



The Linkage between Financial Development, Financial Crisis, and Globalization in Nigeria

EYO EYO¹ AND JOHN UGAH²

¹Department of Banking and Finance, University of Calabar, E-mail: eyoakamba@unical.edu.ng

²Department of Banking and Finance, University of Calabar, E-mail: johnugah@unical.edu.ng

Abstract: The paper empirically examined the effect of financial development, financial crisis, and globalization in Nigeria. The empirical analysis was carried out on time series data from 1986 to 2021 using data extracted from CBN statistical bulletin and World Development Indicator. The researcher employed two empirical models design to capture financial development and financial crises. The vector autoregressive model (VARX) and the autoregressive distributed lag model (ARDL) techniques were employed for the analysis of the data. The outcome of these analyses revealed that the effect of changes in financial developments does not have long-run implications for globalization. Whereas, in the short run, they posit a positive and significant effect on globalization. Furthermore, indicators of financial crisis showcased a long-run negative effect on globalization in Nigeria with exchange rate volatility having negative implications both in the long and short run. The study however recommends that government should design economic policies that will enhance the financial sector and drive globalization in Nigeria. Also, policymakers should develop strategies to expand trade taking cognizance of the implication of high inflation and exchange rate on economic activities.

Keywords: Financial Crisis, Financial development, Globalization, VARX, ARDL

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1. Introduction

Financial institutions globally have witnessed tremendous transformations, driven primarily by deregulation and liberalization of the financial system. The financial system comprises financial institutions, market participants, and financial regulators. The development of the financial system is germane to every economy as it carries out an intermediary function of channeling funds from those in surplus to those in deficit (Akinyobo, 2004). The financial system in any economy of the world plays a crucial

role as the engine of economic growth and development (Edame, 2012). According to Atseye, Mboto, Ugah, and Okio (2022), the global economic system depends on the mechanism of the financial system to achieve sustainable economic growth and development. Hence, a disturbance of the financial system in the form of panic, distress, or crises would impede its ability to effectively carry out its intermediation role.

The Nigerian financial system has been buffeted with episodes of shocks and crises with the effect more severe in banks before and after the SAP era (Samuel, 2010). As observed by Mordi (2010), the banking crisis of 1992 which led to the distress of over thirty-three banks was accredited to several factors such as inadequate capital, huge non-performing loan, poor management, incompetent staff, and the lack of proper regulation, however, the situation was aggravated by negative sentiments of depositors spark by fear of losing their money (CBN, 2009). To curb the risks of bank failures and restore depositor's confidence by ensuring the safety of their funds, the Central Bank of Nigeria (CBN) on December 2005 embarked on a banking sector reform to implant firmly a strong, and calculable banking system that would effectively compete with other financial systems globally (Samuel, 2010).

Despite the banking sector reform to strengthen the bank capital base, the Nigerian financial system experienced yet another banking crisis in 2009, triggered by the global financial crisis (GFC) and other domestic events (World Bank, 2021). The global financial crisis had a huge impact on Nigerian banks' ability to lend, occasioned by declining credit growth, liquidity problems, and slow economic growth. Sanusi (2010), believes that the effect of the GFC in Nigeria is due to inadequate bank regulation and supervision. According to Grouzille and Lepetit (2008), the crisis is attributed to the presence of internal weaknesses in the financial sector such as traditional banking practices and weak regulation. The global financial crisis uncovered the vulnerabilities of financial systems across the world as a result of globalization (Blake, Keller, Moynihan, Elliot, Blac & Wyman, 2017).

Globalization is an economic concept that describes the growing interdependence of economic systems, brought about by growth in cross-border trade, advances in technology, and flows of investment and capital. Akinboyo (2004) and Audu (2009) have argued that globalization is a process of expanding economic cooperation among states. It is a process of consolidated and mutual dependence among nations. Mordi (2010) highlighted that financial globalization has led to increased technological innovations, and universal integration of domestic financial institutions thereby, increasing the level and scope of systemic risks in financial systems of the world.

Since financial institutions are not immune to systemic risks, and, according to Ugah (2020), risks within acceptable limits are necessary for bankers to make profits.

