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COVID-19 Pandemic and the Performance of Financial Firms in Nigeria

Onuorah Anastasia C

Department of Banking and Finance, Faculty of Management Sciences, Delta State University, Abraka, Nigeria

Alika Blessing

Department of Accounting, Faculty of Management Sciences, Delta State University, Abraka, Nigeria

Okoh Ezekiel Oghenetega

Department of Banking and Finance, Faculty of Management Sciences, Delta State University, Abraka, Nigeria

> **Abstract**---The impact of the COVID-19 pandemic on the performance and capital adequacy of Nigerian banks is explored in this article. The aim of the study was to see how the virus outbreak affects the performance and capital adequacy of Nigerian banks. For the purposes of this study, an actual post-research budget was used. The number of confirmed positive cases in Nigeria since 2020 is used as an indicator of the virus, with capital adequacy measured by capital adequacy ratio (CAR) and bank financial performance measured by the performance of assets (ROA). In one model, positive cases of the Covid virus were linked to the banks' CAR, while in the other, positive Covid cases were linked to the banks' ROA. Secondary statistics are included in CBN's annual report for the year ended 2020, to be released in 2021. Conventional least squares (OLS) regression estimates were used to analyze the data. . According to the results, the Covid pandemic has had a positive and significant effect on the capital adequacy of Nigerian banks. This can be seen in CBN's announcement of a higher equity level for 2020 of 15.2%, up from 14.6% in 2019.

Keywords---capital adequacy, COVID-19, financial performance, Nigerian banks, pandemic.

Introduction

In today's economic world, economies are so intertwined in so many ways that there isn't a single economy that can stand on its own. Businesses and economies have benefited from a succession of cross-border collaborations and the flow of physical commodities and services, particularly in emerging nations like Nigeria. Foreign Direct Investment (FDI) is the term used to describe this type of investment. Foreign direct investment, according to Onyorah & Nnenna (2013), helps to the survival of any developed or developing country. However, the onset of the pandemic in late 2019 altered everything, from domestic enterprises to cross-border collaborations. The corona virus has been the most devastating external hit to Nigeria's economy. In fact, according to Ehiedu et al. (2021), the banking industry in the twenty-first century functions in a complex and competitive environment characterized by changing conditions and a volatile economic climate. This epidemic's rise has had a profound impact on nearly every area of the economy, including banking. To contain the spread, governments around the world, including Nigeria's, have chosen to shut down some sectors of the economy, restricting people and goods movement both within and beyond the country. As a result of the lockdown directives, many firms, particularly those unable to work from home, were compelled to close, while persons and businesses providing important services were allowed to continue working (Marshal et al., 2020).

Following the immediate effects of the COVID-19 on the industry, there is growing concern about the state of Nigerian banks (Onuorah & Nkwazema, 2014). Low interest rates, along with the pandemic's considerable impact; have impacted basic banking performance measures to the point where banks have switched away from payment and technology industries and toward commission-based income. In addition, the combined impact of Covid virus and the oil price collapse on the banking industry is a rise in credit risk among corporate and retail bank customers. Non-payment of loans by bank obligors, the drop in global oil prices, plunging currency, foreign exchange shortages, and Nigeria's deteriorating economy as a result of the coronavirus shock that precipitated global lockdown are all factors contributing to the rise in bank asset quality (NPLs). As a result of the coronavirus pandemic, Nigerian banks were forced to restructure 35,639 credit facilities for businesses that were seriously harmed. Based on this hypothesis, this study assesses the influence of COVID-19, a pandemic, and a drop in oil prices on Nigeria's banking sector funding (Blum, 1999; Wirch & Hardy, 1999).

Working capital management includes a component called capital adequacy (Onuorah & Ozurumba, 2013; Akinyomi & Tasie, 2015; Muhammad et al., 2012). According to Okeke (2015) apriori expectations, profitability is considered a generic assessment of a firm's total financial health over a certain period of time. According to the available literature, several studies on liquidity management and corporate profitability have been conducted in both advanced and emerging market economies, but this was before the outbreak of COVID-19. Additionally, regardless of the severity of the COVID-19 outbreak, little is known about how the pandemic impacted the capital and financial health of Nigerian banks and other financial organizations. Furthermore, no research on the impact of the COVID-19

Pandemic on bank liquidity, capital adequacy, or financial performance in developing countries has been conducted. As a result, the goal of this study is to see how COVID-19 affects Nigerian banks' capital adequacy and financial performance. The goal of the research is to see how the COVID-19 outbreak has impacted Nigerian banks' capital adequacy and financial performance (Tetro, 2020; Kim & Su, 2020).

