Impacts of Corporate Governance Practices on the Liquidity and Capital Adequacy of Insurance Companies in Nigeria

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Abstract
Corporate governance practices impact insurance companies' liquidity and capital adequacy. This study explored the impact of corporate governance practices on insurance companies' liquidity and capital adequacy. This study used an ex-post facto research design, using a 20-year (2004 – 2023) time series, data extracted from the financial records of selected insurance companies in Nigeria. The Granger Causality Test and Panel Least Squares Regression were used to test the study's hypotheses. The Hausman test was used to determine if the Fixed Effect Model or the Random Effect Model was adopted for the panel regression. This study revealed that board Size (BSZ) has a positive significant impact on liquidity and capital adequacy; board Independence (BIN) does not have a positive significant impact on liquidity and capital adequacy; board Compensation (BCOM) has a positive significant impact on liquidity and capital adequacy; and controlling interest ratio has a positive significant impact on the liquidity and capital adequacy of insurance companies in Nigeria. This implies that insurance company's financial success must be considered when determining its directors' compensation. The study recommended that insurance firms have a board of directors with a sufficient number of people with varying levels of experience and competence. This will help the board of insurance companies' decisions on liquidity and capital adequacy management.

Keywords: Corporate governance, Liquidity, Capital adequacy, Insurance, Insurance Companies, Nigeria.

1. INTRODUCTION

Risk is integral to business growth, including insurance companies. However, the fear of losses associated with risks can deter economic activities, making insurance, which is a promise of indemnity to insured economic agents in the event of losses,a highly significant driver of economic growth and development. The goal of the insurance sub-sector of the financial sector is to flatten various forms of financial tragedy in the economy, thereby strengthening the nation's financial and economic system (Idowu & Fadun, 2022; Shawar& Siddiqui, 2019). Insurance is a crucial tool for spreading out an individual's or entity's financial misfortunes among many people to lessen the effects of issues. Economic, social, political, technical, cultural, religious, and demographic factors influence the insurance industry growth (Fadun &Silwimba, 2023a, 2023b; Elegunde et al., 2020).

The annual gross premium's percentage rise has not steadily increased. However, Elegunde et

al. (2020) claim that several factors, including poor labour practices, inadequate information technology infrastructure, a poor labour mix, and pricing strategy, are indicators of mismanagement. Fadun and Saka (2018) agree that grossly inefficient service delivery channels, the low integrity of many insurance firms, and low insurance awareness among Nigerians are pointers of poor management strategies. The researchers further affirm that poor labour practices and weak regulatory and enforcement mechanisms have contributed to the underwhelming performance of the Nigerian insurance industry (Fadun& Saka, 2018). The stakeholders and the insuring public know the importance of insurers' financial integrity due to their repeated problems with excessive management expenses that exceed premium income, excess liabilities, and inability to pay claims, among other problems (Kuye et al., 2020).

Insurance businesses are essential to the economic performance of emerging countries such as Nigeria, given the necessity of a stable and financially robust insurance industry in an economy. The primary issues are the wave of corporate governance scandals that undermined investor confidence and increased financial irresponsibility, as well as the high frequency of corporate fraud connected to exaggerated accounting, which has led to a renewed emphasis on the importance of corporate governance globally (Balogun & Ajao, 2024; Okonkwo et al., 2023; Fadun, 2017a, 2017b). One may argue that a strong correlation exists between sound corporate governance and the development and expansion of a country's economy. To guarantee that businesses and their finances are handled appropriately, it is now essential that the corporate governance code be followed in its entirety, particularly concerning the board role (Fadun, 2018). The corporate sector's prosperity, expansion, and advancement depend on implementing sound corporate governance. One issue noted is that an insurance business with a big board size would have more significant sway over choices that impact performance and other sensitive issues (Zakaria et al., 2020). However, there has been additional contention that smaller board members expedite decision-making (Okonkwo & Ezeabasili, 2024; Fadun, 2021; Adejare &Aliu, 2020). Likewise, the significance of board independence has been discussed for a long time, as a lack of it typically resulted in a less effective board. Nonetheless, independent board members are the principal cause of what is referred to as the agency problem (Adejare & Aliu, 2020). Contrasting findings from empirical research have not resolved this argument. Some academics observed that board size negatively affects management effectiveness, whereas board remuneration is favourably related to earnings and profitability of listed insurance firms in Nigeria (Fadun, 2023; Okonwo et al., 2023; Adejare & Aliu, 2020; Elegunde et al., 2020).

Corporate governance studies have frequently focused on the dynamics of the board of directors and audit committees. Due to these problems, a current study is required to statistically determine how corporate governance affects the liquidity and capital adequacy of insurance businesses in Nigeria. This study examines the impacts of corporate governance practices on the liquidity and capital adequacy of insurance companies in Nigeria. It explores the impact of controlling interest ratio (CIR), board size (BSZ), board independence (BIN), and board compensation (BCOM) on liquidity and capital adequacy.