There is, therefore a need for financial regulators to develop a risk management framework that will enhance financial development; accordingly, policy measures should be formulated to mitigate risks and cushion the adverse effects of a shock like the global financial crisis. Besides, regulators have responded to the crisis by reforming the global prudential framework and enhancing supervision. The key goal of these reforms is to bring about financial development stability by making banks resilient through stronger capital and liquidity buffers, stronger supervision, and more explicit resolution frameworks (Abiad, Balakrishnan, Brooks, Leigh, and Tytell, 2009). However, these measures and policies still, did not fully resolve the problems besieging the financial system.

Unarguably, financial development through reforms in the domestic economy can enhance the quality of banks, accentuate investments, and capital flows, and by that means lead to economic growth (see, Balcilar, Gungor and Olasehinde-Williams 2019; Ajayi and Musyimi, 2022). The financial crisis on the other hand would cause bank distress and eventually bring about economic recession and also some of the weaknesses and structural risks of globalization (Robertson, 1992; Bhagwati, 2004; Caballero, Farhi, and Gourinchas, 2008). From the foregoing, both financial development and the financial crisis have exposed most financial institutions globally to stern competition and supervision (Turyahikayo, 2014), with positive and negative changes in the financial system. This current study is therefore consequential as it sought to examine the nexus between financial development, financial crisis, and globalization in Nigeria.

The paper differs from previous literature by examining the nexus of finance and globalization with a focus restricted solely to Nigeria. Also, works of literature that focus on financial development, financial crisis, and globalization are scarce. This study will therefore fill the literature gap by including data that encapsulated the COVID-19 period. In the analysis of the study, both financial development and financial crises were subjected to a corrosive econometric approach of vector error-correcting autoregressive model (VARX) and autoregressive distributed lag model (ARDL). Further, most empirical evidence from past studies has been drawn from cross-country and panel data surveys (e.g. Baltagi Demetriades and Law, 2008; Huang, 2006); while this study employs country-specific data.

2. Theoretical Framework and Empirical Review

Theory of comparative advantage

The theory of comparative advantage is postulated by David Ricardo in 1817 to explain why countries engage in international trade even when they can efficiently produce a

good. The theory states that countries should concentrate on the production of goods and services that produce the lowest alternative costs as compared to other countries. The theory is important in explaining the nexus between globalization and financial development (Huang, 2006), and its forms the bedrock of other trade theories. According to Ricardo (1817), the global economy is becoming interdependent and ensuring international interconnectivity, most notably in trade. Thus, since trade is crucial for development – economic and financial, countries should devote time to produce goods that have a lower opportunity cost. This unique theoretical framework is suitable for the study.

Financial development theory

Financial development theory is credited to the works of Shaw and McKinnon in 1973. The theory states that financial development positively affects economic growth when interest rates and exchange rates rise toward market equilibrium. Shaw (1973) and McKinnon (1973), opine that positive real deposit rates raise the saving rate; increase financial deepening; raise investment, and thus growth. Unlike the theory of comparative advantage, the theory was developed to critically explain the connection between financial development and economic growth. By so doing, the proponents of this theory hypothesized two leading hypotheses; the “demand leading”, which posits that financial development accretes as the economy improves; and a “supply-leading” phenomenon, in which the general growth of financial institutions leads to an economic increase. Thus, financial development is a function of economic growth to the demand for financial services and vice versa (Patrick, 1966). The efficacy of the financial development theory is a predicament in some leading finance-oriented reforms like financial liberalization.

3. Review of Empirical Literature

Numerous empirical studies over the years have been carried out to investigate the nexus between finance and economic growth. However, empirics that focus on finance and globalization are scarce, particularly in Nigeria. Ajayi and Musyimi (2022) examined the impact of globalization on Nigerian financial development using the autoregressive distributed lag (ARDL) model. The researcher employed data variables of foreign direct investment, exchange rate, trade openness, interest rate, inflation rate, and government expenditure obtained from CBN bulletins for several years. The result from the analysis revealed that foreign direct investment, government expenditure, and trade openness jointly had a positive impact on financial development while the other variables inflation, exchange, and interest rate are harmful to financial development.

