BANKING DISTRESS AND ECONOMIC GROWTH IN NIGERIA

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ABSTRACT

This study examined banking distress on economic growth in Nigeria from 1998 to 2023. The source of data was obtained from CBN statistical bulletin and Supervision Report. The study employed Liquidity ratio, Non-Performing loans, Loan loss Provision, Lending rate and bank regulatory capital to risk-weighted asset as measures of bank distress, and real gross domestic product as the measure of the Nigerian economy. The ex-post facto research design was adopted and the data were analyzed with the application of Augmented Dickey Fuller unit root test, ARDL bound test and ARDL shortrun Error correction Model with the aid of E-view statistical package. The study found that longrun relationship exists between the variables. Furthermore, the study holds that Federal government bonds have a positive but insignificant impact on the gross domestic product in Nigeria. Liquidity ratio has a negative and insignificant effect on the Nigerian economy (RGDP). Non-Performing loans had a positive but insignificant effect on the Nigerian economy (RGDP). Loan loss Provision has a negative but significant effect on the performance of deposit money banks in Nigeria. Lending rate has a positive and insignificant effect on the Nigerian economy (RGDP). Finally, bank regulatory capital to risk-weighted asset has a negative and insignificant effect on the Nigerian economy (RGDP). The study concluded that bank distress has a significant impact on the Nigerian economy. The study recommends that banks should not focus mainly on liquidity, but strive to grow by striking a balance between liquidity and profitability. Banks should ensure to reduce its amount of loan loss provision and increase is lending rate to ensure more profits that will serve the productive sector of the economy.

Keyword**:** *Liquidity Ratio*, *Loan loss provision, Non-performing loans, Lending rate, Capital Adequacy, Real Gross Domestic Product*

Introduction

The Nigerian economy has experienced fluctuating growth over the years, largely influenced by the performance of key sectors, especially the banking sector. Economic growth, typically measured by the increase in Gross Domestic Product (GDP), represents the total value of all goods and services produced within the economy (Depersio, 2021). Banks play a crucial role in this growth by facilitating capital mobilization, financing key sectors, and serving as intermediaries between savers and investors (Olukotun et al., 2019). However, when banks encounter distress, characterized by illiquidity and insolvency, the resulting economic consequences can be severe, undermining their capacity to support economic activities and thereby impeding growth. Bank distress in Nigeria, particularly during the years following the 2008 financial crisis and subsequent economic recessions, has posed significant challenges to sustaining economic growth (CBN, 2020).

Banking distress arises from various causes, including non-performing loans, poor risk management, and inadequate regulatory oversight, which lead to the deterioration of a bank's financial health. In Nigeria, this distress has often manifested in banks being unable to meet their financial obligations, threatening the stability of the entire financial system (Mayuku et al., 2020). According to Aburime (2019), the Nigerian banking system has, over the years,

faced multiple distress episodes due to factors such as poor asset quality, lack of experienced personnel, and weak internal controls. Furthermore, banking distress is often exacerbated by systemic issues such as high inflation, regulatory lapses, and economic downturns, all of which hinder banks' ability to lend profitably and recover outstanding loans. When banks fail to function optimally, their inability to provide credit impairs investment in key sectors, leading to slowed economic growth.

The effects of banking distress on economic growth are evident in Nigeria's financial landscape, where distressed banks struggle to support productive sectors of the economy. According to Uwalomwa et al., (2015), the Nigerian banking sector has been plagued by recurring distress, mainly due to weak regulatory frameworks, poor lending practices, and fraudulent activities. This distress leads to reduced capital availability, higher interest rates, and decreased confidence in the banking system, all of which stifle economic activities. As bank distress persists, its ripple effects spread across various sectors of the economy, disrupting industrial production, reducing consumer spending, and ultimately affecting GDP growth. This study seeks to investigate these dynamics by analyzing key distress indicators such as non-performing loans, liquidity ratios, and loan loss provisions—and their relationship with Nigeria's economic performance between 1998 and 2023.

Statement of the Problem

Banks, as key financial intermediaries, are central to the growth and development of any economy. However, for the banking sector to fulfill its role in promoting economic stability and growth, it must remain stable, sound, and reliable. In Nigeria, episodes of banking distress have had significant economic consequences, undermining the sector's ability to drive economic progress. According to Soludo (2015), prior to the consolidation exercise in 2004, the Nigerian banking sector faced systemic distress, with 27 of the 89 banks either marginal or unsound, leading to severe liquidity problems and financial instability. This created an environment in which the overall financial system became vulnerable to bank failures, posing risks to economic growth (Central Bank of Nigeria [CBN], 2020). Despite the implementation of reforms aimed at strengthening the sector, challenges persist. Fraud, mismanagement, and inadequate regulatory oversight have plagued banks, leaving them unable to fulfill their roles in mobilizing funds and supporting industrial and household financial needs (Olukotun et al., 2019). The persistence of these issues indicates that the sector remains susceptible to distress, threatening Nigeria's economic growth. Bank distress results in reduced asset quality, increased non-performing loans (NPLs), and overall financial instability, all of which weaken the banking sector's contribution to economic growth.

