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Bank-Based Financial Architecture and Economic Performance: Evidence From Nigeria

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ABSTRACT

This study examined the correlation between bank-based financial architecture and economic performance in Nigeria utilising quarterly data from 2010:Q1 to 2022:Q4. The study specifically analysed the impact of the cash reserve ratio, monetary policy rate, stated lending rate, stated deposit rate, capital adequacy ratio, leverage ratio, and net stable funding ratio on the financial inter-relation ratio in Nigeria. The research employed descriptive statistics, unit root tests, generalised linear models, Johansen co-integration tests, VEC-Granger causality, and vector error correction methods to analyse data sourced from the Central Bank of Nigeria and the World Bank Development Indicators Statistics bulletin across various editions at a 5% significance level. The investigation indicated that all variables were integrated at the first difference, necessitating the Johansen co-integration test to confirm the existence of a long-run link among the variables. The findings indicated that bank-based financial architecture substantially affects Nigeria's economic performance. In both the short and long term, all measures of financial architecture collectively contributed to significant performance in the overall economy. The study revealed that the integration of domestic and international financial frameworks significantly enhances the overall performance of Nigeria's economy. Consequently, the study recommended that alleviating the stringent regulatory requirements on capital adequacy, particularly with the buffer phenomenon, should be a significant policy focus. Capital funds can be liberated to fulfil their purpose, and if this is achieved, they will function as intended. If this is untenable, a cap should be imposed not to surpass its recorded mean of 13.97% due to the very adverse impacts it produces.

Keywords:

Composition, International, Basel, Intermediaries, Banks.

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1.0 Introduction

It is a most notable fact that financial architecture (both at the domestic and international levels) happens to be one of the most important forces in the determination a country's economic stability and growth in the dynamic world of global economics. Even when financial architecture relates to the financial system, in origin and outcome, the effects of its activities and dimensions cut across the macro- and micro-economies of any nation. It also transcends to the international circles. Any country that wants a robust, healthy, stable and developed financial system must be poised to have an integrated and well-functioning domestic financial architecture and international financial architecture. It is arguable that a good performing financial architecture would impact the performance of the institutional divides of the financial system. Banks for instance would be optimally impacted; noting that whatever that happens to them would simultaneously affect the economy, in view of their dominant position. The financial markets would be properly empowered to contribute more to the economy, with the intervention of a well-articulated financial architecture (Ezirim, 2021).

As the biggest economy in Africa, emerging nations like Nigeria would necessarily place a premium on well-organized and efficient financial institutions and markets that are created, controlled and maintained by expert and well-directed financial architects. The complex interplay between the FA and Nigerian economy and is the general subject of concern, shedding light on the ways in which identified aspects of domestic and international financial architecture (financial architecture) either help or hurt the institutions (banking, in particular), the financial system (by extended inference), and the country's economy, at large (Ezirim, 2021).

Financial architecture as an integral part of the financial system; and essentially the segment that compartmentalizes the body of rules and regulations that govern behavior and operations in the system. Ezirim (1999, 2005) properly dichotomized the financial system as the congeries of financial markets and the instruments, the financial institutions and the body of rules and regulations that govern behavior in the system. The gamut of markets, instruments, and intermediaries or institutions have been referred to as the financial superstructure, while the body of rules that govern behavior in the system are consigned to belong to the financial architecture. This puts the financial architecture, rightly as consisting of the body of rules and regulations, conventions and processes that establish and govern behavior in the financial system. Behaviors in the financial markets and institutions, as well as those that govern their creation and operations thereof, are the responsibilities of the financial architects. Quite contrary to the view-point of Parker (2023), financial markets and institutions are the creations of financial architecture, with financial architects also controlling and maintaining them. Financial architects effect the creation of the markets and institutions by seeing to their designing, setting out their operational modalities, establishment and licensing, as the case may be.Financial architecture goes further to seeing to the control and reforms of the institutions and markets. These they accomplish by concerted policies, regulations and or

deregulations. The maintenance of the markets and institutions equally rests on the shoulders of financial architects (Ezirim, 2021).