2. LITERATURE REVIEW

2.1 Corporate Governance

The way the management team and board conduct and oversee an organisation's operations is known as corporate governance. The connection between the Board of Directors, senior management, and shareholders is outlined in this system of financial and other controls that is considered to exist within a business (Balogun & Ajao, 2024; Jose & Teressa, 2022; Pere &Obah, 2021; Fadun & Oye, 2020; Araoye & Olatunji, 2019). There are typically two types of corporate governance: statutory and self. Aspects of corporate governance that are challenging

to enact into law are included in self-regulation. This area of problems deals with human element concerns. This explains the interaction between the board of directors and management and their independence in evaluating the directors' performance. Conversely, statutory regulation serves as the legally explicable framework for corporate governance. The statutory and regulatory requirements cover disclosure and transparency and the responsibilities, rights, and liabilities of directors, controlling shareholders, and corporate executives.

According to Balogunet al. (2024), insurance is compensating an insurance contract buyer for potential losses that might result from certain types of occurrences in exchange for the payment of a consideration known as a premium. The act of purchasing insurance involves pooling unanticipated losses through a risk transfer mechanism to insurers, who agree to compensate the insured for any losses incurred, offer financial advantages if such losses occur, and provide pertinent services to address difficulties originating from such risks (Fadun & Oye, 2021).
The two primary categories of insurance firms are non-life and life insurance. In contrast, life insurance policies are contracts with insurance companies that provide a lump sum payment, a death benefit, to beneficiaries upon the insured's death in exchange for premium payments (Fadun & Osasona, 2024a, 2024; Fadun & Oluwaley, 2023). Non-life (general) insurance policies, including homeowners and auto insurance policies, claims are based on the loss from a specific financial event.

2.2 Controlling Interest Ratio

Pere and Obah (2021) opined that when a shareholder or group acting in kind possesses the majority of a company's voting stock, this is referred to as having a controlling interest. Due to its controlling shareholding, the owning entity has considerable power over any business activity. Its controlling shareholders frequently make a corporation's most significant strategic and operational choices.

According to Qawariri (2019), when shareholders have more than 50% of the voting shares of a corporation, they have a controlling stake in the firm, which gives them the ability to make decisions at shareholder meetings and set the direction of the company. Shawar et al. (2019) argued that shareholders with voting shares can participate in shareholder meetings, speak, and cast ballots. If shares are not voting, a shareholder cannot affect management choices or the firm's direction, even if they possess a more significant percentage of the company's authorised, issued, and outstanding shares and have a more significant financial investment.

2.3 Board Size

Board size is characterised as the total number of people that make up a company's board (Ubom et al. 2021). As a result, these concepts are thought to mirror earlier research in the area of corporate governance. Comparably, there is an apparent disparity in the evidence that supports and refutes the idea that board size has a favourable relationship with company success (Okonkwo et al., 2023). According to some theorists, larger boards have several benefits since more individuals can watch over management decisions, improving agency problem management (Foluso et al., 2023; Okonkwo et al., 2024). Furthermore, there is actual evidence to support the case for big boards in specific situations. Other board size research, however, has challenged this claim and argued in favour of smaller boards due to benefits such as increased productivity, cohesion and capacity to oversee the company compared to bigger ones (Fadun & Silwimba, 2023; Zakaria et al., 2020).

2.4 Board Independence

For boards to function well, they need to make sure that insiders and executive owners cannot

have excessive influence on the decisions and actions of the board through structural and procedural changes. Foluso and Lateef (2023) looked at the problem of independence to ensure board effectiveness through the strategic and monitoring functions of the directors. Having sufficient independent directors on the board is the deciding element for the board's independence. The results suggest that their talent and willingness may influence directors' independent attitudes and the climate on the board (Foluso & Lateef, 2023). Moreover, Okonkwo et al. (2024) revealed that the formal independence, information accessibility, incentives offered, and skill of non-executive directors impact their efficacy in China. However, they discovered that the Chinese non-executive director system was inadequate due to excessive interference from controlling shareholders and a lack of knowledge about their roles (Okonkwo et al., 2024).

2.5 Board Compensation

A compensation committee comprises impartial members of a corporation's board of directors and is responsible for creating, managing, and optimising executive compensation packages. They play a critical role in balancing inspiring leadership and preserving the firm's financial stability by carefully assessing executive salaries, incentive schemes, and alignment with corporate goals (Kuye et al., 2020). A compensation committee is essential to ensure that the organisation's executives receive a fair and acceptable amount of pay, bonuses, and other benefits. However, a compensation committee is in charge of more than simply the figures that appear on a pay stub (Ibe et al., 2021).

The relationship between board compensation and firm performance has been a topic of interest in recent years. A study by Nworji et al. (2022) explored this relationship in the context of the Nigerian insurance industry using panel data from 2015 to 2020 and a generalised method of moments (GMM) estimation technique. Their findings suggested that board compensation positively impacted firm performance, as measured by return on assets (ROA) and return on equity (ROE).

Okafor and Obi (2022) examined the relationship between Nigerian insurance companies' board compensation and capital adequacy. The authors employed a multiple regression analysis using a sample of 20 insurance companies listed on the Nigerian Stock Exchange (NSE) from 2010 to 2019 (Okafor & Obi, 2022). Their findings indicated that board compensation impacts capital adequacy negatively, suggesting that high board compensation may compromise insurance companies' capital adequacy.

2.6 Liquidity and Capital Adequacy

Performance is a specific outcome in several areas, including management, economics and marketing, to indicate the organisation's competitiveness, efficacy, efficiency, and procedural and structural features (Fadun & Silwimba, 2023). Liquidity and capital adequacy, taken in a more general sense, refer to the extent of financial goal attainment. It is the process of putting a firm's operations and policies' financial outcomes into numerical terms. It assesses a company's overall financial health over a specific time frame (Fadun et al., 2024).