Several empirical studies (Uwalomwa et al., 2015; Aburime, 2019) have examined the impact of banking distress on financial performance in Nigeria. However, few studies have comprehensively integrated key variables such as liquidity ratio, non-performing loans, loan loss provisions, and lending rates in a single model. This gap in literature creates uncertainty for policymakers seeking to implement measures that would stabilize the banking sector. Therefore, this study aims to bridge this gap by analyzing the effects of bank distress on Nigeria's economic growth using these variables, with the goal of recommending strategies to ensure a sound and resilient banking system that fosters sustainable economic growth.

Objectives of the Study

The general purpose of this study was to examine the effect of banking distress on the Nigerian economy. However, the study intends to specifically:

1. Examine the effect of liquidity ratio on the Nigerian economy (RGDP).
2. Investigate the effect of non-performing loans on the Nigerian economy (RGDP).
3. Examine the effect of loan loss provision on the Nigerian economy (RGDP).
4. Examine the effect of lending rate on the Nigerian economy (RGDP).
5. Analyse the effect of Banks regulatory capital to Risk-weighted-assets on the Nigerian economy (RGDP).

Hypotheses

To guide this study, hypotheses were formulated in a null form:

H_{01}: Liquidity ratio has no significant effect on the Nigerian economy (RGDP).
H_{02}: Non-performing loans have no significant effect on the Nigerian economy (RGDP).
H_{03}: Loan loss provision does not have any significant effect on the Nigerian economy (RGDP).
H_{04}: Lending rate has no significant effect on the Nigerian economy (RGDP).
H_{05}: Banks regulatory capital to Risk-weighted-assets vhas no significant effect on the Nigerian economy (RGDP).

REVIEW OF RELATED LITERATURE

Conceptual Review

Concept of Bank Distress

Bank distress refers to a situation where a financial institution experiences severe financial instability, often characterized by liquidity shortages, insolvency, or both, leading to its inability to meet its financial obligations to depositors, creditors, or other stakeholders. The key features of bank distress include excessive non-performing loans, low capital adequacy, poor asset quality, and operational inefficiencies, all of which contribute to the erosion of public confidence in the bank's ability to function effectively. According to Mordi and Akano (2022), a bank is considered distressed when it faces significant challenges in maintaining liquidity and solvency, often resulting in regulatory intervention, such as liquidation or acquisition by stronger institutions. Bank distress can occur due to internal and external factors. Internal factors include poor management, weak corporate governance, and excessive risk-taking, while external factors include economic downturns, regulatory changes, and adverse market conditions. When left unchecked, bank distress can lead to systemic risks that threaten the broader financial system. For instance, the 2009 Nigerian banking crisis saw several banks become distressed due to poor risk management practices and an unstable macroeconomic environment (Ezeani & Ogbonna, 2023). Effective regulatory oversight, risk management strategies, and sound corporate governance are essential for preventing and managing bank distress to ensure the stability of the financial system.

Overview of Bank Distress in Nigeria

Bank distress has been a recurring issue, with the country witnessing several episodes of banking crises that have shaped the evolution of its financial system. The most notable instance of widespread distress occurred in the 1990s when more than half of the country’s banks were declared either insolvent or technically insolvent by the Central Bank of Nigeria (CBN) (Olugbenga & Olanrewaju, 2020). This period of distress was characterized by poor management practices, high levels of non-performing loans, and a lack of effective regulatory frameworks. The CBN and the Nigerian Deposit Insurance Corporation (NDIC) had to

intervene, resulting in the liquidation or merger of many distressed banks. According to Adeyemi and Adebayo (2021), the Nigerian banking system at that time was poorly capitalized, with banks engaging in risky lending practices without adequate provisions for loan losses. The situation improved somewhat in the early 2000s following the banking sector consolidation initiated by the CBN in 2005. This reform led to the recapitalization of banks, with the minimum capital requirement raised to ₦25 billion, forcing many smaller and weaker banks to either merge with stronger institutions or exit the market. This consolidation reduced the number of banks in Nigeria but improved their overall financial health and stability. However, despite these efforts, the Nigerian banking sector once again faced distress in 2009, primarily due to the global financial crisis and internal governance failures. As highlighted by Nwafor and Udoka (2023), several banks became distressed during this period due to inadequate risk management, excessive exposure to the oil and gas sector, and an over-reliance on short-term funds for long-term lending.

In response to the 2009 banking crisis, the CBN implemented a series of reforms, including the introduction of the Asset Management Corporation of Nigeria (AMCON) to take over the toxic assets of distressed banks, and stricter regulatory measures such as the adoption of the Basel III framework to strengthen capital adequacy. These reforms helped stabilize the banking sector and restore depositor confidence. Nevertheless, bank distress remains a challenge in Nigeria due to lingering issues such as poor corporate governance, economic volatility, and inadequate regulatory compliance. Recent research by Osaretin and Aigbokhaevbo (2022) indicates that, while the Nigerian banking system is more robust today, it remains vulnerable to external shocks such as fluctuations in oil prices and global economic uncertainty, underscoring the need for continuous reform and oversight.