On a macro vein, the whole import of the financial system regulation that is midwifed by the financial architects is to guide and cause the commanding heights and institutional divides of the economy such as banks to act in ways that will considerably facilitate in the achievement of pre-determined objective. A noteworthy economic objective is boosted output or income growth. The gross national product (GNP) or income (GNI) ought to be positively and substantially impacted. More than that, in view of the postulated relationship between finance and growth, then the financial inter-relation index ought to be significantly driven to expected levels. The financial inter-relation ration expresses the monetary assets – output relation (the ratio of total monetary or financial assets to the GNP). If the architectural regulatory postscripts are right, then they would significantly drive the financial interrelation ratio to levels of economic fortunes. In this light, it is proper to postulate that the financial interrelation ratio should be a positive function of both the domestic and international financial architecture indicators, ceteris paribus. Given this, this study is about determining the causation imperatives of the financial architecture on the economy of Nigeria.

For the majority of studies, especially those beyond Nigeria, the GMM estimation technique, in its various forms, was mainly employed in the analysis of the data; while most of the cross-country studies relied mainly on panel methodologies, especially the fixed and random effects model as well as the pooled least square estimation model. Also, while more of the non-panel studies were based on annual time series data, a good number also employed quarterly data in their estimation. From the Nigerian studies reviewed on the impact of Basel regulations on the banking sector, only the CAR was examined in virtually all the studies (Erhijakpor, et al., 2022; Obadire, et al., 2022; Salami, Uthman, & Sanni, 2021), which is a major gap, considering that the current framework includes more regulatory instruments, which is presently at the implementation phase in Nigeria. With the inclusion of instruments, such as the LR, LCR and NSFR, such studies are incapable of explaining Basel III's impact on the efficiency and resilience of the banking sector in Nigeria. Moreover, most of the Nigerian studies utilized the OLS estimation technique, which is deemed to be less reliable than the likes of the GMM, ARDL and the Vector Autoregression (VAR) techniques.

2.0 Literature Review

Regulatory and Efficient Market Monitoring Hypothesis

The underlying framework of the above theoretical model, is the emphasis that banks should maintain a capitalization level that is consistent with the size of risk that they are exposed to (Odunga, Nyangweso, Carter, &Mwarumba, 2013). This buttresses that 'ongoing process' view of regulation. To this end, regulatory frameworks act as a 'check and balance' mechanism that ensures that banks are insulated against excessive risks that can pose danger to the bank, the banking system and the economy, as a whole. Therefore, Calomiris, and

Kahn (1991) as well as Berger (1995) stress that increase in capital requirements is usually advocated when the level of a bank's capital seems inadequate.

The adequacy of the capital stock of banks has several implications, especially on efficiency, safety and competitiveness. It is reiterated by Scannella (2012) that having an adequate amount of bank capital is a critical requirement for prudential and sound management of banks. With adequate level of capitalization, banks have the leverage to increase their credit delivery, thereby enhancing the bank' profit potentials – as such credits attract interest income for them. A bank with adequate capital level is also able to be more competitive, as it is able to take advantage of investment opportunities at the quickest possible notice without resorting alternative means of raising financial resources, or having to sell off its yet-to-mature financial assets at somecost implications. In Nigeria, the consolidation reforms brought with it a new wave of bank restructuring, in that the banks in Nigeria, for the first time, graciously embraced the option of merger and acquisition. In some instance, more than five banks came together to form a single new banking institution, in order to meet the regulatory threshold instituted by the apex bank in the country.

