

## **COMBINED EFFECTS OF CAPITAL STRUCTURE AND CORPORATE GOVERNANCE ON FINANCIAL STABILITY OF DEPOSIT MONEY BANKS**

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### **Abstract:**

*Research background:* Liquidity crisis and liquidation of deposit money bank over the past years has been connected to poor corporate governance and in appropriate blend of capital structure.

*Purpose of the article:* By using different sample data, extensive research has investigated how corporate governance and capital structure independently influences bank's profitability, but studies investigating the joint impact of corporate governance and capital structure on the stability of deposit money bank in Nigeria is close to non-existence. This research work seeks to analyse the joint impacts of corporate governance (CG) and capital structure (CS) on stability of deposit money bank in Nigerian from 2010 to 2021.

*Methods:* A panel regression approach was used and ex post facto research design was employed in this study to examined the impacts of corporate governance and capital structure on Bank stability.

*Findings & Value added:* Result showed a positive and substantial influence of capital structure proxied by Total Debt to Total Asset ratio and Long-Term Debt to equity ratio and corporate governance variables (Board independence, Credit Committee) on financial stability proxied with Liquidity ratio among carefully chosen deposit money banks in Nigeria. The research work affords scholars, academicians, banks administration, and deposit money banks supervisory bodies a fresh understanding of how capital structure and corporate governance enhanced banks' financial stability via bank liquidity by designing sound governance and capital mixture policies.

**Keywords:** board independence; credit risk committee; liquidity ratio; total debt to total asset ratio; long term debt to equity ratio

**JEL Classification:** G21; G32; G33; G34

## **1. Introduction**

Financial stability has become an appropriate and germane subject which has garnered important attention from intellectuals and experts. In the previous years, the confidence of depositors worldwide has been shaken by multiple instances and examples of financial fraud in the banking industry. Scholars such as Ajibade et al. (2020) and Aliu et al. (2020) have observed that fraud is intricately connected to the majority of financial crises in banks, which eventually culminate in instances of bank failure. The rise in bank failures and the growing prevalence of corrupt practices have prompted the necessity to enhance corporate governance and formulate an alternative framework for bank performance improvement (Koskei, 2020). An essential element within this process is the emergence of strong corporate governance through a well-constituted board of directors. This board is anticipated to provide a strategic direction and a suitable combination of capital structure to mitigate issues related to illiquidity. A steady and irrepressible banking industry plays a pivotal role in improving economic growth and minimizing vulnerability to crises within the banking sector (Ajibade et al., 2020). Financial stability removes financial inequities occasioning from market tremors which are revealed by bank runs or illiquidity which leads to insolvency in the banking system. A liquid banking sector is a vital requirement for firmness and the growth of the banking sector; subsequently, the resolution concerning the management of liquid assets stands as a fundamental decision that managers must make, irrespective of the scope of their enterprises. This holds particular significance for banks whose primary holdings consist of cash, and whose ongoing viability and stability are significantly reliant on maintaining consistent liquidity (Sanyaolu et al., 2021). The financial stability of banks has emerged as a crucial global discourse among regulators and policymakers after the worldwide credit crunch of 2007 to 2009. On a global scale, central banks and policymakers from various countries have progressively emphasized the maintenance of economic stability in the banking industry and the broader economic sphere (Koskei, 2020).

The developed and emerging economies had their own fair share of the liquidity problems as global commercial scandals and credit crunch like those involving Enron, Tyco, WorldCom, and other U.S. banks were connected to weak corporate governance, which served as a contributing factor to fraudulent financial reporting and an unethical corporate culture (Ajibade et al., 2020). Furthermore, the abrupt failures of Silicon Valley Bank and Signature in the United States, and the erosion of investor trust in Credit Suisse, a systematically significant global bank based in Europe have remained a dominant indicator of the challenge weak liquidity ratio which has exposed the commercial banks to vulnerabilities (Adu, 2023). Asian economies are susceptible to significant and unpredictable cross-border movements of international capital. Nevertheless, sizeable capital influxes, unless effectively controlled, can render countries that receive these capital flows vulnerable to the potential of financial instability (China Financial Stability Report 2020). The financial crunch in Asia, and other developing countries, underscored the systemic threats connected with purported “double-mismatches”. These mismatches involve short-term borrowing in foreign currencies and long-term lending in local currencies (Zhang et al., 2022).

In Nigeria, banks liquidity supervision was discovered to be in jeopardy and consequently caused the failure of the Nigerian banking system. According to Bencharles and Nwankwo (2021) loans were given out by members of the board without sufficient surety; this claim was established by Central Bank of Nigeria report that most banks gave out loan with minimal collateral. The lack of liquidity within banks contributed to the downfall, consolidation, and acquisition of numerous deposit money banks in Nigeria. Financial institutions were impacted by illiquid trend (Bencharles and Nwankwo, 2021). In addition, Salihu et al. (2020)

acknowledged weak corporate governance and inappropriate blend of capital mix to be key elements in bank liquidity crisis. Given the recognized underlying concerned, this research aims to determine the joint effects of corporate governance and capital structure on Nigerian bank stability.