Causes of Banking Sector Distress in Nigeria

The primary causes of banking sector distress in Nigeria is attributed to several key factors, including insider lending, lending to high-risk borrowers, macroeconomic instability, and non-adherence to liquidity support and prudential regulation.

i. Insider Lending

One of the most significant contributors to the failure of commercial and merchant banks in Nigeria is insider lending. Insider loans accounted for a large portion of bad debts, which were often unrecoverable. For instance, in 1995, 65% of the total loans of four liquidated banks in Nigeria were insider loans, most of which could not be recovered (NDIC, 1994). These loans were frequently used for speculative projects such as real estate development and often breached large loan exposure limits. Many were extended to ventures like hotels and shopping centers, which could not generate short-term returns, leading to asset-liability mismatches. The prevalence of insider lending highlights the issue of moral hazard, as many of these loans were granted under political influence, with politicians serving as shareholders or directors of these banks. This political involvement often reduced the pressure to mobilize funds from the public, as political connections were used to secure deposits from public sector entities and prevent regulatory action against banks violating laws (CBN, 2020).

ii. Lending to High-Risk Borrowers

Another significant cause of bank distress was lending to high-risk borrowers at elevated interest rates. This type of lending involved both moral hazard and adverse selection, where banks took on risky borrowers to generate high returns due to the high cost of mobilizing funds. Because newly established commercial and merchant banks were perceived as less safe by depositors compared to established banks, they had to offer higher deposit rates to attract funds. This increased the pressure on banks to earn high returns on their assets, often by lending at high interest rates. The result was poor loan quality, as many borrowers were

rejected by more established banks due to their lack of creditworthiness (Harvey & Jenkins, 1994).

iii. Macroeconomic Instability

Macroeconomic instability, particularly in the form of high and volatile inflation, exacerbated the poor loan quality of commercial and merchant banks. During the 1990s, Nigeria experienced inflation rates as high as 70%. This instability had two critical effects on the banking sector. First, it increased the unpredictability of business profits, which in turn heightened the risks of loan defaults. High inflation led to greater variability in the prices of goods and services, making it difficult for businesses to forecast profits and increasing the likelihood of both windfall profits and significant losses (Harvey & Jenkins, 1994). Second, high inflation made loan appraisal more challenging for banks, as the future viability of borrowers depended on unpredictable factors such as inflation rates, exchange rates, and interest rates. This uncertainty also affected the future real value of loan security, further increasing the risk of bank distress (CBN, 2020).

iv. Non-Adherence to Liquidity Support and Prudential Regulation

The failure of Nigerian banks was also linked to deficiencies in regulatory oversight and adherence to liquidity support mechanisms. Although deposit insurance schemes were introduced in the late 1980s, they only covered deposits below a specified amount, leaving many larger deposits uninsured (NDIC, 1994). Moreover, the willingness of regulatory authorities to provide loans to distressed banks rather than close them down contributed to moral hazard, as banks took on excessive risks, knowing they might receive support if they encountered financial difficulties. The imprudent management practices observed in many failed banks suggest that there were serious shortcomings in banking regulation and supervision, which further contributed to the sector's distress (Ogunleye, 2019).

Variables of Bank Distress

Liquidity Ratio: Liquidity ratio measures a bank's ability to meet its short-term obligations by comparing liquid assets to short-term liabilities. It is a critical metric for evaluating a bank's financial health, as it indicates whether the institution can cover its liabilities in the event of financial stress. A low liquidity ratio can signal distress because the bank may struggle to meet withdrawal demands or other immediate obligations, leading to a potential liquidity crisis. According to Abiola and Olausi (2020), liquidity shortfalls were one of the contributing factors to the banking crisis in Nigeria, as many banks overextended themselves, holding insufficient liquid assets to cover short-term liabilities. Regulatory frameworks, such as the Basel III guidelines, stipulate minimum liquidity coverage ratios to safeguard banks from liquidity risk, but non-compliance or inadequate risk management practices can still lead to distress. Maintaining a strong liquidity ratio is essential for the stability of the banking sector. Inadequate liquidity often forces banks to sell off assets at lower prices, which can exacerbate financial distress. Moreover, a low liquidity ratio can undermine depositor confidence, potentially leading to bank runs. Recent empirical evidence by Adigwe and Uwalaka (2022) suggests that liquidity management has become even more crucial in emerging economies like Nigeria, where external economic shocks can rapidly deplete liquid assets. Effective liquidity management strategies help banks mitigate the risks associated with sudden withdrawals or financial stress, ensuring the continued operation and stability of the institution.

Non-Performing Loans (NPLs): Non-Performing Loans (NPLs) refer to loans that are in default or close to being in default, typically defined as loans where the borrower has failed to

make scheduled payments for 90 days or more. High levels of NPLs are often a major indicator of bank distress, as they signify a deterioration in the quality of a bank's loan portfolio. Banks with a large proportion of NPLs may experience reduced profitability and liquidity pressures, leading to potential insolvency if left unaddressed. NPLs were a key factor in the distress of many Nigerian banks during the 2009 financial crisis, where inadequate credit risk management practices resulted in an alarming rise in bad loans (Ogunyemi & Salami, 2021). NPLs not only affect a bank's financial stability but also hinder its ability to extend further credit, which in turn impacts overall economic growth. The Central Bank of Nigeria (CBN) has implemented various measures to reduce NPLs, including stricter credit risk assessments and improved supervisory frameworks. Recent research by Ekeocha and Ezeani (2023) underscores the importance of proactive NPL management, stating that banks with a lower NPL ratio tend to perform better financially and contribute more effectively to economic development. Reducing the level of NPLs is thus critical for ensuring the resilience and stability of the Nigerian banking sector.