2.3 Empirical Review

Abdala (2024) investigated the extent to which banks and market finance act as rivals or collaborators. The study utilised ordinary least square techniques to evaluate the relative significance of bank-based and market-based finance in light of the pro-bank and pro-market literature. The findings indicated that banks exert a detrimental influence on economic growth, whereas the impact of markets was found to be insignificant. Nevertheless, banks and markets mutually enhance each other's capabilities to promote economic expansion. The study suggested that Cameroon should enhance the financial market activity in order to maximise the potential of finance to have a positive impact on economic growth.

Zhao, Wang, and Agbenyegah (2023) aim to determine the significance of financial structure in economic development. The study utilised quarterly data from 1998 to 2018 from Ghana and employed the auto regressive distributed lag (ARDL)-bound testing technique. The findings indicate that the financial structure has no significant impact on long-term economic growth in Ghana. The discovery supports the idea that banks and the exchange are complementary rather than substitutes, as financial services indicators have a significant impact on economic growth.

Perry and Daboush (2023) analyse the relationship between finance and economic growth, focusing on different structural categories. The paper employs cross-country data to assess the influence of financial structure (bank-based and market-based) on economic growth in 85 countries from 1990 to 2020. The study's findings validate that both the bank-based and market-based perspectives on financial structure have no impact on economic growth. Instead, the study concluded that the provision of financial services, which includes both banks and financial markets, has a beneficial effect on economic growth.

Weli, Okereke, and Nnamdi (2022) conducted a study to examine the hypothesis of financial system progress in Nigeria and South Africa, specifically focusing on financial institutions and markets. The Augmented Dickey-Fuller unit root test and autoregressive distributive lag are used for analysis. The findings revealed that among all the variables examined, only the money supply (financial depth as measured by the institution) had a noteworthy and adverse impact on economic growth in Nigeria. There is no long-term correlation between any aspect of financial development and output in South Africa. The study concluded that the level of financial development in both countries has not yet reached a sufficient level to have the desired impact on economic growth.

Akindipe (2021) conducted a study to analyse the effects of the financial architecture's characteristics on the economic performance of specific countries in West Africa (Cote d'Ivoire, Ghana, and Nigeria), taking into account the level of financial development. The Blundell and Bond System Generalised Method of Moment (GMM) is used to analyse annual data from 1995 to 2018. According to the System GMM results, the financial architecture had minimal effects on the growth of the countries that were selected.

Orekoya, Afolaby, and Akintunde (2021) analyse the comparative efficacy of bank-based and market-based financial development in fostering Nigeria's economic growth. They employ data from 1989 to 2018 and utilise the Auto-Regressive Distributive Lag (ARDL) estimation technique. The study revealed that the development of the banking sector has a positive and significant impact on Nigeria's economic performance. On the other hand, the development of the stock market was found to have a negligible negative effect, rather than contributing positively to the country's economic prosperity. Utilising GDP per capita growth for sensitivity analysis yielded a somewhat comparable outcome. The study concludes that bank-based financial development has a greater impact on growth in Nigeria compared to market-based financial development, based on this finding.

In Houshaimi's (2020) study, the author examined the correlation between financial structure and economic growth in eleven countries in the Middle East and North Africa region. The study focused on three indicators that are associated with financial structure. This paper will adopt the first two indicators, S-ACT and S-SIZE, which measure financial structure. The results of the fixed effect regression confirm that the financial structure (FS) has a significant impact on economic growth, specifically on the banking system, when measured by the S-ACT indicator. However, when other indicators were used, there was no significant correlation observed.

In their study, Yua, Adoms, Okaro, and Ogbonna (2020) analysed the financial structure and its impact on the economic growth of present-day African economies, with a specific focus on Nigeria. The study was based on both bank-based and market-based theories. The study utilised secondary data sourced from the World Bank Data Atlas and applied the Granger Causality technique to examine the relationship between independent variables and the dependent variable with a significance level of 5%. The results indicate that the financial structure in BC, MC, LLR, TR, and VTS did not have a statistically significant impact on the

GDP of the contemporary African economies. The findings also revealed a lack of long-term correlation in the study. Therefore, the study's findings suggest that the financial structure has no substantial impact on economic growth in present-day African economies.