Shahbaz, Mallick, Mahalik, and Hammoudeh (2017) attempt to investigate the relationship between globalization and financial development by utilizing documentary data purely from prior studies from 1971 to 2013. The study employed the cointegration technique and autoregressive distributive lag (ARDL) model to examine long-run and short-run estimates of the study. The study found that globalization and inflation are harmful to financial development, while economic growth and population density both promote financial development. Another similar study by Faduka (2014) adopted the co-integration approach of VARX and ARDL methodology to investigate the causality between financial development, financial crisis, and globalization in India. Findings from the study showed that trade openness had an unnoticeable but positive impact on financial development. The study also revealed that the rapid growth in international trade has instigated the occurrence of the financial crisis.

Garcia (2012) assessed the implication of financial globalization on financial development in Latin America. The author used a dynamic panel data model to carry out an analysis of the study. The major findings from the empirical tests suggested that financial globalization had a significant but negative relationship with the growth and development of the financial system. Similarly, Falahaty and Law (2012) employed the Panel Vector Auto-regressive (PVAR) and Fully-Modified Ordinary Least Squares (FMOLS) approaches to examine the relationship that exists between globalization and financial development in MENA countries from 1991-2007. The findings from the study revealed that globalization positively affects financial development and economic growth in the MENA region.

Utuk (2015) investigated the impact of globalization which spans from 1970 – 2011 on economic growth in Nigeria. By employing the descriptive research technique for analysis, the study concluded that globalization has engendered increased trade and capital flows which could have to enhance the country's growth performance. Omolade, Morakinyo, and Ifeacho (2013) investigated the nexus between globalization and the economic development of Nigeria over the period 1980 – 2011. Using the Johansen co-integration and Granger causality tests the study revealed that trade openness negatively affects economic development in Nigeria. A similar study by Sede and Izilein (2013) employed the Johansen co-integration, Granger causality, and variance decomposition tests to examine the causal relationship between economic growth and globalization in Nigeria. Analysis of the result found that globalization does not Granger-cause economic growth in Nigeria.

From the following empirical literature, it could be observed that only one study empirically examines the linkage between financial development, financial crisis, and globalization (See, Faduka, 2014), all the reviewed studies solely focus on the connection

between globalization and economic growth. The studies also revealed inconclusive results attributable to the time frame, country jurisdictions, and methodologies used. This current will therefore focus on country-specific data for both the dependent and independent variables collated from reliable government-approved websites. The study equally employed several empirical tests to confirm the veracity of the outcome for the analysis of data.

4. Materials and Methods

The research design adopted for the study is the historical research design. Only secondary data sourced from World Bank development indicators, and from the Central Bank of Nigeria (CBN) bulletins from 1986 to 2021, were used for the study. The vector autoregressive model (VARX) and the autoregressive distributed lag model (ARDL) techniques were employed for the analysis of the data. The outcome of these approaches will be used to predict and conclude this study.

Model Specifications

The specified model for this study is adapted from Faduka (2014) and Maduka & Madichie (2017). The works of Faduka (2014) and Maduka & Madichie (2017) used foreign direct investment and trade openness to capture globalization (dependent variable) while measures of financial development and financial crises like the volatility of real exchange rate, money supply, credit to the private sector, GDP and foreign reserve (independent variables) were used. This work employed two empirical specifications designed to capture financial development and financial crises. The reason for doing so is to avoid issues of multicollinearity and establish the robustness of the analysis (Gujarati 2004). To this end, the current study only uses trade openness as a proxy for globalization (dependent variables). The following econometric model was modified and expressed to examine the relationship existing between the variables under study;

Model 1

$$TOP = f(GDP, CPS, MS) \quad [1]$$

The functional relation in (i) above is presented in its econometric form:

$$TOP_t = \beta_0 + \beta_1 GDP_t + \beta_2 CPS_t + \beta_3 BMS_t + \mu_t \quad [2]$$

Where: TOP = trade openness (a proxy for globalization)

GDP = gross domestic product

CPS = credit to the private sector

BMS = broad money supply

Model 2

$$TOP = f(ER, DI, FR) \quad [3]$$

In its econometric form, it is presented thus:

$$TOP_t = \beta_0 + \beta_1 ER_t + \beta_2 DI_t + \beta_3 FR_t + \mu_t \quad [4]$$

Where: TOP = trade openness (a proxy for globalization)

ER = Volatility of real exchange rate

DI = Domestic inflation rate

FR = Foreign exchange reserve

β_0 = Constant term; $\beta_1 - \beta_3$ = Coefficients parameters; μ_t = Error term

5. Analysis and Discussion of Results

The study used annual time series data spanning 1986 to 2021. The time-series data were obtained from the World Development indicator and the Central Bank of Nigeria statistical Bulletin. To address the problem of spurious regression and large values, the data variables for Model 1 were converted to their log form.