Loan Loss Provision (LLP): Loan Loss Provisions (LLP) are funds that banks set aside to cover potential losses from defaulted loans. LLPs serve as a buffer against credit risk and are a crucial measure of a bank's financial health and risk management practices. A high level of LLP typically reflects a bank's anticipation of a large proportion of its loans becoming non-performing. Over-reliance on LLPs can strain a bank's earnings and erode its capital base, particularly in periods of economic downturn when loan defaults rise. The Nigerian banking sector has experienced significant challenges due to inadequate provisioning for loan losses, which has been a contributing factor in several cases of bank failure (Adewuyi & Oke, 2021).

Effective loan loss provisioning helps mitigate the impact of non-performing loans by cushioning the financial blow that would otherwise hit a bank's balance sheet. However, setting aside excessive provisions can also lead to reduced profitability in the short term. The balance between profitability and risk mitigation is thus a delicate one. According to Onyekachi and Obioma (2022), LLPs play a crucial role in maintaining bank stability, particularly in volatile economies like Nigeria, where external shocks and market fluctuations can suddenly impact loan repayment behavior. They argue that banks with more prudent loan loss provisioning policies are better equipped to withstand financial distress.

Lending Rate: The lending rate is the interest rate charged by banks on loans extended to borrowers, and it plays a critical role in determining the overall profitability and risk profile of a bank. A higher lending rate can increase a bank's profit margin but may also lead to adverse selection, where only high-risk borrowers are willing to take on expensive loans. This, in turn, increases the likelihood of loan defaults and contributes to rising levels of non-performing loans. Research by Akinnibosun and Olowookere (2023) suggests that lending rates in Nigeria have been a significant factor in the distress of several banks, as elevated rates led to a deterioration in loan quality and a rise in loan defaults. Additionally, lending rates are influenced by macroeconomic factors such as inflation, monetary policy, and economic growth. During periods of high inflation or economic uncertainty, lending rates tend to rise, which can discourage borrowing and slow down economic activity. However, overly aggressive rate increases can also lead to a credit crunch, which exacerbates bank distress. According to Balogun and Emeni (2021), Nigerian banks often face challenges in setting appropriate lending rates due to the volatile macroeconomic environment. The researchers

emphasize the need for a balanced approach that considers both the economic conditions and the risk profile of borrowers to maintain financial stability.

Banks' Regulatory Capital to Risk-Weighted Assets: The regulatory capital to risk-weighted assets ratio is a critical measure of a bank's capital adequacy, which ensures that it can absorb potential losses and protect depositors. This ratio is essential for maintaining the stability of the banking system, as it provides a cushion against financial shocks and reduces the likelihood of bank insolvency. Regulatory capital is the capital that banks are required to hold by regulatory authorities, and it is often measured as a percentage of their risk-weighted assets. According to the Basel III framework, banks are required to maintain a minimum capital adequacy ratio to safeguard against credit risk, operational risk, and market risk (CBN, 2021). In Nigeria, the regulatory capital to risk-weighted assets ratio has been a key focus of the Central Bank of Nigeria, particularly following the 2009 banking crisis. Ensuring that banks maintain sufficient capital is vital for preventing systemic risk and promoting economic stability. Recent studies by Osaroejiji and Adekunle (2023) highlight the importance of adhering to regulatory capital requirements, as banks with higher capital buffers tend to be more resilient in the face of financial distress. The researchers further note that inadequate capital reserves were a significant contributor to the distress experienced by many Nigerian banks in the past, making it a critical area of focus for regulatory authorities.

Theoretical Framework

Theory of Financial Intermediation

This study is anchored on the *Financial Intermediation Theory* as the most appropriate framework for analyzing the effects of bank distress on economic growth in Nigeria. Financial intermediation theory emphasizes the crucial role banks play in facilitating economic activities by channeling funds from savers to borrowers, reducing transaction costs, and managing risks (Diamond & Dybvig, 1983). In times of distress, such as when banks face liquidity crises or deal with high levels of non-performing loans, their ability to perform these intermediary functions becomes impaired, leading to a contraction in credit availability, reduced investments, and slower economic growth. By focusing on the disruption in financial intermediation caused by factors like non-performing loans, high lending rates, and poor liquidity management, this study aims to explore how these bank-level challenges extend to the wider economy, hindering productive investment and economic development. Given that the Nigerian banking sector is a critical component of the country's financial system, disruptions in intermediation processes directly affect the pace of economic growth. This theory is, therefore, best suited to explain the link between bank distress and the broader economic impacts observed in Nigeria.

Empirical Review

Maryam and Adamu (2017) investigated bank distress and economic growth in Nigeria. The study used annual data from 1986 to 2015 and Autoregressive Distributed Lag (ARDL) model was adopted as data analysis technique. Their findings revealed that exchange rate and non-performing loans had a positive and statistically significant impact on bank distress, indicating that fluctuations in these variables increase the likelihood of financial instability within banks. On the other hand, inflation and interest rates exhibited a negative but statistically insignificant effect on bank distress. Additionally, liquidity ratio was found to have a positive but statistically insignificant influence on bank distress. Based on these results, the authors recommended several measures: first, banks should adopt proactive approaches such as loan surveillance and monitoring to prevent loan defaults. Furthermore, the government should

implement mechanisms to foster macroeconomic stability, while banks must strictly adhere to lending policies to control non-performing loans. Lastly, the Central Bank of Nigeria (CBN) should ensure that deposit money banks operate in line with regulatory guidelines, with penalties for non-compliance.