Nkoro and Uko (2019) examined the impact of financial structure on the patterns of economic growth in Nigeria by analysing annual time series data from 1981 to 2017. The data analysis in the study utilised the vector error correction model (VECM). The study's findings indicate that there is a cointegration between economic growth, financial development variables, and the underlying control variables. The empirical analysis revealed that both stock market and bank-based financial development exert a substantial impact on economic growth. This suggests that both banking institutions and market mechanisms are significant factors in understanding the dynamics of economic growth. The study found that there is a long-term relationship between economic growth, financial structure, and the control variables. The study also found that the financial structure, which encompasses both stock market-based and bank-based systems, has a significant positive impact on growth. A substantial coefficient of financial structure indicates that financial structure plays a crucial role in explaining growth.

Olushola and Uzoma (2018) conducted a study to investigate the correlation between the development of the financial sector and economic growth in Nigeria, covering the years 1981-2017. The data analysis was conducted using ordinary least squares regression. The model underwent the Johansen Rank Cointegration technique to investigate the enduring relationship between the variables. The Augmented Dickey Fuller and Phillips-Peron tests were performed to assess the stationarity (presence of a unit root) and determine the level of integration of the variables. This was followed by the implementation of an error correction model (ECM) using a general to specific modelling approach to obtain meaningful results. The t-tests indicated a statistically significant and positive correlation between the total insurance income and economic growth in Nigeria. The comprehensive model indicates a clear and meaningful correlation between the assets of deposit money banks, the capitalization of the stock market, and the economic growth in Nigeria. Although the broad money supply has had a notable influence on Nigeria's economic growth, the impact is negative according to the model.

Mathenge and Nikolaidou (2018) investigated the impact of financial structure on the economic growth of Sub-Saharan Africa. The sample comprises low- and middle-income countries with varying degrees of financial system development, ranging from underdeveloped to relatively well-developed within the context of developing countries. The study employs dynamic panel estimation techniques to examine the impact of financial structure on growth in 14 Sub-Saharan African (SSA) countries from 1980 to 2014, considering both short-term and long-term effects. The findings suggest that the financial structure does not play a significant role in explaining the growth in the region. The study is resistant to variations in sample groupings, and the findings remain consistent even after excluding countries with more advanced financial systems compared to other countries in the sample.

3.0 Methodology

From a financial perspective, a suitable metric for assessing economic performance is the financial interrelation index. The relationship between total financial assets or total monetary assets and GDP pertains to intermediation. It is argued that due to their inherent nature, application, and effects, the banks, as the principal institutional divide in the economy, imply that both the CBN and Basel regulatory frameworks should have collective implications for Nigeria's financial performance. Consequently, the FIR is posited as a positive function of the combined financial architecture (CFA) and can be articulated in accordance with the assertions of model 3.1. Thus,

FIR = f (CFA = DFA + IFA) 3.1

FIR = f (CRR, MPR, SLR, SDR, CAR, LVR, NSFR) 3.2

Explicitly,

$FIR_t = \psi_{0+} \psi_1 CRR_t + \psi_2 MPR_t + \psi_3 SLR_t + \psi_4 SDR_t + \psi_5 CAR_t + \psi_6 LVR_t + \psi_7 NSFR_t +$

E_{t4} 3.3

$\psi_1, \psi_3 < 0$; $\psi_2, \psi_4, \psi_5, \psi_6, \psi_7 > 0$

Where, FIR = Rate of credit generated, CRR = Cash reserve ratio, MPR = Monetary policy rate, SLR = Stated lending rate, SDR = Stated deposit rate, CAR = Capital adequacy ratio, LVR = Leverage ratio, NSFR = Net stable funding ratio