A profitability ratio called liquidity and capital adequacy shows how much money a business can make from its assets. Liquidity and capital adequacy quantify the effectiveness of a company's management in generating profits from the assets or financial resources shown on its balance sheet (Ibe et al., 2021). The higher the figure, representing liquidity and capital adequacy as a percentage, the more effectively a company's management manages its balance sheet to produce profits. A profitability ratio called liquidity and capital adequacy shows how

much money a business can make from its assets. The higher the figure, representing liquidity and capital adequacy as a percentage, the more effectively a company's management manages its balance sheet to produce profits (Elegundeet al., 2020).

Businesses that generate profit with low liquidity and capital adequacy often have more assets than those with high liquidity and capital adequacy (Jose et al., 2022). The ideal way to evaluate liquidity and capital adequacy is between similar organisations (Shawar et al., 2019). For example, a company with many assets may have a lower liquidity and capital adequacy than a related company with fewer assets and a similar profit margin, which might be concerning.

2.7 Theoretical Review

2.7.1 Theory of Resource Dependence

The resource dependency theory was adopted for this study. The theory focuses on how an organisation's performance is impacted by its external resources (Prefer & Salancik, 1978). It measures an organisation's access to power and control and acknowledges that its success depends on the resources at its disposal. According to resource dependency theory, the board of directors serves as a vital conduit between the company and the non-financial and financial resources that are critical to the company's development. This is because "organisations are not self-contained or self-sufficient; they rely on their environment for existence, and the theory's central idea is how organisations acquire the resources they need to survive and grow" (Araoye & Olatunji, 2019).

A company's resources could include labour, materials, and money, but the significance, quantity, and control of the resources impact the resource dependence theory (Adejare & Aliu, 2023). They also argue that resource dependence theory concentrates on directors' role in supplying or obtaining vital resources for a business using their connections to the outside world. Resources, it has been said, improve a firm's ability to operate, perform, and survive. The foundation of resource dependency theory is two fundamental presumptions. The board of directors is presumed to provide two essential resources. First, business contacts and contracts, knowledge, experience, and expertise. Second, the board is presumed to have the capacity to safeguard the interests of diverse stakeholders (Adejare & Aliu, 2020). According to Ebereet al. (2021), the board of directors may facilitate the attainment of a competitive advantage for the company by acting as a liaison between the latter and its operating environment. Liquidity and capital adequacy are supposed to demonstrate corporate governance through this technique.

2.8 Empirical Review

Elegunde et al. (2020) examined the impact of financial success on corporate governance standards, specifically focusing on a few chosen insurance businesses in Nigeria. The research designs used in the study were ex post facto. For this study, a purposeful selection of nine insurance companies was made. Secondary data from a subset of insurance firms' annual reports was used to test the hypothesis. The study employed a regression model; the study revealed that corporate governance procedures significantly affect the profitability of insurance companies.

Kuye (2020) investigated the impact of corporate governance codes on the long-term viability of insurance firms. The study employed regression analysis to determine and establish the link between the independent and dependent variables. Based on the study results, the alternative hypothesis was accepted, which showed a positive and substantial association between an organisation's board size and sustainability and between an audit committee and sustainability.

The impact of corporate governance on the liquidity and capital adequacy of Nigerian listed insurance businesses is examined by Ajisafe (2022). The study's population comprises thirty-four (34) insurance businesses listed on the Nigeria Stock Exchange as of December 31, 2018, of which twenty-three companies were chosen as the study's sample size using the purposive sampling approach. The secondary data from the 2013–2018 annual reports and accounts of the sampled firms were used for descriptive and panel regression analysis. The study discovered that the liquidity and capital adequacy of listed insurance businesses in Nigeria are adversely affected, albeit insignificantly, by board remuneration. According to the study's empirical findings, Nigerian listed insurance firms' liquidity and capital adequacy are positively impacted by the size of their boards.

Egwakhe et al. (2019) studied corporate governance's effect on Nigerian insurance businesses' profitability. They used descriptive statistics and Cronbach's alpha reliability coefficients in the investigation. The results showed a statistically significant correlation between the profitability of a subset of Nigerian insurance businesses that were chosen and listed and the diversity components of the board, including gender diversity, ethnic diversity, board composition, size, and expertise diversity.

The effect of corporate governance on the performance of insurance businesses in Nigeria was investigated by Balogun et al. (2024). The study, which spans five years from 2011 to 2015, collects data from secondary sources and does multiple regression analysis to determine if each independent variable has a statistically significant impact on the dependent variable. It was shown that leverage favours liquidity and capital adequacy, while board size has a negative effect. The software automatically eliminated the management team because of a multicollinearity issue. According to the study, corporate governance has little bearing on how healthy insurance businesses function in Nigeria.

Deev and Khazalia (2022) studied European insurers' liquidity and capital adequacy, social responsibility, and corporate governance, focusing on Bloomberg data from 2000 to 2015. According to the report, social responsibility and corporate governance significantly impact the financial success of the European insurance market. An increase in market performance is strongly correlated with board independence, as measured by the proportion of independent directors. The study also showed a positive correlation between more excellent market performance and an average increase in board membership.