Felix et al., (2015) examined the effects of bank distress on the Nigerian economy over a 31-year period from 1982 to 2012, using cointegration and error correction mechanisms to analyze the data. Their results indicated that non-performing loans to total loans and total loans and advances had significant negative effects on economic growth, with p-values of 0.0240 and 0.0445, respectively. Conversely, total bank deposits and the cash reserve ratio had significant positive effects on economic growth, with p-values of 0.0020 and 0.0374, respectively. The study highlighted that bank distress significantly affects the Nigerian economy and recommended that banks conduct thorough evaluations of loan proposals to ensure project viability and repayment, thereby improving asset quality and mitigating the risk of distress.

Aliyu and Yusuf (2014) focused on the impact of bank lending on economic growth in Nigeria between 1987 and 2012. Utilizing secondary data and a multiple regression model, the study revealed that bank lending accounted for about 82.6% of the variation in Nigeria's economic growth during the period under review. The findings showed a statistically significant relationship between bank lending and economic growth, underscoring the critical role of credit flow in influencing the performance of the Nigerian economy. The authors recommended that the Federal Government of Nigeria, through the Central Bank, strengthen the banking sector to improve credit flow to critical economic sectors, thereby fostering sustained economic growth.

Muyuku et al., (2012) evaluated bank distress on the Nigerian economy between 1986 and 2010. The study estimated two linear regression models and found that interest rates, inflation rates, and banking crises had negative effects on economic performance, while exchange rate, domestic credit, and real GDP had positive effects. Additionally, the study identified inflation, exchange rate fluctuations, broad money supply, and corruption within the banking industry as key drivers of bank distress. The authors recommended effective management of macroeconomic variables and stringent measures to combat corruption in the banking industry to ensure sustained economic growth.

METHODOLOGY

Research Design: The study utilizes the *ex-post* facto research design was adopted. This design was deployed as it permits the examination of independent variables in retrospect for their possible relationship with dependent variables.

Sources of Data: Data for the empirical study are time series data (Secondary Data). The data used for this research were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and Supervision Report from 1998-2023.

Method of Data Analysis: Since our data are aggregate figure of a quantitative nature, it requires statistical assistance to reveal the implied meaning. The ADF unit root and ARDL cointegration test will be required in this study, while the ARDL shortrun error correction model, which is an Ordinary Least Squares (OLS) technique, was employed to analyze the data collected. The E-view econometric package is used for these analyses:

Model Specification

For the purpose of this study, the researcher adopted the statistical method of multiple regression approach to examine the effect of banking distress on the economic growth in Nigeria.

The functional relation of the model is given as:

$RGDP = f(LQR, NPL, LLP, LNDR, BRC)$ ---------- (1)

Econometrics model seek to explain economic relationship. It makes use of mathematical and statistical principle in analyzing economic principle.

Thus, equation (1) is explicitly transformed into econometric and operational form.

$RGDP_t = \beta_0 + \beta_1 LQR_t + \beta_2 NPL_t + \beta_3 LLP_t + \beta_4 LNDR_t + \beta_5 BRC_t + \mu$ ---------- (2)

The econometric model could be transform to log form.

$LogRGDP_t = \beta_0 + Log\beta_1\ LQR_t + Log\beta_2 NPL_t + Log\beta_3\ LLP_t + \beta_4\ LNDR_t + Log\beta_5 BRC_t + \mu$ ----- (3)

Where:

RGDP = Real Gross Domestic Product
LQR = Liquidity Ratio
NPL = Non-Performing loans
LLP = Loan Loss Provision
LNDR = Lending Rate
BRC = Bank Regulatory Capital to risk-weighted- asset (Capital Adequacy)
LOG = log form

β_0, β_1, β_2, β_3 and β_4 = coefficient parameters.

t = Time period

μ= the error term which is the disturbance term or random variable.

DATA ANALYSIS AND DISCUSSION

Data Analysis

Descriptive Statistics

Table 4.2 shows the summary of descriptive analysis results for all the variables in the study in terms of the mean, the median, maximum, minimum, the standard deviation and the number of observations etc.

Table 1: Summary Descriptive Results

	LogRGDP	LogLQR	LogNPL	LogLLP	LogLNDR	LogBRC
Mean	10.72701	3.908813	6.989031	5.537540	2.866236	2.643274
Median	10.81690	3.921973	7.315511	5.609179	2.848392	2.785011
Maximum	11.22116	4.182050	7.651206	7.589589	3.212858	3.152736
Minimum	10.01381	3.414443	3.966701	3.766766	2.511224	0.562326
Std. Dev.	0.417576	0.217229	0.849782	1.371558	0.131145	0.564144
Skewness	-0.463582	-0.748079	-2.215368	0.120586	0.099254	-2.729442
Kurtosis	1.800922	3.131419	8.039994	1.597713	5.327921	9.949959
Jarque-Bera	2.201696	2.161770	43.15658	1.940215	5.231178	74.84713
Probability	0.332589	0.339295	0.000000	0.379042	0.073125	0.000000
Sum	246.7213	89.90270	160.7477	127.3634	65.92343	60.79529
Sum Sq. Dev.	3.836128	1.038147	15.88684	41.38578	0.378378	7.001694
Observations	**23**	**23**	**23**	**23**	**23**	**23**

Source: Researcher's Computation, 2024

Table1 above indicates the mean, median, maximum, minimum and several other statistics of our variables. It shows the Jarque-Bera that indicates the normality of our variables. From the table, the probability values shows that all the variables were normally distributed, except for

Non-performing loans and Capital adequacy ratio which not normally distributed, as its values were less than 0.05.