Summary of Descriptive Statistics

The analysis of the result started with the estimation of the descriptive characteristics of the data to show the trend behavior of these variables. The summary of statistics is presented in Table 1 below.

Table 1: Result of descriptive statistics

	<i>TOP</i>	<i>GDP</i>	<i>CPS</i>	<i>BMS</i>	<i>ER</i>	<i>DI</i>	<i>FR</i>
Mean	35.02113	9.234526	7.002820	7.333426	115.1786	20.31229	81.67013
Median	34.45783	9.514656	6.999911	7.577082	120.9700	12.60000	31.54639
Maximum	54.27796	11.94634	10.27683	10.49169	358.8000	76.76000	331.4242
Minimum	14.52000	5.288889	2.724412	3.169954	2.020000	3.610000	3.149426
Std. Dev.	10.08386	2.103212	2.471073	2.378944	99.79894	18.06389	97.77161
Skewness	-0.230500	-0.427180	0.213105	-0.264218	-0.758323	1.836225	1.422036
Kurtosis	2.471611	1.896680	1.687079	1.746946	2.851573	5.114439	3.969905
Jarque-Bera	0.717085	2.839733	2.776733	2.697026	3.386611	26.18837	13.16797
Probability	0.698694	0.241746	0.249233	0.259626	0.183911	0.000002	0.001382
N	35	35	35	35	35	35	35

Source: E-views 12.0 statistical software

The result of the descriptive statistics depicted that, trade openness (TOP) stood at an average mean of 35.0211, for the period 1986 to 2020. This positive value of TOP signifies that the trade openness proxy for globalization was positive in

Nigeria. The maximum value of TOP was observed at 53.27779 while the minimum value was observed at 14.52000. The standard deviation for TOP was 10.0838. This demonstrated that the TOP was stable and is considered not to display wide dispersion from its average value. Further, the mean values for GDP, CPS, BMS, ER, DI, and FR were 9.2345, 7.0028, and 7.3334. 115.1786, 20.3122, and 81.6701, respectively with their standard deviations as 2.1032, 2.4710, 2.3789, 99.7989, 18.0638, and 97.7716 during the period under study.

The analysis further revealed that TOP, CPS, DI, and FR were skewed positively with CPS near normality. While GDP, BMS, and ER were found to be negatively skewed. The result of the kurtosis for DI and ER was found to be greater than 3 hence, the variables are Leptokurtic while the other variables were Platykurtic, which is below 3. The p-value of JB statistics for domestic inflation and foreign exchange reserve is significant at the 5% level, implying that the variables are normally distributed.

VAR lag order selection criteria

The researcher sought to obtain the optimum level of time lag to ensure the reliability of the models. Hence, the Vector Auto Regression criteria for the Akaike information criterion (AIC), Schwarz information criterion (SC), and Hannan-Quinn information criterion (HQ) were employed and the results are presented in the table below:

Table 2: VAR lag order selection criteria for Model 1

<i>Lag formation</i>	<i>AIC</i>	<i>SC</i>	<i>HQ</i>
0	57.48912	57.62654	57.53467
1	50.63785	51.18750	50.82004
2	50.23908	51.20097	50.55792
3	48.96094*	50.33507*	49.41642*

Table 3: VAR lag order selection criteria for Model 2

<i>Lag formation</i>	<i>AIC</i>	<i>SC</i>	<i>HQ</i>
0	32.26074	32.39815	32.30629
1	27.66652*	28.21617*	27.84872*
2	27.76317	28.72506	28.08201

* indicates lag order selected by the criterion (tested at 5% level each)

Source: E-views 12.0 statistical software

The VAR result for Model 1 and Model 2 from the table above showed that all the information criteria collectively chose lag length 3 for Model 1 and lag length 1 for model 1. For both models, the Akaike information criterion (AIC) was adopted in the estimation since its criterion is the smallest (Nwaolisa & Chijindu, 2016).