2.9 Hypotheses Formulation

Based on the literature review, the following hypotheses are formulated:

$H_0$1: Board size (BSZ) does not positively impact liquidity and capital adequacy.

$H_0$2: There is no positive correlation between Board Independence (BIN) and insurance companies' liquidity and capital adequacy.

$H_0$3: Board compensation (BCOM) does not positively impact liquidity and capital adequacy.

$H_0$4: There is no relationship between the controlling interest ratio (CIR) and insurance companies' liquidity and capital adequacy.

3. METHODOLOGY

This study used an ex-post facto research design to perform the research. Ex-post facto research designs use historical patterns to make inferences about the connections between economic variables. The type of data utilised in this study makes this research design the most appropriate. The secondary sources of this data are easily accessible and devoid of the biases that come with

gathering primary data.
This study uses panel time series data in its analysis. The panel data includes Time series data for each of the chosen quoted insurance firms from 2004 to 2023. Seven (7) quoted Insurance Companies are listed on the Nigerian Exchange Group (NEG): Lead way Assurance Company, AIICO Insurance Company, Custodian Insurance Plc, AXA Mansard Insurance Plc, NEM Insurance Plc, Mutual Benefit Assurance, and African Alliance Insurance.

For this study, liquidity and capital adequacy are the dependent variables, while the independent variables are the Controlling Interest Ratio (CIR), Board Size (BSZ), Board Independence (BIN), and Board Compensation (BCOM).

3.1 Research Model

This study uses the Qawariri (2019) model, which expresses liquidity and capital adequacy as a function of Board Expertise, Board Independence, Foreign Board Members, Firm Size, Leverage, Market Value, and Firm Growth.
In this study, however, liquidity and capital adequacy are expressed as a function of the Controlling Interest Ratio (CIR), Board Size (BSZ), Board Independence (BIN), and Board Compensation (BCOM), as in equation I.

The economic model of the study is presented in equation i:

$$LCA = \alpha 0 + \alpha 1BSZ + \alpha 2BIN + \alpha 3BCOM + \alpha 4CIR + \mu t \ldots\ldots\ldots\ldots\ldots\ldots (i)$$

Where:
LCA is the liquidity and capital adequacy.
α is the Intercept.
$\alpha 1 - \alpha 4$ isthe coefficient of determinants.
BSZ is the Business Size.
BIN is the Board's Independence.
BCOM is the Board's Compensation.
CIR is the Controlling Interest Ratio.
μt is the error term.

The liquidity and capital adequacy value the independent variable cannot explain is known as the intercept, constant term, or $\alpha 0$. The regression coefficients are $\alpha 1$, $\alpha 2$, $\alpha 3$, and $\alpha 4$. μt represents the regression's error term.

The variables may be divided into two categories: independent and dependent variables. The dependent variable represents the performance of insurance businesses. The research aims to forecast this variable as a function of the independent variable. Liquidity and capital adequacy are the chosen stand-ins for the insurance businesses' performance. This is a gauge of the business's financial performance. It speaks to the insurance company's financial performance efficiency from its producing assets.

On the other hand, changes in the independent variables are anticipated to affect the dependent variable (LCA). Corporate governance, as determined by the board's size, independence, remuneration, and controlling interest ratio, is one of the study's independent factors.

4. DATA ANALYSIS

Table 1: Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
LCA	140	5.83	11.16	16.99	1976	14.11	.099	1.17	1.37	.001	.205	-.296	.407
BCOM	140	4.20	10.80	15.00	1832	13.09	.085	1.01	1.03	-.047	.205	-.502	.407
BIN	140	3.30	2.70	6.00	515	3.68	.064	.75	.57	.883	.205	.433	.407
BSZ	140	4.10	9.90	14.00	1632	11.65	.080	.95	.91	.373	.205	-.156	.407
CIR	140	22.00	62.00	84.00	10067	71.91	.418	4.94	24.49	.216	.205	-.574	.407
Valid N (listwise)	140												

Source: Researchers' Computation using *SPSS 25*

The descriptive statistics are presented in Table 1. Table 1 shows that the insurance mean for liquidity and capital adequacy is 14.11%; this number is not erratic because the standard deviation (1.17 %) is lower than the mean. Among the chosen insurance businesses, 13.09% is observed as the mean of BCOM, while 3.64% is recorded as the mean value of BIN. The chosen insurance company's board of directors makes, on average, 12 (11.65) members a year. The CIR makes an average of 72%.

4.1 Data Analysis and Test of Hypotheses

The Granger Causality Test and Panel Least Squares Regression were used to test the study's hypotheses.

4.4.1 Panel Least Square

The Hausman test was used to determine whether the Fixed Effect Model or the Random Effect Model was adopted for the panel regression. The result of the Hausman test is shown in Table 2.

Table 2: Hausman Test Results

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.152471	6	0.741

Source: Researchers' Computation using E-views 11.0

The p-value result is 0.741, more significant than 0.05, indicating that the null hypothesis of random effects is accepted (Table 2). Therefore, the panel data regression was conducted using the Random Effect Model.