4.0 Results and Discussion

Table 4.1: Results of GLS

Dependent Variable: FIR

Method: Generalized Linear Model (Newton-Raphson / Marquardt steps)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
CAR	-0.030398	0.012449	-2.441877	0.0146
LEV	0.035265	0.017278	2.041095	0.0412
NSFR	0.001940	0.002275	0.852684	0.3938
MPR	0.123561	0.049667	2.487800	0.0129
SLR	-0.220441	0.071114	-3.099831	0.0019
SDR	0.060074	0.028464	2.110475	0.0348
CRR	0.004080	0.010669	0.382402	0.7022
C	1.219891	0.357251	3.414664	0.0006
@TREND	0.049456	0.023551	2.099921	0.0357

@TREND^2	-0.001161	0.000344	-3.379258	0.0007
Mean dependent var	0.498019	S.D. dependent var		0.398529
Sum squared resid	1.604181	Log likelihood		16.10666
Akaike info criterion	-0.234871	Schwarz criterion		0.140368
Hannan-Quinn criter.	-0.091014	Deviance		1.604181
Deviance statistic	0.038195	Restr. Deviance		8.100095
LR statistic	170.0733	Prob(LR statistic)		0.000000
Pearson SSR	1.604181	Pearson statistic		0.038195
Dispersion	0.038195			

Source: Eviews Output

The results of its estimation are shown in Table 4.1. Analysis covered the two main emphasis of global and relative utilities' checks. Taking off from the global utility check for the model, the observed global statistics that estimated for model (3.3) satisfied the requirements of global usefulness and would suggest that the model is suitable for further analysis that includes hypotheses testing. This is clearly shown by an observed Pearson statistic of 0.03819 and LR stat, of 170.07 [0.000000]. The probability of 0.0000 is less than the critical probability of 0.05 at 5% level of significance. This suggests the rejection of a null hypothesis of "no good fit" of the data relating to the variables. An attempt to analyze the 'effects' of the individual predictors belongs to the relative usefulness tests that this study uses the z-statistics to perform. At the relative statistics level, the MPR, being one of the domestic architecture variables, posted a beta coefficient of 0.12356 and a z-stat. of 2.4878 [0.0129]. The probability of 0.0i29 is less than the critical probability of 0,05. This alludes to the point that MPR positively and significantly associates with the FIR. Thus, it can be said that as the MPR increases, the FIR also increases. This is the same as saying that the volume of monetary of financial assets generated in the Nigerian economy relative to the GDP increases, as well. This is in line with a priori expectations sold by the monetary authorities to the nation that the policy of using changes in monetary policy rates, and when they deem fit, is asset-boosting to the economy relative to the GDP. In another vein, the SLR, which is the standing lending facility rate at which banks borrow at short-time notice (such as over-night) from the CBN to cover temporary shortages, also has its results depicted on Table 4.8. As the Table shows, the SLR predictor posted a beta coeff. of -0.2204 and a z-stat of -3.0998 [0.0019]. This prob. of 0.00129, being less than the critical prob. of 0.05, means that SLR significantly relate with FIR. It is also negative as expected, showing that both variables move in inverse directions. When the SLR is increased, for instance, the FIR reduces. But when SLR reduces, the FIR increases. Arguably, whatever that discourages the borrowing activities of banks (i.e., their funds mobilization capacity), will also discourage their ability and propensity to lend. High borrowing rate has the potential of reducing their level of borrowing from the CBN, at short notice. The SDR predictor posted a beta coefficient of 0.060 and a z-stat. of 2.11[0.0348]. It is significant at conventional levels, since it depicts a

probability that is less than the critical probability (0.0011 < 0.05). It is equally positive in line with *a priori* expectation. The cash reserve ratio variable, CRR, posted a beta coefficient of 0.004 and z-stat of 0.382 [0.7022]. This is not significant at 5% level when a look is taken at the observed probability of 0.7022, which is greater than the critical probability of 0.05. The positive sign implication is contrary to expectation, in theory. A possible way of seeing the development is to take up the view-point of the CBN, who attempts to convince everyone that the CRR is a positive indicator that works for the good of the entire economy.