Literature review

The COVID-19 pandemic

COVID-19 was discovered in late 2019 in Wuhan, China. The virus outbreak has had a significant impact on many sectors of human activity in recent years. The coronavirus has an impact on global public health services and, as a result, on global economics. The pandemic is worrisome because it will almost probably lead to a global economic slowdown (Aifuwa et al., 2020). The COVID virus will almost certainly cause respiratory sickness, according to the Jebril (2020), and older persons, as well as people with medical or health conditions such as diabetes, cancer, or lung disease, are more likely to be infected. Nonetheless, there are a number of international efforts underway, including those in China, the United States, the United Kingdom, Japan, Canada, Germany, and France, to develop trial vaccines for the treatment of cancer (Davis & Albright, 2004; Horváthová, 2010).

Buffer theory of capital adequacy

To avoid slipping below legal capital requirements, banks may want to have a "buffer" of extra capital on hand, especially if their capital adequacy ratio moves a lot. Capital requirements are the most important tool for banking oversight in Nigeria. Despite conducting on-site exams and occasionally delegating this role to external auditors, the Central Bank of Nigeria is mainly uninvolved in bank operations. A violation of the capital requirements, on the other hand, is a serious violation of banking legislation that the Nigerian Central Bank will not tolerate. Banks that have been chronically undercapitalized are compelled to close. Some banking licenses were revoked after the recent capitalization of Nigerian banks expired in 2005, demonstrating this. If public deposits are not completely mobilized, banks will seek extra capital (Oboh & Ajibolade, 2017; Osuagwu & Nwokoma, 2017).

Portfolio regulation theory

The theory of portfolio regulation is also used to assess the performance of banking organizations in the study. According to the notion, bank regulation is important to protect the banking system's safety and soundness to the extent that it allows it to satisfy its liabilities without trouble. As a result, regulatory authorities had no choice but to impose more solvency and liquidity on individual banks rather than making it optional. This hypothesis is depicted in this paper's model 1.It represents the banks' liquidity status by capturing LAD, which stands for Liquid Assets (LA)/ Bank Deposit (BD). The higher this ratio, the better the individual banks' liquidity and solvency (Zhang et al., 2020; Clase et al., 2020).

Review of related literature

The impact of the COVID-19 on the performance of financial markets and banks was explored (Baret et al., 2020). The study found evidence of COVID-19's significant influence on global financial markets, given recent decreases in stock prices, oil price equality, and bound pricing. Regardless, the study found a link between bank performance and COVID-19 incidence (Tetty, 2020; Kustina et al., 2019).

- Xinhua (2020), researched the influence of the COVID-19 plague on the performance of Chinese financial exchange-listed banks Despite the Corona Virus's widespread spread, the study discovered that COVID-19 has a substantial impact on listed Chinese banks and the financial market, resulting in the Chinese financial industry remaining relatively stable in comparison to the international market.
- Lelissa (2020), investigated how Ethiopia's private banking system was affected by the COVID-19 outbreak. The study looked at ten years of data from 2010 to 2019 and found that the pandemic had an effect on banks' balance sheets and income statements.
- Wakode (2020), looked into how COVID-19 affects a bank's credit exposure. The study chose and discovered that COVID-19 and bank risk metrics have a significant impact using the statistical tool of multivariate analysis of variance.
- The impact of the banking sector's performance during the COVID-19 crisis is investigated (Demirguc-Kunt et al., 2021). The study found that the crisis and banks' projected countercyclical lending role had put baking systems under severe strain, with bank stocks outperforming the local market and other non-bank financial enterprises.
- Erdem (2020), analyzes whether a country's independence and its stock market's reaction to COVID-19 pronouncements are linked. The results reveal that the pandemic has a significant negative influence on markets, with index returns falling and volatility rising as a result of the outbreak.

Methodology

The study used the ex-posto facto research design. Two models were used for this study. In one model, COVID-19 positive cases are connected to banks' CAR, whereas in the other, COVID-19 positive cases are linked to banks' ROA. Secondary statistics were included in the CBN Annual Report for the fiscal year ending in 2020, which was released in 2021. Data will be evaluated using the Ordinary Least Square approach.

Model specification

CAR =
$$f$$
 (COVID-19₊) + ε (i)
ROA = f (COVID-19₊) + ε (ii)

Then the variables are coded into the main regression model as shown below:

$$CAR_v = \alpha_0 + \beta_1 COVID-19 + \epsilon_0$$
 (iii)

$$ROA_y = \alpha_0 + \beta_1 COVID-19 + \varepsilon_i \qquad (iv)$$

Where:

COVID-19+: Total number of positive cases of COVID-19 identified and published

by the NCDC as a fraction of the Nigerian population during the

years 2020.