Table 3: Panel Least Square Regression

Dependent Variable: Liquidity and capital adequacy				
Method: Panel EGLS (Cross-section random effects)				
Sample: 2004 2023				
Periods included: 5				
Cross-sections included: 7				
Total panel (balanced) observations: 140				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
BCOM	0.046	0.080	2.576	0.015
BIN	-0.307	0.041	-0.7520	0.566
BSZ	0.127	0.079	2.614	0.021
CIR	0.180	0.024	7.364	0.009
C	0.208	0.458	0.454	0.000
	Effects Specification			
			S.D.	Rho
Cross-section random			4.375891	0.4591
Idiosyncratic random			4.750085	0.5409
	Weighted Statistics			
Root MSE	4.588464	R-squared		0.931
Mean dependent var	2.194504	Adjusted R-squared		0.929
S.D. dependent var	5.500661	S.E. of regression		0.31344
Sum squared resid	736.8900	F-statistic		453.417
Durbin-Watson stat	2.064713	Prob(F-statistic)		0.000

Source: Researchers' Computation using E-views 11.0

The Panel Least Square Regression (Table 3) result reveals that board compensation, board size and controlling interest ratio positively predict insurance companies' liquidity and capital adequacy. The predictions, however, significant only in the case of controlling interest ratio with a p-value of 0.009, which is less than 0.05. With regression coefficients of 0.046, -0.307 and 0.127 for board compensation, board independence, and board size, respectively, while the controlling interest ratio has regression coefficients of 0.180, it can therefore be predicted that each unit increase in board compensation, board independence, board size and controlling interest ratio will coincide with an increase in liquidity and capital adequacy by 0.046, -0.307,0.127, and 0.180 respectively. On the other hand, the results also showed that board independence is negatively (t = -0.7520) and insignificantly ($p > 0.05$) related to liquidity and capital adequacy. The R-squared value of 0.931 indicates that about 93% of the liquidity and capital adequacy variations can be explained by the combined variations of board size, board independence, board compensation and controlling interest ratio. The prob (F-statistics) value is 0.000, which is less than 0.05, indicating an overall significance of the relationship between corporate governance and the performance of insurance companies.

4.2 Test of Hypotheses

The Granger causality test is used to validate the research hypotheses.

4.2.1 Hypotheses Testing Results Decision Rule

If the p-value exceeds 0.05, the null hypothesis of random effects is accepted. If the p-value is less than 0.05, the null hypothesis is rejected in favour of the alternate hypothesis.

$H_0$1: Board size (BSZ) does not positively impact liquidity and capital adequacy.

Table 4: Granger Causality Test for Board Size, liquidity and capital adequacy

Pairwise Granger Causality Tests			
Sample: 2004 2023			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
BSZ does not Granger Cause liquidity and capital adequacy.	7	8.156	0.0004
Liquidity and capital adequacy do not Granger Cause BSZ.		0.2415	0.1246

Source: Researchers' Computation using E-views 11.0

Table 4 shows that the p-value of0.0004 is less than 0.05. It reveals that board size positively impacts liquidity and capital adequacy. On the other hand, a p-value of 0.1246 reveals that liquidity and capital adequacy do not positively affect board size. Therefore, it shows that unidirectional causation flows from board size to liquidity and capital adequacy in Nigeria's insurance companies.

Decision

Since the p-value of 0.0004is less than 0.05, the null hypothesis of random effects is rejected, and the alternate hypothesis is accepted. This suggests that board size (BSZ) positively impacts liquidity and capital adequacy.

Hypothesis 2 Testing

$H_0$2: There is no positive correlation between Board Independence (BIN) and insurance companies' liquidity and capital adequacy.

Table 5: Granger Causality Test for Board Independence, liquidity and capital adequacy

Pairwise Granger Causality Tests			
Sample: 2004 2023			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
BIN does not Granger Cause liquidity and capital adequacy.	7	3.19339	0.0861
liquidity and capital adequacy does not Granger Cause BIN		0.19915	0.6592

Source: Researchers' Computation using E-views 11.0

Table 5 shows that the p-value of 0.0861 is more significant than 0.05. With an F-statistic of positive (3.19), there is a positive but insignificant correlation between Board Independence (BIN), liquidity, and capital adequacy of insurance companies. Likewise, a p-value of 0.5766, more significant than 0.05, reveals that liquidity and capital adequacy positively correlate with board independence.

Decision

The null hypothesis is accepted since the p-value is 0.0861, more significant than 0.05, and the F-statistic is 3.19. This suggests positive correlation between Board Independence (BIN) and insurance companies' liquidity and capital adequacy.

Hypothesis 3 Testing

$H_0$3: Board compensation (BCOM) does not positively impact liquidity and capital adequacy.

Table 6: Granger Causality Test for Board Compensation, liquidity and capital adequacy

Pairwise Granger Causality Tests			
Sample: 2004 2023			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
BCOM does not Granger Cause liquidity and capital adequacy	7	0.09950	0.002
liquidity and capital adequacy does not Granger Cause BCOM		0.02663	0.8717

Source: R*esearchers' Computation using EViews 11.0*

As shown in Table 6, a p-value of 0.002, which is lower than 0.05, reveals that board compensation causes (impacts) liquidity and capital adequacy. The p-value of 0.8717 is more significant than 0.05, indicating that liquidity and capital adequacy do not affect the board compensation. Therefore, it shows that there is a causation from board compensation to liquidity and capital adequacy in insurance companies in Nigeria.

Decision

The p-value of 0.002, which is lower than 0.05, indicates that the null hypothesis of random effects is rejected in favour of the alternate hypothesis. This suggests that Board compensation (BCOM) impacts liquidity and capital adequacy.