One of the key challenges encumbering the stability of banks in Nigeria in recent years has been problem of liquidity; this is owing to their over dependence on government central bank funds as their main source of constant financing (Sanyaolu et al., 2021). Therefore, efforts made by banking supervisory body to guarantee the liquidity and viability of the banking sector have not accomplished its aims (Salihu et al., 2020). Also, whenever there is high influx of liquidity, commercial banks in Nigeria engage in an extremely risky trading like forex, oil gas business, stock market margin finance as their main source of revenues, especially. This abundant bank liquidity has led to extreme loaning by the deposit money banks in Nigerian which consequently led to increase in loan and loan concentration in the oil and gas business and margin finance (Koskei, 2020). Consequently, the elevated inclination towards high-risk behaviors led to the Central Bank of Nigeria assuming control of Afribank, Finbank, Intercontinental bank, Oceanic bank, and Union bank due to insolvency. Similarly, Polaris bank took over Sky bank, and Access bank acquired Diamond bank (Ajibade et al., 2020).

Researchers like Wuave et al. (2020), Sanyaolu et al. (2021), and Koskei (2020) asserted that an influx of liquidity safeguards banks against funding liquidity risk. This can, however, encourage them to adopt a more carefree approach by taking on higher risks in an effort to achieve immediate gains, which ultimately contributes to the emergence of financial crises. Consequently, board directors were deemed responsible for their failure to fulfill their primary obligations and for their neglect in carrying out their duties, primarily in terms of overseeing non-performing loan exposures. Moreover, some of the instituted committees that have the responsibility of risk management on behalf of the main board members lack the necessary expertise and dedication. Similarly, numerous independent directors encounter challenges when attempting to exert significant influence within board committees due to the distinctive intricacies of the banking industry (Karaye et al., 2022). This consequently stresses the necessity of a good code of corporate governance to checkmate financial misconducts among board of directors. The interrelation among capital structure, corporate governance, and liquidity administration is inherently interconnected. The efficiency of liquidity administration is contingent upon the adherence to sound corporate governance principles and a well-balanced capital structure. These factors collectively contribute to the reinforcement of bank stability (Salihu et al., 2020).

In light of the previously mentioned challenges, problem and gap identified, the study investigated the interaction influence of capital structure measured with (ratio of total liability to total assets and ratio of long-term debt to the sum of total debt and equity) and corporate governance measured with (board independence and credit risk committee) on bank stability proxied with bank liquidity among banks in Nigeria. Thus, this problem and gap identified motivated this study.

Financial stability according to Joseph et al. (2021), can be defined as a situation where the Deposit Money Banks (DMBs) intermediation process functions efficiently, thus, imparting confidence amongst persons that use it. Mohamed et al. (2021) stated that a bank can be financially stable when it fulfills its obligations with respect to investment funding, the formation of a deposit security fund, and the establishment of solid corporate governance mechanisms.

Similarly, the viewpoint presented by Bilal et al. (2021) suggests that bank stability signifies a state in which a bank operates seamlessly and competently, even in the face of the turbulence

experienced by the banking sector due to both systematic and unsystematic risks. Nguyen and Du (2022) view bank stability as an absence of insolvency problem, bank run or non-performing loan. In the same way Hassan (2022) defined bank financial stability as the broad structure that oversees the running of banks which enables the smooth performance of the banking sector. Thus, this study defined bank financial stability as the absence of financial instability which is a condition in which a financially viable deposit money bank performs its contractual obligations as they become due.

Liquidity ratio according to Dhanuskodi et al. (2022), was describe as a financial ratio that measures a company's ability to fulfill its short-term debt obligations. It assists in evaluating how effectively a company employs its current assets to meet its current liabilities. According to Appah et al. (2021) three liquidity ratios are frequently used: current ratio, quick ratio and cash ratio and in each case, the current liabilities figure is located in the denominator of the equation and current assets figure is located in the numerator. Ratios greater than 1.0 are preferred. A ratio of one means that a firm can precisely offset all its short term obligation with its liquid assets; a value below one indicates that a company would struggle to settle its short-term liabilities. Furthermore, a ratio exceeding one would indicate that a company possesses sufficient resources to fulfill its current obligations adequately. This metric is employed to gauge a bank's liquidity level and its ability to cover short-term obligations as they come due (Hamid, 2023).

The ratio can be computed using data found in the working capital, which comprises current assets and current liabilities. Therefore, in this study, the Liquidity ratio is characterized as the measure that evaluates a bank's capability to settle its near-term financial responsibilities using its liquid assets (Dhanuskodi et al., 2022; Hamid, 2023; Wuave et al., 2020; Karim et al., 2021).

Capital structure is the combination of a bank's equity and debt is what ensures financial stability, income generation, and growth (Usman, 2019). The composition of funding for a financial institution, such as a bank, encompasses various channels of financial support. Determining the capital structure is an initial and crucial choice for a bank, as it intertwines with both risk and potential gains (Ullah et al., 2020). Adeoye and Olojede (2019) define capital structure as the amalgamation of diverse funding sources accessible to the bank, employed to finance its feasible projects exhibiting positive net present value (NPV). It shows how a bank funds its overall activities and maintains its expansion through the utilization of diverse funding sources.

The ratio of total liabilities to total assets as one of the indicators of capital structure indicates the percentage of a bank's assets financed by leverage (Kong et al., 2023). The total-debt-to-total-assets ratio, another debt metric, portrays the overall leverage compared to a bank's assets, as explained by Adeniyi et al. (2020) and Mazanec (2023), which shows how financially sound a bank is (Nwannunu, 2022). This ratio reveals the extent to which a bank uses leverage to fund its assets (Adeniyi et al., 2020). This ratio is determined by dividing the aggregate value of a bank's total liabilities by the aggregate value of its total assets. If the ratio is 0.4 (40%), it signifies that 40% of the bank's total assets are funded through debt, while the remaining 60% are funded by owners' equity. According to Olaniy et al. (2022) a ratio above one (1) reveals that a significant percentage of the assets is financed by creditors, which means the bank has more debts than assets. Also, a ratio less than 0.5 reveals that a bigger percentage of a bank's assets is financed by shareholders' fund.