Stationarity Test

To check for stationarity and avoid having a nonsense regression, the unit root test was conducted using the augmented Dickey-Fuller (ADF) and Philip Perron unit-root tests. The results of the ADF and PP tests are presented in table 4 below. The result of the unit root tests showed that only trade openness was stationary at level $I(0)$ for both ADF and PP. while all the explanatory variables (i.e., gross domestic product, credit to the private sector, broad money supply, exchange rate, domestic inflation, and foreign exchange reserve) for both models were stationary at first difference. This is a result of the fact that the probability values of the selected variables are less than standard probability values of 1%, 5%, and 10%.

Table: 4. Unit Root Test

Variables	Test	Level		First Difference		Order of integration
		Test Stat	Prob	Test Stat	Prob	
TOP	ADF	-3.190407	0.0293*	-6.784099	0.0000	$I(0)$
	PP	-3.154368	0.0319*	-7.607282	0.0000	$I(0)$
GDP	ADF	9.711530	1.0000	-2.731099	0.0409*	$I(1)$
	PP	9.023251	1.0000	-2.618659	0.0361*	$I(1)$
CPS	ADF	4.192491	1.0000	-3.229335	0.0271*	$I(1)$
	PP	4.298745	1.0000	-3.173201	0.0308*	$I(1)$
BMS	ADF	5.787685	1.0000	-3.777008	0.0418*	$I(1)$
	PP	5.787685	1.0000	-3.51768	0.0404*	$I(1)$
ER	ADF	1.718454	0.9995	-3.949381	0.0046*	$I(1)$
	PP	1.905664	0.9997	-3.899236	0.0053*	$I(1)$
DI	ADF	-3.270198	0.0247*	-5.410037	0.0001	$I(0)$
	PP	-2.776334	0.0723	-8.993169	0.0000*	$I(1)$
FR	ADF	-2.125632	0.2364	-4.046758	0.0036*	$I(1)$
	PP	-2.333693	0.1790	-3.790402	0.0070*	$I(1)$

Source: E-views 12.0 statistical software

Hence, the variables are mutually integrated [that is, the variables were either $I(0)$ or $I(1)$]. Based on the result, it is, therefore, apposite to apply the ARDL bounds testing procedure to ascertain the existence of cointegration in the variables.

From the ARDL bound test shown above, the result for model 1 found a long-run cointegrating relationship among the variables. This is because the calculated F-value of 7.4216 is far greater than the respective critical values of both levels $\{I(0)\}$ and the first difference $\{I(1)\}$ for each significant level. The result, therefore, gives econometric credence to carry out the short-run and long-run dynamics of the ARDL model.

Table 5: ARDL Bound Test for Model 1

<i>F-Bounds Test</i>		<i>H₀: No levels of relationship</i>		
<i>Test Statistic</i>	<i>Value</i>	<i>Signif.</i>	<i>I(0)</i>	<i>I(1)</i>
F-statistic	7.421650	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

Source: E-views 12.0 statistical software

Table 6: ARDL Long-run Result for Model 1

Dependent Variable: D(TOP)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	-41.39688	23.13314	-1.789505	0.0833
LN_GDP	21.94681	8.614557	2.547642	0.0160
LN_CPS	-16.52189	12.17193	-1.357376	0.1845
LN_BMS	-1.438691	16.73425	-0.085973	0.9320

Source: E-views 12.0 statistical software

The long-run result in Table 6 revealed that all the explanatory variables for model 1 except economic growth (GDP) were insignificant to explain changes in economic globalization in the long run. Therefore, the effect of changes in credit to the private sector and broad money supply as indicators of financial development does not have a long-run implication for globalization. On the other hand, the ARDL long-run result for economic growth (GDP) revealed to have a positive and significant impact on globalization (TOP) in the long run. Hence, a unit increase in economic growth tends to lead to a 21.94 percent increase in economic globalization in the long run. These findings are in agreement with the work of Falahaty and Law (2012) who reported that globalization positively affects economic growth and financial development.

Short run dynamics for model 1

The result of the short-run ARDL test below differs greatly from the long-run result. Here, the result of the log worth of GDP revealed a negative and insignificant impact on economic globalization in the short run. Hence, economic growth will have an insignificant effect on globalization in the short run. The result for CPS had a positive and significant impact on TOP. This implies that in the short run, a unit increase in credit to the private sector will lead to a 19.74 percent increase in economic globalization.