Hypothesis 4 Testing

$H_0$4: There is no relationship between the controlling interest ratio (CIR) and insurance companies' liquidity and capital adequacy.

Table 7: Granger Causality Test for Controlling Interest Ratio, liquidity and capital adequacy

Pairwise Granger Causality Tests			
Sample: 2004 2023			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
CIR does not Granger Cause liquidity and capital adequacy	7	16.7096	0.0004
liquidity and capital adequacy does not Granger Cause CIR		11.9636	0.0020

Source: Researchers' Computation using E-views 11.0

Table 7 shows that the p-value is 0.0004, less than 0.05, and the F-statistic is positive (16.7). It is revealed that there is a relationship between the controlling interest ratio (CIR) and insurance companies' liquidity and capital adequacy. Similarly, with a p-value of 0.0020, which is also less than 0.05, the study reveals that liquidity and capital adequacy cause (impact) controlling interest ratio. It, therefore, shows that bidirectional causation flows both ways between controlling interest ratio, liquidity and capital adequacy in insurance companies in Nigeria.

Decision

Table 7 shows p-value of 0.0004, which is less than 0.05. This indicates that the null hypothesis of random effects is rejected, and the alternate hypothesis is accepted. shows a positive relationship exists between the controlling interest ratio (CIR) and insurance companies' liquidity and capital adequacy.

4.3 Discussion of Findings

Utilising information gathered from certain insurance businesses, this research looked at how corporate governance affected the liquidity and capital adequacy of insurance companies in Nigeria. Insurance businesses' liquidity and capital adequacy were examined. At the same time, corporate governance was broken down into board size, board remuneration, board independence, and controlling interest ratio. According to the researchers' expectations, board size positively influenced liquidity and capital adequacy in insurance businesses. The data were statistically examined using panel least square regression and the Granger causality test. However, it turned out that this prognosis was not very important. This result supports the claims made by the Resource Dependency Theory, which holds that the board of directors provides vital resources, such as contracts and business contacts, knowledge, experience, and expertise, in addition to their monitoring role, all of which enhance a company's liquidity and capital adequacy.

Board size is critical to increasing insurance businesses' management efficiency (Adejare & Aliu, 2020). Kuye (2020) has demonstrated that an increased board size has a good impact on the long-term viability of insurance companies. This suggests that large Board sizes make insurance businesses more sustainable, improving their liquidity and capital adequacy compared to smaller boards. Ajisafe (2019) also shows a clear correlation between the financial success of listed insurance businesses in Nigeria and the size of their boards.

The Granger causality test result also showed that this link culminated in an impact, with board size being found to have a substantial effect on Nigerian insurance businesses' liquidity and capital adequacy. This demonstrates that growing the board size results in higher liquidity and capital adequacy. Deev and Khazalia (2022) also revealed a correlation between better market performance and an average increase in board membership. According to Ebere et al. (2021), board size and insurance firms' earnings per share are positively correlated.

Additionally, as the panel least square regression indicates, board compensation and Nigerian insurance businesses' liquidity and capital adequacy are positively correlated. This suggests that more considerable liquidity and capital adequacy might be expected from a board with a higher salary. Adejare and Aliu (2020) also discovered a favourable correlation between board compensation and the performance and earnings of listed Nigerian insurance businesses. Ajisafe (2019) discovered no correlation between the financial success of listed insurance businesses in Nigeria and the remuneration of their boards. The results of the Granger causality test also showed that the liquidity and capital adequacy of Nigerian insurance businesses were not substantially impacted by board compensation.

The study indicates a positive and substantial relationship between the controlling interest ratio and Nigerian insurance businesses' liquidity and capital adequacy. This conclusion is consistent with that of Balogun et al. (2024), who discovered that leverage favourably increases liquidity and capital adequacy and is comparable to the controlling interest ratio. This indicates that a significant factor influencing the liquidity and capital adequacy of insurance businesses in Nigeria is the quantity of capital that represents the owners' control. The study's conclusions also demonstrated a reciprocal causal relationship between liquidity and capital adequacy and the controlling interest ratio. This shows that controlling the interest ratio positively and significantly influences liquidity and capital adequacy and that managing the interest ratio positively and significantly impacts liquidity and capital adequacy.

Conversely, panel least square regression demonstrated a negative and negligible correlation between board independence and Nigerian insurance businesses' liquidity and capital adequacy. Additionally, Gambo (2019) showed that the return of insurance businesses in Nigeria is not significantly impacted by board independence. Ibe et al. (2021) discovered a negative correlation between the financial success of listed insurance businesses and board independence. This result validates the theoretical tenets of the agency theory, which postulates that hiring autonomous individuals to manage a firm's operations would always lead to a principal-agent conflict. Granger causality analysis, however, could not reveal a flow of causation between the two variables, suggesting that board independence in Nigerian insurance businesses has no discernible effect on liquidity and capital adequacy and that liquidity and capital adequacy have no discernible influence on board independence.

The study revealed a strong correlation between insurance businesses' liquidity, capital adequacy and corporate governance. Elegunde et al. (2020) further supported that corporate governance significantly impacts profitability. These results suggest that the degree of liquidity and capital adequacy of insurance companies may be ascertained through corporate governance. The conclusions were drawn from the panel least square regression and Granger causality test results.