The long-term debt to equity ratio reveals the proportion of a bank's assets that are financed through long-term debt, as discussed in a study by Usman (2019). This ratio is measured through the division of long term debt by owners' equity. The owners' equity is ascertained by deducting total debt from total assets (Bala and Babangida, 2022).

Adegboyegun and Igbekoyi (2022) viewed corporate governance as a mechanism that aids management of banks. It shows the interconnection that subsists among a bank's proprietors, management, and key stakeholders, influencing the establishment of its goals and the estimation of its output. In addition, it generally shows the procedures employed by bank owners in monitoring the agents in order to protect their interest and also maintain financial stability. Mohamed et al. (2021) also defined corporate governance as a mechanism that sets out a structure that aids the management and the directors in providing clear, just and well-organized setting that enhances the satisfaction of the interest of the relevant stakeholders in the banking sector.

Furthermore, Adedeji and Ajulo (2021) described corporate governance as a structure overseeing the management and the administration of banks, this stipulates the dispersal of privileges and duties amongst various members in the industry. According to Inim (2021) corporate governance is concerned with the way in which deposits money banks are directed and controlled. It entails the process or structure that is used for directing and managing banks' affairs in order to enhance banks prosperity and financial stability and ultimately achieve the set objectives of the organization. In addition, Inyang et al. (2020), Bencharles and Nwankwo, (2021), Abdulai et al. (2020), and Okoye et al. (2020), observed that corporate governance consists of body of rules and structure that strive to provide procedures and codes to the members of the board to efficiently accomplish their duties and the maximization of the shareholders' interest by reducing corporate vices.

Board independence refers to a situation where most members of the board are outside directors. It is assumed that board with greater number of external director will be very cautious in checking the conducts and resolution of the deposit money bank; hence the owners interest been well secure by external directors than the internal directors (Ajala and Adesanya, 2019). Independent board brings in additional expertise to the bank which increases proficiency needed for policy execution which aids efficient monitoring thereby reducing agency cost and increasing firm's performance (Mohamed et al., 2021).

According to Peizhi and Ramzan (2020), independent directors are those who are not employed by the bank and lacking any substantial affiliations with the institution. Broad literature proposes that the inclusion of independent director increases the worth of banks with their independent analysis of strategies. Furthermore, El-Chaarani et al. (2022) stated that independent directors refer to those with no substantial interest in the company, apart from sitting allowance. Agency theory supports the use of independent executives as a crucial corporate governance tool for mitigating executive mismanagement. The supporters of agency theory, sees managers as persons with proud dispositions, who must be given close monitoring by an independent board member (Althubaiti and Rasid, 2020). This is obtained by taking the ratio of non-executive directors to the overall board membership. As used by the following past scholars such as (Akamiokhor and Okologume, 2022; Sanyaolu et al., 2021; Li et al., 2020).

The credit committee is a group of persons who are given the duty of evaluating the credit position of a potential borrowers as well as their capability to pay back the loan given to the borrowers by credit establishments (Egungwu and Egungwu, 2018). The credit committee evaluates the bank's financing undertakings and gives its view on credit categories (Karaye et al., 2022). The credit committee also identifies the likely risks the bank undertakes for various kinds of transactions. Credit committees on banking authorization regularly decide the basis on which funding is made accessible, as well as any collateral from borrower. The committee's responsibility is to offer oversight of credit risk in a rational and reliable way within the bank's lending and financing activities (Karaye et al., 2022).

The study anchored on agency theory since its explained objectives of the study. The origin of the Agency theory can be traced back to economic theory posited by Alchian and Demsetz (1972) and subsequently developed by Jensen and Meckling (1976). It is the foremost theoretical effort on the study of corporate governance (Adedeji and Ajulo, 2021). According to the Agency theory, governance is perceived as an agreement between the board and shareholders; these executives and management, most times take resolutions that are advantageous to them but may detrimental to shareholders. Instances of such actions include forging of financial reports and extreme payment structure for management (Sarpong-Danquah et al., 2022).

Agency cost is the price that is paid by shareholders, to make sure that the executives discharge their duty in the utmost interest of the shareholders (Jensen and Meckling, 1976). These costs include all incentives and control mechanism established by the principal to ensure that agents work in their best interest (Inyang et al., 2020). Agency supporter perceives agents as selfish individuals, logically maximizing their interest, to the detriment of principal's interest. To safeguard their assets, the principal trades off three diverse costs: monitoring expenses, bonding expenses, and residual losses (Jensen and Meckling, 1976). Critics of this theory contend that it is overly simplistic and heavily biased. It encompasses solely economic elements, while disregarding the roles of other interested parties, political influences, and the internal intricacies inherent in governance (Adegbe et al., 2019). Agency theory claims that executives responsible for the running of the organization will require close monitoring from the shareholders. It postulates that shareholders will need to safeguard their asset and liability from misuse so as to gain financial stability (Adegboyegun and Igbekoyi, 2022; Olokoyo et al., 2019).

