REG	22	0.20293	0.8185
REG does not Granger Cause ROA		1.52153	0.2502
LOG(ROE) does not Granger Cause REG	22	0.07740	0.9259
REG does not Granger Cause LOG(ROE)		7.21676	0.0064
LOG(ROE) does not Granger Cause ROA	22	0.13751	0.8726
ROA does not Granger Cause LOG(ROE)		10.9144	0.0012
LOG(ROI(-1)) does not Granger Cause ROA	21	10.1589	0.0019
ROA does not Granger Cause LOG(ROI(-1))		1.69161	0.2198

Source: Authors Computation (2024).

A statistical technique for examining the causal relationship between two time series is the Pairwise Granger Causality Test. It helps determine whether one variable (X) has a greater predictive power than the other (Y), incorporating a constant and the lag values of Y.

Since X does not Granger-cause Y, our null hypothesis (H0) is true. H0, in other words, asserts that there is no information in X that makes it possible to forecast Y more accurately than in other variables. More evidence is found to be against the null hypothesis when the test statistic, which is usually an F-statistic, is greater.

Consequently, based on our research, we reject the null hypothesis that LOG(ROI) does not Granger Cause ROA, LOG(D_E_RATIO) does not Granger Cause LOG(ROI), and LOG(ROI) does not Granger Cause LOG(ROE), REG does not Granger Cause LOG(D_E_RATIO), LOG(D_E_RATIO) does not Granger Cause REG, LOG(ROE) does not Granger Cause LOG(D_E_RATIO), LOG(D_E_RATIO) does not Granger Cause LOG(ROE), LOG(ROI(-1)) does not Granger Cause LOG(D_E_RATIO), REG does not Granger Cause LOG(ROE), ROA does not Granger Cause LOG(ROE), and LOG(ROI(-1)) does not Granger Cause LOG(ROE).

5.6. Impulse Response Forecast

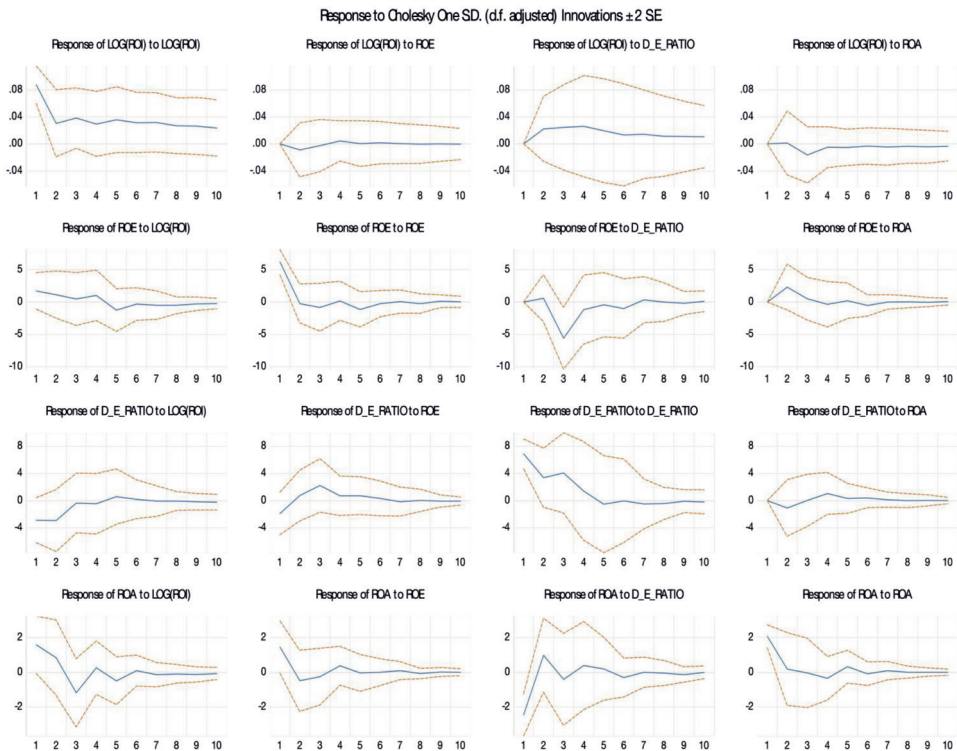


Figure 2. Impulse Response of External and Internal Mechanisms of Corporate Governance and Organizational Performance in Nigeria’s Banking Sector. *Source:* Authors Computation (2024).