The results of the IFA variables are equally summarized in Table 4.1. As can be seen, the CAR posted a beta coefficient of -0.03039 and a z-stat. of –2.44 [0.0146]. The probability of 0.0146 is less than the critical probability of 0.05. With this, CAR would be said to negatively but significantly related to FIR. It is noteworthy, again, that the CAR and the FIR moves in opposite directions, implying that as banks increase in their capital adequacy as required or specified by Basel, their ability to contribute to the boosting of financial assets reduces instead of increasing. The consistency of this negative sign implication of CAR is quite remarkable. A priori expectation has been consistently flouted. For LEV variable, the results are also posted in Table 4.8. From the Table, the LEV variable posted a beta coefficient 0.03526 and a z-stat of 2.04 [0.041]. The observed prob. of 0.041 is less than the critical prob. of 0.05, This implies that LEV considerably relates with FIR, significantly. Being positive as expected, it amplifies that both FIR and LEV variables move in the same direction. This theoretical connecting link is not mistaken. Assets are financed by liabilities. Greater volumes of assets are made possible by high volumes of financial liabilities, such as deposits. Higher leveraged positions boost banks' abilities to provide services that improve the fortune of the economy. For example, higher deposit mobilisation gives banks more liberty and impetus to extend more credit facilities to the economy. The net stable funding ratio (NSFR), another IFA variable, has a beta coeff. of 0.00194 and a z-stat. of 0.853 [0.3938]. As recorded, NSFR is not significant given that it posted a probability that is greater than the critical probability (0.3938> 0.05). It is however positive, as *a priori* expected, showing that as the net stable funding of banks increase, so does the potentials and ability to generate assets to the betterment of the overall economy. The study recognizes the place of the constant term and went ahead to interpret the results thereby. This, as earlier posited, represents the 'effect and direction' of other factors that are not recognized overtly as major arguments in the present model (3.30). From Table 4.7, the other unmodelled factors posted a beta coeff. of 1.21989 and a z-stat. of 3.414 [0,0006]. This indicates that the 'other factors' that are not presently modelled and that relate with FIR are significant. They are also positive in their relation with FIR, showing that they move in similar direction. This goes to confirm that the duo of the sets of domesticand international architecture variables, as specified, are not conclusive, in explaining the length and breadth of the FIR.Other variables that may not belong to financial architecture surely have veritable 'effects' on the FIR. This is true in that the FIR is an economy-wide phenomenon that has many determining forces that are outside the purview of FA. Finally, it is necessary to x-ray the 'effects' of trends, even when it is not within the purview of the objectives of this study. But since it arose within the confines of the analytical

approach adopted for this study. Both the linear trend and cyclical trends are significant, judging by the results they posted. Being significant would have been distortive to the models' performance, only that causality is not established on the analytical anvil of the GLM estimation technique.

Table 4.2: Group Unit Root Test Results for FIR Model

Group unit root test: Summary

Series: FIR, MPR, SLR, SDR, CRR, CAR, LEV, NSFR

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.77532	0.0028	8	406
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.39841	0.0082	8	406
ADF - Fisher Chi-square	30.5963	0.0151	8	406
PP - Fisher Chi-square	28.2545	0.0295	8	408

Source: Eviews Output

The results are set out in Table 4.2, which summarizes the group-unit-root tests for the combined FIR or economy-level performance model. The observed values of all the test-statistics are taken in turns. First, the Levin-Lin-&-Chu-t-stat posted a value of -2.77532 [0.0028] and the observed probability of 0.0028 < 0.05. In the same vein, the Im-Pesaran-and-Shin-W-stat recorded a value of -2.398 [0.0082] and a prob of 0.05 (0.082 ¸0.05). In a similar manner, the ADF-Fisher-Chi-sq.-stat documented a value of 30.596 [0.0151] and prob is less than the critical-prob(0.0151 < 0.05). Finally, the result of the PP-Fisher-Chi-Sq.-stat lays to rest every contrary argument about lack of joint-stationarity. This is seen in the posted observed value of 28.2545 [0.0295] and the probabilities are compared, (0.0295 < 0.05). thus, it can be noted that there is no unit root in all the results.