Houshang et al. (2022), Pham et al. (2022) and Dinh and Pham (2020) found that capital structure significantly affect performance proxied with profitability of companies. Shahriar et al. (2022) and Bilal et al. (2021) found that capital structure had substantial favourable influence on the profitability of banks in Pakistan in particular and Asia as a whole. Both Alam et al. (2020) and Hafiz et al. (2020) discovered a bidirectional (positive-negative) correlation amid corporate governance and conventional banks' profitability in Pakistan. Kong et al. (2023) and Kanu (2022) examined the relationship between capital structure and financial performance in Ghana, as well as the impact of capital structure on the financial performance of banks in Sierra Leone. They discovered that the capital structure variables have a favourable and substantial correlation with probability in Ghanaian and Sierra Leone banks.

Equivalently, Akhsanul (2020), Rashid et al. (2020), Alam et al. (2020) and Hafiz et al. (2020) found the significant relevance of corporate governance and the connection on banks' efficiency in Bangladesh and Pakistan. Likewise, Addo et al. (2021) and Bekiaris (2021) established significant connection between corporate governance and banks' profitability. Also, El-Chaarani, et al. (2022), Sarpong-Danquah et al. (2022) and Musah and Adutwumwaa (2021) found that there exists sound interconnection between corporate governance and profitability of Ghanaian manufacturing companies and Ghanaian rural banks. Bala and Babangida (2022), Olaniyi et al. (2022) and Adeniyi et al. (2020) discovered that capital structure measures had favourable substantial impacts on the profitability of banks and registered manufacturing companies in Nigeria. Furthermore, Adegboyegun and Igbekoyi (2022), Eni-Egwu et al. (2022) and Akinola (2021) found that corporate governance measures exert an immaterial and negative influence on bank and firm performance. From review of past empirical related studies, no known studies examined interaction effect of ratio of total liability to total assets, the ratio of long-term debt to the sum of total debt and equity, board independence, and credit committee on liquidity of DMBs in Nigeria, thus there exist empirical gap this study intends to investigate.

Several studies within and outside Nigeria contexts such as Kong et al. (2023), Kanu (2022), Houshang et al. (2022), Pham et al. (2022), Dinh and Pham (2020), Nguyen and Du (2022), Zhang et al. (2022), Addo et al. (2021), Bekiaris (2021), Peizhi and Ramzan (2020), Shahriar et al. (2022), Ullah et al. (2020), Rishi and Boopendra (2022), Mohamed et al. (2021), Akhsanul (2020), Rashid et al. (2020), Alam et al. (2020), Hafiz et al. (2020), Sarpong-Danquah et al. (2022), Bala and Babangida (2022), Olaniyi et al. (2022), Adeniyi et al. (2020), Adegboyegun and Igbekoyi (2022), Eni-Egwu et al. (2022), Akinola (2021), Okoye et al. (2020), Inim (2021) and Kafidipe et al. (2021) among others have examined the individual effect of corporate governance on performance of bank as well as effect of capital structure on bank profitability, however, most of these past related empirical works on how both corporate governance (board independence, and credit committee) and capital structure (ratio of total liability to total assets, the ratio of long-term debt to the sum of total debt and equity) influence financial stability measured with bank liquidity in Nigeria was closed to non-existence. Therefore, there exist a lacuna in the existing literature that this study intended to address.

## 2. Methodology

The study utilized ex-post facto research design from 2010 to 2021. The research encompassed a study population of 12 deposit money banks, which were chosen based on the accessibility and they were leading banks among international and national categorized banks in Nigeria as well as listed in the Nigerian stock market, Central Bank of Nigeria Report (2022) and NSE Reports (2022). The sampled population was taken from the total population of 19 Nigerian deposit money banks. The sample size was achieved through the use of purposive sampling technique; where international categorized banks were; First Bank Limited, UBA Plc, GTBank Plc, Zenith Bank Plc, FCMB Bank Limited and Access Bank Plc while national categorized banks were; Ecobank Nigeria, Stanbic IBTC Bank Plc, Sterling Bank Plc, Wema Bank Plc, Polaris Bank.

The study employed the panel regression analysis method, and the selection between fixed, random, and pooled panel regression models was determined through the application of the Hausman test. Secondary data of the selected 12 deposit money banks enlisted on the Nigerian stock market within the period of 2010 to 2021 was obtained. Time series - cross-section data was used to examine the data. They were combined and pooled for regression analysis. Data relating to bank capital structure (ratio of total liability to total assets, sum total of equity and ratio of long term liabilities to total liability), corporate governance (Board independence) and bank stability proxied with Liquidity ratio were extracted from yearly published financial statement of banks in Nigeria.

The econometric model employed in this research is specified thus:

$$Y = \beta_0 + \beta_1 x_{it} + \beta_2 x_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

The equation pertains to a regression model where  $Y$  represents the dependent variable. The parameter  $\beta_0$  denotes the constant,  $Y$  is dependent variable represented by Bank Stability, while  $\beta_1 x_{it}$  and  $\beta_2 x_{it}$  were independent variable (capital structure and corporate governance) with their coefficients. In the context of the study,  $x_{it}$  stands for the explanatory variable, while  $\varepsilon_{it}$  signifies the error term. Mathematically, transmuted eq. (1) into a testable form based on agency theory, the study obtained the following regression equations:

$$LQR_{it} = \beta_0 + \beta_1 TLTA_{it} + \beta_2 LDTL_{it} + \beta_3 BI_{it} + \beta_4 CRC_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

Table 1: Measurement of Variable

Variables	Proxied	Computation	Apriori Expectation	Dependent/Independent
Capital Structure	Debt to equity	Total liability to total assets ratio	+/-	Independent Variable
	Debt to equity	Long term liability to total liability plus equity ratio	+/-	Independent Variable
Corporate governance	Board independence (BI)		+	Independent Variable
	Credit committee (CRC)		+	Independent Variable
Bank Stability	Bank Liquidity	Ratio of current assets and current liabilities		Dependent Variable

Source: authors' computation

### 3. Results

Table 2 below depicted the descriptive trend among the study variables.