Table 7: ARDL Short-run Result for Model 1

Dependent Variable: D(TOP)		Selection Model: ARDL (1,1,2,3)		
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	-51.81509	8.193550	-6.323888	0.0000
D(LN_GDP)	-15.49058	12.10329	-1.279866	0.2160
D(LN_CPS)	19.74531	9.126854	2.163430	0.0435
D(LN_CPS(-1))	-47.18846	9.629499	4.900407	0.0001
D(LN_BMS)	39.78382	11.28433	3.525581	0.0023
D(LN_BMS(-1))	59.40554	16.18614	3.670149	0.0016
D(LN_BMS (-2))	-34.00981	10.40188	3.269583	0.0040
CointEq(-1)*	-0.738404	0.125945	-5.862931	0.0000
R-squared	0.740507		Durbin stats	2.262796

Source: E-views 12.0 Statistical software

Similarly, the first lag of CPS had a positive and significant effect on globalization, this implies that a percentage increase in credit to the private sector in the previous year would cause the credit allocated to the private sector in the base year to increase and this will continue in the long run with an additional value of 47.18 percent. However, the broad money supply (BMS) in the base year was significant with a positive coefficient value of 37.78 percent. Thus, the effect of changes in the broad money supply will lead to a positive increment in economic globalization in the current year. Furthermore, the first and second lags of the broad money supply were also significant in explaining changes in trade openness in the current year; while the first lag had a positive effect, the second lag had a negative effect. Hence, changes in the broad money supply in the previous years would affect the level of economic globalization in the current year. Thus, the financial development in the current year can be explained by the broad money supply (BMS) for previous years and not the broad money supply (BMS) in the current year. The result of the error correction term had a coefficient of -0.73 and this was less than the 5% significant level. The CointEq(-1) result indicated that deviations from the equilibrium path in the model were corrected by 73% annually.

From the ARDL bound test shown above, the result for model 2 found a long-run cointegrating relationship among the variables. This is because the calculated F-value of 5.504787 is greater than the respective critical values of both levels $\{I(0)\}$ and the first difference $\{I(1)\}$ for each significant level. Hence, the results of the short-run and long-run dynamics of the ARDL model were estimated.

Table 8: ARDL Bound Test for Model 2

<i>F-Bounds Test</i>		<i>H₀: No levels of relationship</i>		
<i>Test Statistic</i>	<i>Value</i>	<i>Signif.</i>	<i>I(0)</i>	<i>I(1)</i>
F-statistic	5.504787	10%	2.72	3.77
K	3	5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

Source: E-views 12.0 statistical software

Table 9: ARDL Long-run Result for Model 2

Dependent Variable: D(TOP)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	37.65695	4.364638	8.627737	0.0000
ER	-0.021641	0.019247	-1.124364	0.2695
DI	-0.109373	0.109016	-1.003274	0.0235
FR	0.025448	0.019431	1.309677	0.1999

The results presented in Table 9 show that exchange rate has an insignificant negative effect on economic globalization in the long run. This shows that as the exchange rate increases in Nigeria, the resulting consequence will lead to a decrease in economic globalization and vice versa (Price, & Elu 2014). As such a unit increase in the exchange rate (ER) will lead to a 2.16 percent decrease in economic globalization. The result also revealed that domestic inflation has a significant negative effect on economic globalization in the long run. The results show that a unit increase in the inflation rate will lead to a 10.93 percent increase in economic globalization. Foreign reserve (FR) on the other hand, exerted a positive but insignificant impact on globalization (TOP) in the long run. Hence, a unit increase in foreign reserves will result in a 25.44 percent increase in economic globalization in the long run. The findings agree with Loto (2011)

Short run dynamics for model 2

The short-run results presented below express the direction of the relationship that existed between the explanatory variables and economic globalization in the short run. The result denotes that domestic inflation (DI) and foreign reserves (FR) have no implication on economic globalization in the short run whereas exchange rate (ER) in the current year and first lag period had a negative and insignificant impact on economic globalization in the short run such that an additional increase in the

exchange rate would cause the economic globalization to begin to decline and in the long run settle on a new equilibrium value characterized by 11.2 and 11.0 percent decrease respectively.