1. Board size has a positive and insignificant association with liquidity and capital adequacy, and there is a unidirectional causation (impact) flow from board size to liquidity and capital adequacy of insurance businesses in Nigeria.
2. There is a slight but positive correlation between board remuneration, liquidity, and capital adequacy, but no causal relationship was discovered; that is, no impact was discovered between board compensation, liquidity, and capital adequacy of Nigerian insurance businesses.
3. There is a weak and negative correlation between board independence, liquidity, and capital adequacy, but no causal relationship was discovered; that is, no impact was discovered between board independence, liquidity, and capital adequacy of Nigerian insurance businesses.
4. There is a bidirectional causal link (effect) between the controlling interest ratio and Nigerian insurance firms' liquidity and capital adequacy. The controlling interest ratio, liquidity and capital adequacy have a positive and substantial association.

5. CONCLUSION

The study indicates that corporate governance affects the liquidity and capital adequacy of insurance businesses in Nigeria based on its results. The study specifically finds that controlling interest and board size have a good effect on the liquidity and capital adequacy of insurance businesses in Nigeria. Therefore, more shareholder control and a larger board of directors result in better liquidity and capital adequacy management for insurance businesses. Although board

remuneration may not have an impact on liquidity and capital adequacy, it is reasonable to assume that insurance businesses with well-paid board members would do better than those with poorly paid board members. However, despite the possibility that board independence has no impact on insurance businesses' financial success, it is evident from the negative correlation that boards with fewer independent members outperform those with more.

5.1 Recommendations

The study's conclusions lead to the following recommendations: insurance firms should have a board of directors with a sufficient number of people with varying levels of experience and competence. As a result, the board would be qualified to decide wisely in a variety of situations.
The insurance company's financial success should be taken into account when determining the compensation of its directors. Bonuses and rewards might be distributed in accordance with profitability to achieve this. Directors would work toward the company's profitability in this way.
Insurance companies have to make sure that there is as little as possible of an independent director to hired director ratio. The independent directors ought to be people with a track record of accomplishment in specific areas that support the liquidity and capital adequacy of businesses.
Insurance companies should make sure that controllable interests make up more than 95% of their stock. Increased control diversity makes ensuring that the company's interests are not compromised by the interests of a particular shareholder group.

References

Adejare, R., & Aliu, I. (2023). Effect of board members' dynamics on liquidity and capital adequacy of insurance company in Nigeria using caramels liquidity and capital adequacy indicators. *Fountain University Osogbo Journal of Management (FUOJM), 5*(1), 198-158.

Ajisafe, A. (2022). Effect of corporate governance on liquidity and capital adequacy of listed insurance companies in Nigeria. *Dissertation presented to the Department of Accounting and Finance*, Kwara State University

Araoye, F., & Olatunji, E, (2019). Effect of board attributes on liquidity and capital adequacy of quoted insurance companies in Nigeria. *International Journal of Accounting and Finance, 8*(1), 78-96.

Balogun, S., & Ajao, C. (2024). Corporate governance, liquidity and capital adequacy. *Corporate Governance: An International Review, 14*(2), 107-125

Datta, N. (2023). Impact of Corporate Governance on Liquidity and capital adequacy: A Study on DSE listed Insurance Companies in Bangladesh. *Global Journal of Management and Business Research,* 18(2), 32-40.

Deev, O., &Khazalia, N. (2022). Corporate Governance, Social Responsibility, liquidity and capital adequacy of European Insurers. *Acta Universitatis Agriculture et Agriculture,* 65(6): 1873-1888.

Ebere, C. C., Ibanichuka, E. A. L. & Ogbonna, G. N. (2021). Corporate Governance System, liquidity and capital adequacy of Quoted Insurance Companies in Nigeria. *International Journal of Business & Law Research, 4*(4), 34-41.

Egwakhe, A. J., Akpa, V. O., & Ajayi, A. A (2019). Board diversity and profitability of insurance firms in Nigeria: Evidence from listed insurance firms. *International Journal of Advanced Studies in Business Strategies and Management, 7*(1), 41-59

Elegunde, A., Ajemugbohun, S., & Azeez, T. (2020). Evaluation of corporate governance practices on liquidity and capital adequacy of selected insurance firms in Nigeria. *ACTA Universitatis Danubius, 16*(4), 86-110

Fadun, O. S. (2017). Corporate governance, a risk management tool for enhancing organizational performance: Study of Nigeria Stock Exchange (NSE) listed companies. *Journal of Finance and Banking Studies*, 6(4), 12-27.

Fadun, O. S. (2017). Risk management through corporate governance: Implications on the performance of banks in Nigeria. *UNILAG Journal of Business*, *3*(2), 147-170.

Fadun, O. S. (2018). Risk Factors and Risk Management Strategies as Correlates of Profitability and Survival of Selected Small and Medium Enterprises (SMEs) in Nigeria. *Nigerian Journal of Management Studies*, *18*(2), 12-26.

Fadun, O. S. (2021). Nexus between insurance penetration and economic growth: Evidence from Nigeria. *Nigeria Journal of Risk and Insurance*, *11*(1), 20-36.

Fadun, O. S. (2023). Analysis of the impacts of insurance claims settlement on economic growth: The case of Nigeria. *International Journal of Business Ecosystem & Strategy*, *5*(3), 51-59.