The Impulse Response Forecast (IRF) for the next ten (10) years showed a possible downward trend in the impact of corporate governance on organizational performance in the Nigerian banking sector.

6. Implications for policymakers

According to the results obtained by the author, businesses with strong corporate governance (CG) systems will improve their organizational performance, particularly when it comes to information sharing and openness. To gain greater value, prospective investors, stakeholders, politicians and international organizations should maintain and, where necessary, enhance transparency.

A set of standards for evaluating CG practices need to be swiftly developed for banks to comply with international environmentally friendly standards. There should be clear rules and more stringent guidelines for the required disclosure of information. It is also necessary to provide incentives for voluntary disclosure of information, especially on related parties. Properly formulated corporate transparency standards will contribute to a more favorable business climate that will draw in both domestic and foreign investors and foster honesty, integrity and moral principles in the marketplace.

The research indicates that businesses with a strong corporate governance (CG) that are accountable to stakeholders and provide them with adequate information will demonstrate improved financial performance.

Every business in Nigeria, including its banks, need to develop corporate governance regulations that will match their current circumstances and balance the interests of all parties involved. Businesses must also formulate the rules pertaining to ethics and company culture.

The success of corporate governance standards and the global orientation of banking sectors, particularly in emerging countries, might show the way to improving organizational performance. It is therefore possible that international orientation and initiatives will contribute to sound corporate governance that will, in its turn, have a favorable impact on organizational performance.

Furthermore, the relationship between corporate governance and business performance has been shown to be favorably and significantly moderated by international orientation. Based on the findings, financial sectors in emerging nations may gain fresh insights from participating in the global market. Investors and governments in emerging nations should work together to facilitate globalization of banking sectors.

7. Summary and Conclusions

The paper looks at the impact of external and internal mechanisms of corporate governance and its influence on organizational performance in Nigeria's banking

sector. All variables for internal and external mechanisms of corporate governance were significant at 5% level with the Error Correction regression results showing that external mechanisms of corporate governance, e.g. regulatory index, have a positive but insignificant impact on organizational performance in Nigeria's banking sector.

The internal mechanisms of corporate governance such as Returns on Assets (ROA), shareholder's profit and Debt-Equity ratio had a negative impact on organizational performance. The forecast and long-term co-integration relation between corporate governance mechanisms and organizational performance imply that the inducement of organizational performance by corporate governance mechanisms is likely to experience a steady increase after 2023 with both mechanisms having a long-term relationship with organizational performance in the Nigerian banking sector.

In the case of Nigeria, some of the operational lapses of certain players in the banking industry can be attributed to inadequate management and insufficient internal control mechanisms. The Nigerian banking sector has also been plagued by technical mismanagement, which includes poor policies, a lack of standard practices, bad lending, misalignment of assets and liabilities, weak and ineffective internal control systems and poor, sometimes practically nonexistent, strategic planning (Babatunde & Olaniran, 2009).

We can thus conclude that although internal processes are essential for efficiency, they might not be enough for effective corporate governance because, in addition to these internal elements, the performance of the Nigerian banking system may also be impacted by external factors.

The influence of the external mechanisms on the performance of corporate governance in the Nigerian banking sector may be significant but good governance appears to be more important when a country's legal environment does not properly secure investors' interests and compliance and law enforcement appear to be inadequate. Besides, the costs of monitoring may be especially high in Nigeria, as there are many dispersed external investors in the banking sector which may have created a free-rider problem, thus substantially decreasing the benefits accruing to bona fide market participants.

In addition, the pair-wise granger causality test showed that most internal mechanisms except the regulatory index do not granger-cause organizational performance. Also, there was evidence of a two-way causality between external mechanisms of corporate governance and organizational performance.

Lastly, the Impulse Response Forecast (IRF) for the next ten (10) years showed a possible downward trend in the impact of corporate governance on organizational performance in the Nigerian banking sector.

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