Table 10: ARDL Short-run Result

Dependent Variable: D(TOP)		Selection Model: ARDL (1,3,0,0)		
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	31.06764	6.439267	4.824717	0.0000
D(ER)	-0.112904	0.058926	-1.916032	0.0673
D(ER (-1))	-0.110675	0.066866	1.655186	0.1109
D(ER(-2))	0.137225	0.068781	1.995100	0.0575
CointEq(-1)*	-0.695468	0.139734	-7.968386	0.0000
R-squared	0.557289		Durbin stats	2.110163

Source: E-views 12.0 statistical software

The second lag of exchange rate had a positive but insignificant effect on globalization. Thus, an additional naira increase in exchange rate from the last three years results in an insignificant improvement in globalization in the base year and in the long run settle on a new equilibrium value of an additional 13.7 percent. The ECM result shows that a 69% percent deviation from the equilibrium needs to be corrected each year. The negative and significant result of the error term confirms the cointegration relationship among the variables.

Residual Diagnostic Test Results

The results of the residual diagnostic tests are presented in Table 11. The diagnostic tests result above showed that the Breusch-Godfrey serial correlation LM test for both model 1 and model 2 had p-values greater than the ideal 5% significant level, hence, the model is free from serial correlation.

Table 11: ARDL Residual Diagnostic Test Results

<i>Diagnostics tests</i>	<i>Observed values</i>	<i>P-values</i>
Breusch-Godfrey Serial Correlation LM Test	2.276386	0.1227
Jarque-Bera Normality Test	1.724746	0.4221
Breusch-Pagan-Godfrey Heteroskedasticity Test	1.997547	0.0997
Ramsey RESET test	1.248560	0.2225

Source: E-views 12.0 statistical software

Similarly, the normality and heteroskedasticity tests both had probability values to be greater than the 5% level. This shows that the ARDL model was normally distributed and is also free from heteroskedasticity. Lastly, the Ramsey specification reveals that the model is well specified with an F-stats probability value greater than 5%.

5. Conclusion and Recommendations

The paper empirically examined the effect of financial development, financial crisis, and globalization in Nigeria. The empirical analysis was carried out on time series data from 1986 to 2021 using data extracted from CBN statistical bulletin and World Development Indicator. The result of the descriptive statistics revealed that trade openness proxy for globalization was positive during the period under review. The result of the unit root ADF and PP tests showed that the variables were mutually integrated of $I(0)$ and $I(1)$. This gave credence to conduct the ARDL bound test. The ARDL bound test for both models, 1 and 2 revealed the existence of a long-run cointegrating relationship among the variables. Hence, the long-run and short-run forms of the estimates were conducted for each model.

For model 1, the study revealed that in the long –run, all the independent variables except economic growth (GDP) were insignificant to explain changes in globalization in the long run. In the short-run, aside from economic growth which hurt globalization in Nigeria, credit to the private sector and broad money supply had a positive and significant effect on economic globalization both in the current and first year. This implies that a percentage increase in CPS and BMS in the short run will lead to significant improvements in globalization in the long run.

Going further, the ARDL results for model 2, revealed that exchange rate has an insignificant negative effect on globalization in the long run whereas domestic inflation has a significant negative effect on globalization in the long run. The results also show foreign reserves exerted a positive but insignificant impact on globalization in the long run in Nigeria. On the other hand, the short-run result for model 2 denotes that domestic inflation and foreign reserves have no implication on economic globalization in the short run whereas the exchange rate in the current year and first lag period had a negative and insignificant impact on economic globalization in the short run such that an additional increase in the exchange rate would cause the economic globalization to begin to decline.

The result thus concludes that the effect of changes in financial developments does not have a long-run implication for globalization. Whereas, in the short run, they posit a positive and significant effect on globalization. Furthermore, indicators of financial crisis showcased a long-run negative effect on globalization in Nigeria with exchange

rate volatility having negative implications both in the long and short run. The study however recommends that government should design economic policies that will enhance the financial sector and drive globalization in Nigeria. Also, policymakers should develop strategies to expand trade taking cognizance of the implication of high inflation and exchange rate on economic activities.

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