CAR : Capital adequacy ratio for the selected DMBs for the 2020 financial

year

ROA: Return on assets of the selected DMBs for the 2020 financial year

 α_0 : a constant, equals the value of Y when the value of X = 0

β : coefficient of the independent variables

 ξ : the error term

Data Presentation, Analysis and Results Discussion

Table 1
Data presentation and analysis

YEAR	Average CAR for	Average ROA for	COVID-19 ₊
	Banks	Banks	
	%	%	No.
Dec. 2020	15.2	0.57	0.10
Dec. 2019	14.6	0.48	0

Sources: CBN Statistical Bulletin (for Capital Adequacy Ratio- CAR)
Annual Reports of selected Banks for 2021

Discussion of Results

Table 2 Descriptive statistics

	CAR	ROA	COVID 10
			COVID_19_
Mean	14.90000	0.525000	0.050000
Median	14.90000	0.525000	0.050000
Maximum	15.20000	0.570000	0.100000
Minimum	14.60000	0.480000	0.000000
Std. Dev.	0.308697	0.046305	0.051450
Skewness	-1.81E-17	1.74E-17	0.000000
Kurtosis	1.000000	1.000000	1.000000
Jarque-Bera	3.856422	4.542525	3.123512
Probability	0.065213	0.223130	0.084523
_			
Sum	268.2000	9.450000	0.900000
Sum Sq. Dev.	1.620000	0.036450	0.045000
•			
Observations	18	18	18
Source: Evierra Q O Output 2021			

Source: Eviews 9.0 Output 2021

Table 2 presents an overview of the descriptive statistics derived from the data used in this investigation. According to the findings, the average COVID-19+ ratio to the whole population in 2020 will be 5%, with maximum positive instances of 1.0 percent of the average in early 2020. The average return on assets (ROA) for the study period is 52 percent, with 57 percent recoded as the highest in 2020. CAR, on the other hand, had an average capital adequacy ratio of 14.6 percent for the study period.

Table 3
Correlation matrix

Covariance Analysis: Ordinary Date: 10/01/21 Time: 11:24

Sample: 1 18

Included observations: 18

Correlation	CAR	ROA	COVID_19_
CAR	1.000000		
ROA	0.013500	1.000000	
COVID_19_	0.015000	0.002250	1.000000

Source: Eviews 9.0 Output 2021

Table 3 is a simple summary of the degree of correlation between the study's selected variables, as stated above. The association between capital adequacy and return on assets is roughly 1.4 percent positive for the purposes of this study, while the relationship between capital adequacy and COVID-19 is 1.5 percent positive. COVID-19 and return on assets (ROA) have a positive correlation of about 0.3 percent.

Table 4
Unit root test result

Data	Augmented Dicker-Fuller	Test Critical Values @ 5%	Probability
Series	(ADF)	(TCV)	of ADF
BRDSZ	3.950767	2.635354	0.0025
BRDID	3.936679	2.635354	0.0026
BRDEX	4.112039	2.635354	0.0015

Source: Eviews 9.0 Output 2021

Table 4 shows that the ADF test statistics are bigger than the test critical values, and that at the 5% level of significance, each variable exhibited the absence of unit root (i.e. stationary). As a result, we accept the null hypothesis, which claims that the data does not have a unit root.

	Table 5			
Regression	estimation	for	model 1	I

CAR = f (COVID-19+)	+ ε, (i:	ii)	
Independent COVID-19 and Banks' Capital			
	Adequacy		
variables	OLS Summary		
	Coeff.	p-value	
Intercept	14.61215	0.0000	
Covid-19	0.125422	0.0000	
N	10		
Adjusted R-	0.924563		
squared			
F-test		0.000000	

^aSignificance at the level 5% level (two-tailed)

Table 6
Regression estimation for model II

$ROA = f (COVID-19+) + \varepsilon $ (iv)			
Independent	COVID-19 and Banks' Financial		
	Performance		
variables	OLS Summary		
	Coeff.	p-value	
Intercept	0.484512	0.0000	
Covid-19	0.952655	0.0000	
N	10		
Adjusted R-	0.825463		
squared			
F-test		0.000000	

^aSignificance at the level 5% level (two-tailed)

The result follows the notion that a rise in positive Covid cases favoured Nigerian banks' capital adequacy ratio. Furthermore, the p-value of 0.00000.05 shows that the Covid pandemic significantly increased the capital adequacy of banks. The results on Table 6 also indicate that the rise in Covid cases has shown to promote the financial performance of banks in Nigeria as measured by the return on assets (ROA). The p-value of 0.0000<0.05 confirms that the pandemic significantly contributed to the financial performance of banks in Nigeria (Rahayu et al., 2021; Nikolaeva et al., 2021).

Conclusion and Recommendations

The Covidepidemic had a strong positive impact on bank capital adequacy ratios in Nigeria, as well as a positive and significant impact on Nigerian banks' financial performance, according to this report. Consequently, our outcome suggests that the apex bank's regulatory powers be expanded to ensure that banks are well-positioned in terms of capital adequacy, in order to protect against unanticipated economic events. This research also indicates that banks should embrace regulatory policies focusing on liquidity and capital adequacy, as these policies

are aimed at averting failure of banks during economic downturns (Kanca et al., 2020; Kasni & Budiarta, 2021).

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