Fadun, O. S., & Oye, D. (2020). Impacts of Operational Risk Management on Liquidity and capital adequacy: A Case of Commercial Banks in Nigeria. *International Journal of Finance & Banking Studies*, 9(1), 22-35.

Fadun, O. S., & Oye, D. (2021). The analysis of drivers of operational risks in Nigerian commercial banks. *Busycon Review of Finance & Banking*, *3*(3), 1-14.

Fadun, O. S., & Saka, S. T. (2018). Risk management in the construction industry: Analysis of critical success factors of construction projects in Nigeria. *International Journal of Development and Management Review*, *13*(1), 108-139.

Fadun, O. S., & Silwimba, P. (2023a). Does credit risk management impact the liquidity and capital adequacy of commercial banks? *International Journal of Business Ecosystem & Strategy*, *5*(2), 55-66.

Fadun, O. S., & Silwimba, P. (2023b). Does insurance promote economic growth? Evidence from Nigeria. *Nigeria Journal of Risk and Insurance*, *13*(1), 1-24.

Fadun, O. S. & Oluwaleye, T. O. (2023). Impact of life insurance development on economic growth: A case study of Nigeria (2000-2022). *Gusau Journal of Economics and Development Studies*, *4*(1), 162-181.

Fadun, O. S., Isimoya, O. A., & Ugwuoke, A. O. (2024). Socio-economic determinants of life assurance purchase in Nigeria. *EKSU Journal of the Management Scientists*, *3*(1), 288-

306.

Fadun, O. S. and Osasona, A. V. (2024a). Roles of Life Insurance Claim Settlement on Insurance Penetration in Nigeria. *Gusau Journal of Economics and Development Studies*, *5*(1), 310-325.

Fadun, O. S. and Osasona, A. V. (2024b). The influence of life insurance premium on insurance penetration in Nigeria. *International Journal of Management and Development Studies*, *4*(1), 155-167.

Foluso, O. A., & Lateef, O. A. (2023). Corporate Governance Mechanisms, liquidity and capital adequacy of Quoted Insurance Companies in Nigeria *International Journal of Management Studies, Business & Entrepreneurship Research, 3*(2), 12-32.

Ibe, H. C. A., Ugwuanyi, G. O. &Okanya, O. C. (2021). Effect of Corporate Governance Mechanisms on Liquidity and capital adequacy of Insurance Companies in Nigeria. *Journal of Finance and Accounting*, *5*(3), 93-103.

Idowu, T. S. & Fadun, O. S. (2022). Analysis of insurance products and services effectiveness in rural areas (Case study of Lagos state, Nigeria)**.** ***Nigeria Journal of Risk and Insurance*****,** ***12*****(1), 243-258.**

Jose, M. C. V., & Teresa, M. C. L. (2022). Does integrity matter for CSR practice in organizations? The mediating role of transformational leadership. *Business Ethics: A European Review*, *24*(1), 34-52.

Kuye, O., Sulaimon, A., &Odiachi, M. (2020). Corporate governance code: The application and effect on sustainability of selected insurance companies in Nigeria. *Academic Journal of Economic Studies, 6*(1), 22-30.

Nworji, A. N., Ogbonna, G. N., & Ofoegbu, W. I. (2022). Board compensation and firm performance in the Nigerian insurance industry. *Journal of Business Ethics,* 177(2), 257-272.

Okafor, C. E., & Obi, C. (2022). Board compensation and capital adequacy in Nigerian insurance companies. *International Journal of Financial Management*, 12(1), 34-47.

Okonkwo, J. J., &Ezeabasili, V., N. (2024). Effect of board size on liquidity and capital adequacy of Nigerian Banks. *Journal of Emerging Trends in Management Sciences and Entrepreneurship, 2*(2), 2-21.

Okonkwo, J. J., Ibenta, S. N., &Nkemakolam, A. (2023). Effect of board ownership structure on bank performance in Nigeria. *Journal of Emerging Trends in Management Sciences and Entrepreneurship, 2*(1), 20-36.

Okonwo, J. J., Azolibe, C. &Nwadibe, E. (2019). Corporate governance and bank performance in Nigeria: An empirical study. *European Scientific Journal, 15*(28), 76-90.

Pere, D., &Obah, O. (2021). Corporate governance and Nigerian insurance industry. *European Journal of Accounting, Finance and Investments, 4*(11), 5-13.

Pfeffer, J., &Salancik, G. R. (1978). *The external control of organisations: A resource dependence perspective*. New York, NY, Harper and Row.

Qawariri, E. (2019). Corporate Governance Practices in Banking and Insurance: A Comparative Study of Companies Listed on Tadawul Stock Exchange. *Global Advanced Research Journal of Criminology, Law and Conflict Resolution (GARJCLCR*)*, 1*(1), 1-10.

Shawar, K., & Siddiqui, D. A. (2019). Factors Affecting Liquidity and capital adequacy of Insurance Industry in Pakistan. *Research Journal of Finance and Accounting, 10*(5), 29-41.

Ubom, U. B., Williams, A. J., &Ubom, A. U. (2021). Microinsurance, micro investments and sustainable development in Nigeria. *Export Journal of Finance, 5,* 41-48.

Zakaria, Z., Purhanudin, N., &Palanimally, Y. R. (2020) Board governance and firm performance: A panel data analysis. *Journal of Business Law and Ethics*, *2*(1), 1-12