Table 2: Descriptive Statistics

	LQR	TD TA	LTD E	BI	CRC
Mean	13.4716	1.194571	7.528227	0.513646	0.423689
Median	1.169914	0.715332	5.747714	0.500000	0.300452
Maximum	4,686.551	17.72317	136.9585	0.928571	0.822591
Minimum	0.011153	0.001222	-4.642964	0.000000	0.000000
Std. Dev.	542.1579	2.590552	12.97798	0.115053	0.112521
Skewness	5.815883	4.577263	7.494762	0.004611	0.042692
Kurtosis	41.82311	23.79005	71.57247	5.952120	4.833899
Jarque-Bera	9,855.190	3,096.188	29,561.22	52.29059	48.346708
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	19,795.91	172.0182	1,084.065	73.96509	69.753845
Sum Sq. Dev.	42,032,732	959.6674	24,085.21	1.892902	1.7529851
Observations	144	144	144	144	144

Source: authors' computation

The table provided below presents a description of the data utilized for the analysis, outlining its key attributes. The range of the total liability to total assets ratio is 0.001 to 17.72317, with an average of 1.194571. The long term liability to equity ratio ranges from -4.642964 to 136.9585, with an average value of 7.528227. Board independence ranges from 0.000 to 0.928579, with a mean value of 0.513646. The range of the credit committee is from 0.000000 to 0.822591, with a mean value of 0.423689. Finally, LQR, the explained variable, had an average value of 13.4716 with a range of 0.01115 to 4686.551. The variables also demonstrated a strong level of uniformity, as evidenced by the close proximity of the mean and median values to the highest and lowest values. All the variables are leptokurtic (the values are more than 3) in terms of kurtosis. Positive skewness permeates every variable. Since the probability value for the Jarque-Bera is less than 5%, it inferred that the data for the research variables LQR, TDTA, LTDE, CRC, and BI were normally distributed. The Jarque-Bera probability indicates that the data distribution of the study variables, including LQR, TDTA, LTDE, CRC, and BI, were normally distributed. This conclusion is drawn from the fact that the Jarque-Bera probability value is below 5%.

The explanatory power Adj.R<sup>2</sup> of capital structure and corporate governance measures (TDTA, LTDE, BI and CRC) combined effect on LQR proxied for bank financial stability using Fixed OLS is 0.36. This means that just 36% deviation in the LQR is expounded through the joint impact of the dependent proxies of capital structure and corporate governance (TDTA, LTDE, BI and CRC) while the remaining 64 percent is affected by external causal variables that fall beyond the scope of this study. Looking at the F-statistics results with a p-value of 0.00 (0 percent), it indicated that the combined impact of the explanatory variables (TDTA, LTDE,



Table 3: Panel Regression

Method	Pooled OLS			Fixed effects			Random effects		
Variables	Coeff	t-Stat	Prob	Coeff	t-stat	Prob	Coeff	t-stat	Prob
TDTA	-26.35	-1.50	0.14	12.70	3.69	0.09	-15.72	-0.88	0.37
LTDE	-2.96	-0.85	0.39	-0.51	-0.16	0.87	-0.91	-0.29	0.76
BI	12.194	3.082	0.00	62.15	1.71	0.04	72.87	2.02	0.08
CRC	11.186	2.068	0.06	56.07	1.67	0.02	67.78	1.08	0.06
Constant	-427.78	-2.06	0.04	165.59	-0.87	0.39	-20.70	-1.00	0.31
	Adj. R-squared = 0.06			Adj. R-squared = 0.36			Adj. R-squared = 0.11		
	F-Stat = 4.27			F-Stat = 6.67			F-Stat = 3.54		
	Prob > F = 0.00*			Prob > F = 0.00*			Prob > F = 0.00*		
Hausman Test: $\chi^2_{(5)} = 2.37$ , Prob > $\chi^2 = 0.04$									
Breusch-Pagan LM Test: $\chi^2_{(1)} = 1.55$ , Prob > $\chi^2 = 0.21$									
Breusch-Pagan/ Cook-Weisberg Test: $\chi^2_{(1)} = 1.23$ , Prob > $\chi^2 = 0.24$									
Pesaran Cross-sectional Dependence (CD) = 1.368 (p > 5% = 0.735)									
Wooldridge Test: F = 7.85, Prob > F = 0.13									
Dependent Variable: Liquidity ratio *Significance @ 5% and 10%									

Source: authors' computation

BI, and CRC) significantly influences the dependent variable (LQR), which serves as a proxy for bank financial stability. The t-statistics as shown in Table 3 indicated that Total Debt to Total Asset (TDTA) (t-stat = 3.69, p-value = 0.09 > 0.05); Long Term Debt to Equity ratio (LTDE) with (t-stat = -0.16, p-value = 0.87 > 0.05) have favorable influence on the ratio of Liquidity (LQR) of the selected Nigerian, deposit money banks, Board Independence (BI) (t-stat = 2.02, p-value = 0.04 < 0.05); Credit Risk Committee (CRC) with (t-stat = 1.67, p-value = 0.02) have positive and substantial impact on the Liquidity ratio (LQR) of selected Nigerian deposit money banks. Looking at the regression model, the F-statistics is 6.67, while the p-value of the F-statistics is 0.00, which is less than the level of significance of 0.05 used in this study. Thus, the regression model was well fitted.