Table 2 Augmented Dickey Fuller (ADF) Unit Root Test

Variables	Unit Root Test @Levels			Unit Root Test @1st Difference			Order of Integration
	No Trend and Intercept			No Trend and Intercept			
	t-stat	Critical Value	Prob.	t-stat	Critical Value	Prob.	
Ln RGDP	0.8606	-3.658446	0.9995	-3.9356	-3.658446	0.0298	I(1)
LnLQR	-1.9579	-3.632896	0.5910	-4.2616	-3.690814	0.0178	I(1)
LnNPL	-5.3906	-3.632896	0.0014				I(0)
LnLLP	-2.3540	-3.632896	0.3908	-4.2464	-3.644963	0.0156	I(1)
LnLNDR	-3.6021	-3.632896	0.0530				I(0)
LnBRC	-3.9218	-3.644963	0.0295				I(0)

Source: Author Computation from E-view output, 2024

The result from the Augmented Dickey Fuller (ADF) unit root test result shows that three of the variables, Real Gross Domestic Product (RGDP), Liquidity Ratio (LQR), and Loan loss provision (LLP) were stationary at first differencing in the order of I(1); whereas, Non-performing loans (NPL), Lending Rate (LNDR) and Bank Regulatory Capital to Risk-weighted-assets were stationary at level in the order of I(0). Thus, the method of ARDL bound test will be carried out to know if there exist a long-run or equilibrium relationship between the independent variables and the dependent variable.

Test for Co-integration

As opined by Pesaran et al., (2001), the appropriate co-integration technique for the study unit root test results is Auto Regressive Distributive Lag (ARDL) Bounds test. This test becomes appropriate when dealing with variables that have combination of different order of integration (I(0) and I(1).

Table 3: ARDL Bound Test for Co-Integration

Test Statistic	Value	K
F-statistic	4.337159	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: E-view 9

Table 3 presents the result of ARDL Bounds test for co-integration. The result revealed that F statistics value of 4.337159is higher than the upper critical value bounds I(1) of 3.79 at 5% level of significance. Thus, there is no longrun relationship among the variables. As a result, the short run error correction model will be estimated using ARDL regression technique.

Table 4: ARDL Short-Run Error Correction Model
Dependent Variable: D(LOGRGDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001428	0.016754	0.085257	0.9334
D(LOGRGDP(-1))	0.939619	0.248303	3.784158	0.0023
D(LOGLQR(-1))	-0.052681	0.046584	-1.130895	0.2785
D(LOGNPL(-1))	0.029403	0.018735	1.569435	0.1406
D(LOGLLP(-1))	-0.010295	0.016737	-0.615096	0.5491
D(LOGLNDR(-1))	0.066947	0.079710	0.839872	0.4162
D(LOGBRC(-1))	-0.000111	0.014843	-0.007447	0.9942
ECM(-1)	-1.267016	0.360737	-3.512301	0.0038

R-squared	0.622693	Mean dependent var	0.054695
Adjusted R-squared	0.419527	S.D. dependent var	0.042900
S.E. of regression	0.032685	Akaike info criterion	-3.721456
Sum squared resid	0.013888	Schwarz criterion	-3.323543
Log likelihood	47.07529	Hannan-Quinn criter.	-3.635099
F-statistic	3.064955	Durbin-Watson stat	2.116917
Prob(F-statistic)	0.038737		

Source: Extract by Author from E-view 9

Testing of Hypotheses
The E-view highlighted the result that is significant with the output indicating significant at 5% level. Accept the alternate hypothesis if *p*-value ≤ 0.05. Otherwise, reject. The formulated hypotheses are;
Hypothesis One: H_{01}: Liquidity ratio has no significant effect on the Nigerian economy (RGDP
From the table, it can be seen that liquidity ratio has a t-stat value of -1.130895 and a probability value of 0.2785>0.05 level of significance. Hence we can argue that a negative and insignificant relationship exists between the dependent and independent variables.
Decision: From the result we therefore reject the null hypothesis and accept the null hypothesis which implies that liquidity ratio has no positive and significant effect on the Nigerian economy (RGDP).

Hypothesis Two: H_{02}: Non-performing loans have no significant effect on the Nigerian economy (RGDP)
From the table, it can be seen that non-performing loans have a t-stat value of 1.569435 and P-value of 0.1406 which is >0.05 level of significance. Hence we can argue that an insignificant relationship exists between the dependent and independent variable.
Decision: From the result we therefore accept the stated null hypothesis. This implies that the non-performing loans have a positive but insignificant effect on the Nigerian economy (RGDP).
Hypothesis Three: H_{03}: Loan loss provision does not have any significant effect on the Nigerian economy (RGDP)

Therefore, from Table 4.4, it is observed that loan loss provision has a probability value of 0.5491>5% level of significance, and t-statistic value of -0.615096. The implication is that the null hypothesis is rejected. Therefore, the study concludes that loan loss provision has a negative but significant effect on the Nigerian economy.

Hypothesis Four: H_{04}: Lending rate has no significant effect on the Nigerian economy (RGDP)

From the table, it can be observed that lending rate has a t-stat value of 0.839872 and P-value of 0.4162 which is >0.05 level of significance. Hence we can argue that an insignificant relationship exists between the dependent and independent variable.