## 4. Discussion

The study dwelled on combined effect of capital structure and corporate governance mechanism on bank financial stability proxied with bank liquidity. Findings of this study established that both capital structure and corporate governance mechanism determine bank liquidity. This indicated that both capital structure and corporate governance significantly improved bank liquidity among selected deposit money banks in Nigeria. The results of the study are consistent with the findings of Alam et al. (2020), Hafiz et al. (2020), Sarpong-Danquah et al. (2022), Bala and Babangida (2022), Olaniyi et al. (2022), Adeniyi et al. (2020), Otekunrin et al. (2020), Adegboyegun and Igbekoyi (2022) and Eni-Egwu et al. (2022), that both corporate governance and capital structure proxied (TDTA, LTDE and BI) enhanced bank stability of selected deposit money banks in Nigeria. Thus, this study rejected the null hypotheses stated.

## 5. Conclusions

The focused of this study examined how the stability of banks in Nigeria is affected by both capital structure and corporate governance; it concludes that Board Independence (BI) and Credit Committee (CRC) have positive and significant influence on the Liquidity ratio (bank stability) of selected banks in Nigeria. While, Long Term Debt to Equity Ratio (LTDE) and Total Debt to Total Assets ratio (TDTA) have positive but insignificant influence on the Liquidity ratio (bank stability) of deposit money banks in Nigeria. The study recommends that;

The study's conclusions revealed that viable DMBs do not only finance their assets with TDTA or LTDE. Therefore, anytime a bank chooses to borrow money for investment, due diligence must be performed. This will ensure that the performance-enhancing managerial restraint imposed by debt is not offset by the potential financial distress brought in by excessive leverage. This will increase the bank's liquidity, which will in turn strengthen the deposit money banks' financial stability. The study also suggests that management should increase incentives for debt suppliers, particularly depositors, as this will inspire the depositors to preserve their savings with DMBs for a lengthier period. The modification to the maturity structure will give DMBs access to more liquid assets, which might improve their capacity to maintain their financial stability. Also, the government must adopt laws that will hasten the growth of a more active capital market, where DMBs and other businesses will have access to shares and bonds at prices that are competitive globally. This will significantly reduce the likelihood of Nigerian businesses looking for financing opportunities outside while also luring foreign investors to the Nigerian capital market. Finding also shows that corporate governance significantly improved liquidity ratio of deposit money bank.

The study thus suggests that outside directors should be truly independent in order to continuously improve financial stability; priority should be on enhancing their financial literacy, and notably, possessing prior experience in banking operations is crucial to facilitate the effective management of liquidity. Lastly, policymakers and bank executives in Nigeria should make sure that the credit committee is properly composed with finance managers, and external directors with the right financial expertise so as to ensure quality loan policy formulation, lending guideline and credit risk management in a fair and consistent manner within the bank's lending and credit-related activities. This will in turn enhance the liquidity ratio and increase the financial stability of the deposit money banks in Nigeria.

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## References

- Abdulai, R. A., Abere, M., & Olowo, S. O. (2020). Effects of corporate governance on delinquency management of microfinance Banks in Southwest, Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 10(5), 438–455.
- Addo, K., Hussain, N., & Iqbal, J. (2021). Corporate governance and the systemic risk: A test of bundling Hypothesis. *Journal of International Money and Finance*, 115, 102327.
- Adedeji, E. A., & Ajulo B. O. (2021). Impact of corporate governance on the performance of selected banks in Nigeria. *Journal of Accounting and Management*, 1(11), 189-206.
- Adegbie, F. F., Akintoye, I. R., & Ashaolu, A. O. (2019). Corporate governance and financial stability of Nigeria quoted deposit money banks. *International Journal of Business and Management Review*, 7(5), 38-60.
- Adegboyegun, A. E. & Igbekoyi O. E. (2022). Corporate governance and firm performance: Evidence from the deposit money banks in Nigeria. *Amity Journal of Management Research*, 5(1), 88-99.

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- Adeniyi, A. J., Marsidi, A., & Babatunji, A. S. (2020). Capital structure and commercial banks performance in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 10(1), 239-249.
- Adeoye, S. D. & Olojede, S. O. (2019). Effect of capital structure on financial performance of listed banks in Nigeria. *Asian Journal of Economics, Business and Accounting*, 12(2), 1-14.
- Adu (2023). Corporate governance and the financial performance a quoted company in Nigeria. *International Journal of Social Sciences and Humanities Reviews*, 13(1), 94-100.
- Ajala, O. A., & Adesanya, T. A. (2019). Corporate governance mechanism and financial performance of deposit money banks in Nigeria: An empirical analysis. *Journal of Association of Professional Bankers in Education*, 5(1), 187-212.
- Ajibade, A. T., Jaji, K. Z., & Kwarbai, J. D. (2020). Corporate governance and financial performance in the banking sector of Nigeria and the United Kingdom. *CJSMS*, 5(1), 8-19.
- Akamiokhor, C., A. & Okologume, H., C. (2022). Effect of corporate governance on financial performance of manufacturing firms in Nigeria. *African Scholar Publications & Research International*, 25(7), 307-330.
- Akhsanul, K. (2020). The relevance of corporate governance and capital structure to financial performance in state owned enterprises (SOES). *International Journal of Innovation, Creativity and Change*, 12(5), 515-537.
- Akinola, A. (2022). The nexus between bank size and financial performance: Does internal control adequacy matter? *Journal of Accounting and Taxation*, 14(1), 13-20.
- Alam, A., Abbas, S. F. & Hafeez, A. (2020). Board governance and bank's performance: Does size matter? *Journal of Asian Finance, Economics and Business*, 7(11), 817-825.
- Alchian, A., A. & Demsetz, H. (1972). Production, information costs, and economic organization. *American Economic Review*, 62(5), 777-795.
- Aliu, A. A., Abdullahi, N. A., & Bakare, T. O. (2020). Capital adequacy and financial performance of deposit money banks with international authorization in Nigeria. *Accounting and Taxation Review*, 4(4), 78-91
- Althubaiti, S. A., & Rasid, S. S. A. (2020). Conceptual framework of bank's financial stability, governance mechanisms, regulation and risk management in the kingdom of Saudi Arabia. *International Journal of Academic Research in Business and Social Sciences*, 10(3), 22-32.
- Appah E., Onowu J. U., & Tonye Y. (2021). Liquidity and profitability ratios on growth of profits of listed oil and gas firms in Nigeria. *African Journal of Accounting and Financial Research*, 4(3), 1-14.
- Bala, S., A. & Babangida, M. A. (2022). Capital structure and financial performance of quoted deposit money banks (DMBs) in Nigeria. *Asian Journal of Economics, Business and Accounting*, 22(5), 1-10.
- Bekiaris, M. (2021). Board structure and firm performance: An empirical study of Greek systemic banks. *Journal of Accounting and Taxation*, 13(2), 110-121.
- Bencharles, O. K., & Nwankwo, D. C. (2021). Credit risk management and deposit money banks stability in Nigeria: Does Good Corporate Governance Matter? *Research Journal of Finance and Accounting*, 12(16), 1-15.
- Bilal, S., Noor, M., & Usman A. (2021). Financial stability and competitiveness of commercial banks in Pakistan: An empirical analysis. *Journal of Managerial Sciences*, 14(2), 53-63.
- Dhanuskodi R, Abba Y. & Oladokun N., O. (2022). Liquidity analysis through financial ratios. *International Journal of Scientific Research and Management (IJSRM)*, 10(12).
- Dinh, H. T., & Pham, C. D. (2020). The effect of capital structure on financial performance of Vietnamese listing pharmaceutical enterprises. *Journal of Asian Finance, Economics and Business*, 7(9), 329-340.
- Egungwu, I., & Egungwu, N. U. C. (2018). Effect of corporate governance on asset quality of Banks (Evidence from Nigeria). *International Journal of Academic Research in Business and Social Sciences*, 8(12), 1981 – 2002.
- El-Chaarani, H., Rebecca, A. & Yahya S. (2022). The impact of corporate governance on the financial performance of the banking sector in the MENA (Middle Eastern and North African) region: An Immunity Test of Banks for COVID-19. *Journal of Risk and Financial Management*, 15(2), 82.
- Eni-Egwu, C. O., Madukwe C. J., & Ezeilo C. B. (2022). Impact of selected corporate governance variables on the financial performance of selected quoted deposit money banks in Nigeria. *ARRUS Journal of Social Sciences and Humanities*, 2(1), 32-46.
- Hafiz, M. N., Shoaib, A., Yao, H., Saqib A., & Jan, M. S. (2020). The impact of corporate governance on profitability of conventional banks operating in Pakistan. *Quantitative Economics and Management Studies*, 1(4), 260-267.
- Hamid, A., A. (2023). Impact of liquidity and solvency on profitability. An empirical analysis of the pharmaceuticals and chemicals sector of Bangladesh. *International Center for Research and resources*, 4(1), 112-126.