Decision: From the result we therefore accept the stated null hypothesis. This thus holds that lending rate has a positive and insignificant effect on the Nigerian economy (RGDP).

Hypothesis Five: H_{05}: Banks regulatory capital to Risk-weighted-assets has no significant effect on the Nigerian economy (RGDP).

From the table, it can be observed that Banks regulatory capital to Risk-weighted-assets has a t-stat value of -0.007447 and P-value of 0.9942 which is >0.05 level of significance. Hence we can argue that an insignificant relationship exists between the dependent and independent variable.

Decision: From the result we therefore accept the stated null hypothesis. This thus holds that Banks regulatory capital to Risk-weighted-assets has a negative and insignificant effect on the Nigerian economy (RGDP).

Residual Diagnosis Test

Few diagnoses were conducted for the study to know the stability of the model. The histogram normality, Serial Correlation, Heteroskedasticity test and CUSUM test for stability diagnosis were adopted to test the model fitness.

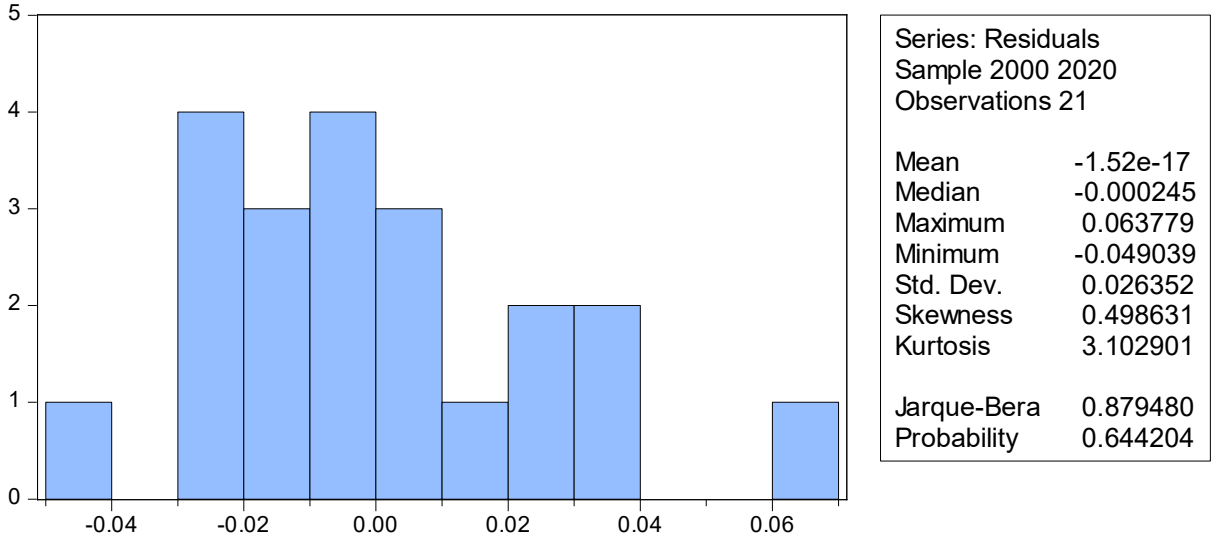

Fig 1: Histogram Normality Test

This test measures the overall normality nature of our data. A Jarque-Bera (JB) probability value above 5% level of significance indicates that our data is normally distributed. From the above, with a probability value of 0.644204, it shows that our variables were well and normally distributed.

Table 5 Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.774919	Prob. F(1,12)	0.3960
Obs*R-squared	1.273848	Prob. Chi-Square(1)	0.2590

Table 6 Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.116350	Prob. F(7,13)	0.4091
Obs*R-squared	7.884112	Prob. Chi-Square(7)	0.3429
Scaled explained SS	3.176800	Prob. Chi-Square(7)	0.8682

Source: Eview 9 extracted output

Table 5 and 6 represents the result of Breusch–Godfrey serial correlation and Heteroskadastcity test. With an F-statistic values of 0.774919 and 1.116350 and a p-value of 0.3960 and 0.4091 respectively which is above 0.05 (5%), it is indicative that our model does not suffer from the problem of serial correlation and heteroskedasticity. This shows that our result is reliable.

Stability Diagnostics Test

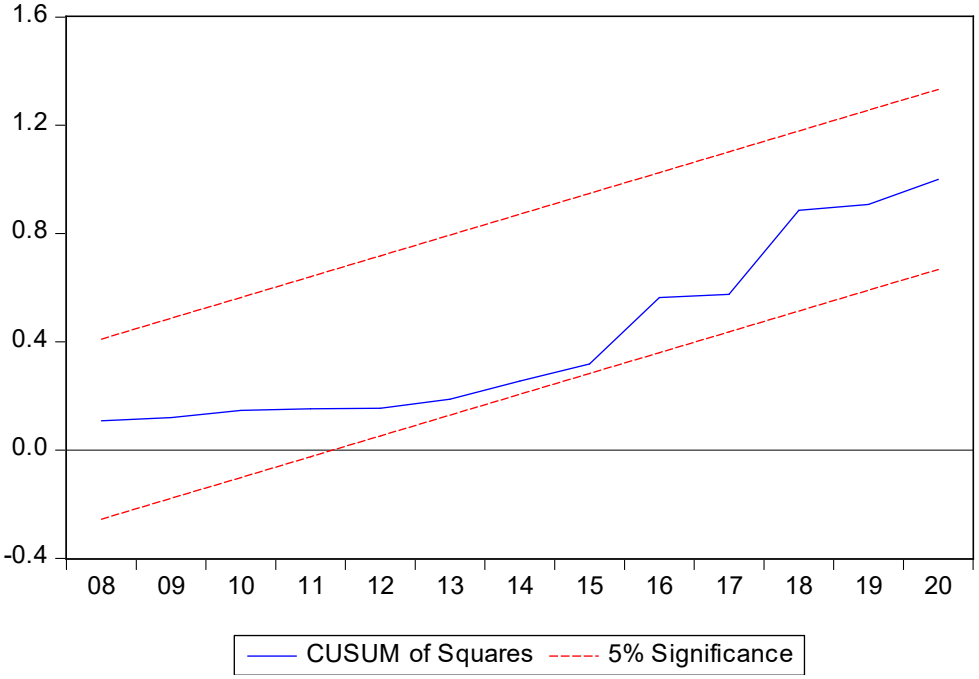

Figure 2: CUSUM of Squares Residual Test

This test is conducted to check for the stability of the model over the studied time. Where the CUSUM of squares lies within the critical boundary line, it is indicative of stability. Thus, from the figure above, our CUSUM line falls inside the two critical boundary lines. This means that our model was stable for the period of 1998-2020.

Discussion of Findings

From the coefficient as depicted in the Table 3, liquidity ratio has a value of -0.052681, this shows that a negative relationship exist between liquidity ratio and the Nigerian economy. The implication of this relationship is that, all things being held constant, a percentage increase in the liquidity ratio of deposit money banks resulted in 5.2681% fall in the growth of the Nigerian economy. This can be explained that, as banks keep hold of more liquidity to meets its daily needs, it reduces funds that are available for productive purposes, thus

affecting the performance of the economic agents. Also, it indicates that the banks were too focused on liquidity to the detriment of efficiently utilizing capital to grow and expand its business.

The result further reveals that non-performing loan has a coefficient of 0.029403. This depicts a positive relationship between non-performing loans and the Nigerian economy (RGDP). This thus implies that, an increase in non-performing loan by 1% results in a 2.9% increases in performance of the Nigerian economy (RGDP).

Again, the result shows that loan loss provision has a negative coefficient of -0.010295. This depicts an inverse relationship between loan loss provision and the performance of the Nigerian economy. The implication is that, a percentage increase in loan loss provision by banks leads to a fall in performance of the Nigerian economy (RGDP) by 1.0 percent.

Furthermore, lending rate also has a positive coefficient of 0.066947. This implies that, an increase in lending rate by one (1) percent leads to 6.69% increase in the Real Gross Domestic Product of Nigeria. This means that, when lending rate is increased, the banks stands to make more profits when the loans are recovered, which would in turn serve as funds to be channelled to productive sectors of the economy, thus leading to the growth and expansion of the economy.

Lastly, bank regulatory capital to risk-weighted-assets has a coefficient value of -0.000111, showing that this variable exacts a negative effect on the Nigerian economy. This is such that, a 1% increase in capital adequacy ratio resulted in a 0.001% fall in the Nigerian economy (RGDP).

R-Square

The coefficient of determination (R^2) from the table reads 0.622693, and signifies that approximately 62% variation of RGDP can jointly be explained by changes in the liquidity ratio, non-performing loans, loan loss provision, Banks regulatory capital and lending rate.

Furthermore, the significance is confirmed in the value of prob(F-statistic) 0.038737. The significance of probability is below (0.05) 5% significance level; thus confirming the model to be fit for making generalization. The study therefore concludes that bank distress have a significant effect on the Nigerian economy.

Conclusion and Recommendations

Conclusion

The estimated result on the effect of bank distress on the Nigerian economy; reveals that the regression coefficient of loan loss Provisions, bank regulatory capital to risk-weighted asset, and liquidity ratio are negatively signed, indicating that they negatively influence the economy (RGDP), during the period studied. However, lending rate and non-performing loans had positive effects on the performance of the economy. Although, most DMBs could not grow or perform as expected due to high rate of loan loss provision, strong DMBs still generates loans from the customers' deposits, and with the higher interest rate charged on the loan facilities, banks can give out more loans without fear because they know that income earned or paid on recovered loan would be enough to cancel that which went bad. Based on the findings, the study concluded generally that bank distress does have a significant effect on the Nigerian economy.

Recommendations

1. The management of banks especially credit officers must do diligence by adhering to prudential guidelines when given out credit facilities.

2. Banks should not focus mainly on liquidity, but strive to grow by striking a balance between liquidity and profitability.
3. Banks should ensure to reduce its amount of loan loss provision and increase is lending rate to ensure more profits that will serve the productive sector of the economy.
4. Banks must put in place sound credit-granting process, strictly hold fast to know your customer (KYC) system, applying effective measures in measuring and monitoring of credit and ensure effective controls over credit risk. This will enable them avoid extending high interest loans to high risk borrowers who may end up defaulting and hurting the health of the bank.
5. To avoid distress, deposit money banks should carefully evaluate credit request before granting to customer(s) to circumvent high rate of non-performing loans.

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