- Hassan, M. M. H. (2022). Does the efficiency of banks adversely affect financial stability? A comparative study between traditional and Islamic banks: Evidence from Egypt. *Banks and Bank Systems*, 17(2), 13-26.
- Houshang, H., Suzan, D., Mustafa, R. R., Nishad, N., & Rezart, D. (2022). Impact of capital structure on profitability: Panel data evidence of the telecom industry in the United States. *Risks*, 10(8), 157.
- China Financial Stability Report. (2020). *Financial stability analysis by The People's bank of China*. <https://www.pbc.gov.cn/en/3688235/3688414/3710021/3982927/4154143/2021012517352186067.pdf>
- Inim, V. E. (2021). Corporate governance and efficiency of deposit money banks in Nigeria. *International Journal of Management Studies and Social Science Research*, 3(4), 19-26.
- Inyang, W. S., Inah, E. U., & Eyo, E. I. (2020). Corporate governance and deposit money banks' profitability: evidence from Nigerian deposit money bank. *International Journal of Business, Economics and Law*, 23(1), 199-208.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Joseph, Y., Hadrat, M., Yusif, E. T., George A., & Daniel A. A. (2021). Main determinants of banks' stability: Evidence from commercial banks in Ghana. *Journal of Finance and Economics*, 9(2), 42-52.
- Kafidipe, A., Uwalomwa, U., Dahunsi, O., & Okeme, F. O. (2021). Corporate governance, risk management and financial performance of listed deposit money bank in Nigeria. *Cogent Business & Management*, 8(1), 1888679.
- Kanu, J. (2022). The impact of capital structure on the financial performance. Evidence from Sierra Leone commercial banks. *Research in Finance*, 3(5), 1-15.
- Karaye, A.I., Ahmad-Zaluki, N.A., Badru, B.O. (2022). The effect of credit committee characteristics on bank sset quality in Nigeria. *Financial Markets, Institutions and Risks*, 6(2), 60 -75.
- Karim, R., Shetu, S., A. & Razia, S. (2021). COVID-19, liquidity and financial health: empirical evidence from South Asian economy. *Asian Journal of Economics and Banking*, 5(3) 307-323.
- Kong, Y., Donkor, M., Musah, M., Nkyi, J. A., & Ampong, G. O. A. (2023). Capital structure and corporates financial sustainability: Evidence from listed non-financial entities in Ghana. *Sustainability*, 15(5), 4211.
- Koskei, L. (2020). Determinants of banks' financial stability in Kenya commercial banks. *Asian Journal of Economics, Business and Accounting*, 18(2), 48-57
- Li, K., Kong, Y., Atuahene, S. A., Bentum-Micah, G. & Agyapong, M. K. (2020). Corporate governance and banking stability: The case of universal banks in Ghana. *International Journal of Economics and Business Administration*, 8(1), 325-352.
- Mazanec, J. (2023). Capital structure and corporate performance: An Empirical analysis from Central Europe. *Mathematics*, 11(9), 2095.
- Mohamed, M., Hany, K. & Israa E. (2021). How does internal governance affect banks financial stability: Empirical evidence from Egypt. *International Journal of Disclosure and Governance*, 18(2), 240–255.
- Musah, A., & Adutwumwaa, M. Y. (2021). The effect of corporate governance on financial performance of rural banks in Ghana. *International Journal of Financial, Accounting, and Management*, 2(4), 305-319.
- Nguyen, T. D & Du, Q. L.T. (2022). The effect of financial inclusion on bank stability: Evidence from ASEAN. *Cogent Economics & Finance*, 10(1), 2040126.
- Nwannunu, S., E. (2022). Capital structure and firm performance: Evidence from 2021 best-performed stocks in Nigeria. *International Journal of Research and Innovation in Applied Science (IJRIAS)* 7(9), 65-75.
- Okoye, L., Olokoyo, F., Okoh, J., Ezeji, F. & Uzohue, R. (2020). Effect of corporate governance on the financial performance of commercial banks in Nigeria. *Banks and Bank Systems*, 15(3), 55-69.
- Olaniyi, R. B., Abiloro, K. P., & Ilaniyan, N. O. (2022). Capital structure and firm performance of listed manufacturing firms in Nigeria stock exchange. *Annals of Spiru Haret University. Economic Series*, 22(2), 149-167.
- Olokoyo, F. O., Adegboye, F. B., Okoye, L. U., Evbuomwan, G. O. & Adebo, A. E. (2019). Corporate governance and deposit money banks' performance in Nigeria. *International Conference on Education and Social Sciences*, 4(6), 1135-1143.
- Otegunrin, A. O., Nwanji, T. I., Damilola Eluyela, D., Olowookere, J. K., & Fagboro, D. G. (2020). Capital structure and profitability: the case of Nigerian deposit money banks. *Banks and Bank Systems*, 15(4), 221-228.
- Peizhi W., & Ramzan, M. (2020). Do corporate governance structure and capital structure matter for the performance of the firms? An empirical testing with the contemplation of outliers. *PLoS ONE*, 15(2), e0229157.
- Pham, H. N., Hoang, T. M. & Pham, N. T. H. (2022). The impact of capital structure on bank profitability: Evidence from Vietnam. *Cogent Business & Management*, 9(1), 2096263.

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- Rashid, H. U., Zobair, S. A., Chowdhury, A. I. & Islam, A. (2020). Corporate governance and banks' productivity: Evidence from the banking industry in Bangladesh. *Business Research*, 13(2), 615–637.
- Rishi, K. R. & Boopendra, S. (2022). Corporate governance, capital structure, and firm performance, a panel VAR approach. *SN Business Economics*, 3(14), 1-30.
- Salihu, L. M., Ibrahim, G. M., & Bala A. Y. (2020). Liquidity and banks' stability in Nigeria: A review. *Journal of Management Sciences*, 17(3), 52-61.
- Sanyaolu, W., Siyanbola, T. & Innocent, O. (2021). Corporate governance and liquidity management: Evidence from Nigerian deposit money banks. *Iranian Economic Review*, 25(4), 791-801.
- Sarpong-Danquah, B., Oko-Bensa-Agyekum, K., & Opoku, E. (2022). Corporate governance and the performance of manufacturing firms in Ghana: Does ownership structure matter? *Cogent Business & Management*, 9(1), 2101323.
- Shahriar, S. M., Hoque, M. N. Wanke, P. & Azad, A. K. (2022). The effect of capital structure, operating efficiency and non-interest income on bank profitability: New evidence from Asia. *Asian Journal of Economics and Banking*, 7(1), 25-44.
- Ullah, A., Pinglu, C., Ullah, S., Zaman, M., & Hashmi, S., H. (2020). The nexus between capital structure, firm-specific factors, macroeconomic factors and financial performance in the textile sector of Pakistan. *Heliyon*, 6(8), e04741.
- Usman, M. (2019). The Impact of capital structure on financial performance of consumer goods industry in Nigeria. *Open Journal of Accounting*, 8(4), 47-62.
- Wuave, T., Yua, H., & Yua, P., M. (2020). Effect of liquidity management on the financial performance of banks in Nigeria. *European Journal of Business and Innovation Research*, 8(4), 30-44.
- Zhang, M., Lin, L., Chen, H. & Zhao, X. (2022). The impact of capital structure on the performance of Chinese E-commerce industry companies. *Hindawi Journal of Mathematics*, 2022, 7612349.