Table 4.3: Cointegration Test Results of the FIR Model

Panel A: Unrestricted Cointegration Rank Test (Trace)

Trend assumption: Linear deterministic trend

Series: FIR MPR SLR SDR CRR CAR LEVNSFR

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.809006	225.1520	159.5297	0.0000

At most 1 *	0.529119	142.3764	125.6154	0.0032
At most 2 *	0.487712	104.7188	95.75366	0.0105
At most 3 *	0.368202	71.27548	69.81889	0.0381
At most 4 *	0.341005	48.31623	47.85613	0.0452
At most 5	0.269158	27.46428	29.79707	0.0908
At most 6	0.168274	11.78638	15.49471	0.1675
At most 7	0.050173	2.573767	3.841466	0.1086

Panel B; Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.809006	82.77559	52.36261	0.0000
At most 1	0.529119	37.65751	46.23142	0.3053
At most 2	0.487712	33.44337	40.07757	0.2305
At most 3	0.368202	22.95924	33.87687	0.5336
At most 4	0.341005	20.85195	27.58434	0.2853
At most 5	0.269158	15.67790	21.13162	0.2442
At most 6	0.168274	9.212609	14.26460	0.2689
At most 7	0.050173	2.573767	3.841466	0.1086

Source: Eviews Output

There is harmony in the inferences between the results in Panel A and those in Pabel B. Both Panels posted results that confirm the presence of cointegration among the variables in the economy-level performance FIR model.

Table 4.4: ECM Results (standard error in parentheses 9) while. t-stat in brackets [ ])

Dependent = FIR

Short-run Variables	Short-run Stats	Long—run Variables	Long-run Stas
D(MPR(-1))	0.119981	MPR(-1)	0.128043
	(0.02574)		(0.05250)
	[4.66186]		[2.43899]
D(SLR(-1))	-0.128901	SLR (-1)	-0.192930
	(0.03150)		(0.04232)
	[-4.09231]		[-4.55885]
D(SDR(-1))	0.035210	SDR(-1)	0.082546
	(0.01184)		(0.01592)
	[2.97424]		[5.18458]
D(CRR(-1))	0.016985	CRR(-1)	0.015564

	(0.00355)		(0.00589)
	[4.79010]		[2.64155]
D(CAR(-1))	-0.010464	CAR(-1)	-0.031618
	(0.00708)		(0.00512)
	[-1.47761]		[-6.17038]
D(LEV(-1))	-0.008351	LER(-1)	0.022891
	(0.00776)		(0.00649)
	[-1.07675]		[3.52761]
D(NSFR(-1))	-0.001334	NSFR(-1)	0.000162
	(0.00068)		(0.00124)
	[-1.97236]		[0.13001]
VECM Coefficient	-0.663972		
	(0.05494)		
	[-12.0850]		
C	0.211584	C	-0.116411
	(0.02100)		
	[10.0760]		

Source: Eviews Output

The VECM's beta coefficient is revealed as -0.664 and a t-stat-value of -12.085.This value is significant at 5% level (-12.085> 1.96 critical t at 5%). Thisresult satisfies the sufficient conditions of the VECM that the coefficient must be negative and significant. When these conditions prevail, then, three situations prevail. The first, for the purposes of the FIR model, is that the already-determined cointegration and long-run relations as in Table 4.23 is verified and confirmed.The second is that the correction and adjustment of short-run errors in the long-run is not only possible but tenable and certain. For the FIR model, the rate of this correction and adjustment is 66.4% per quarter. This is indeed a fast rate or speed of adjustment. Short-run errors are corrected at the speed of 66.4% every quarter of the year. The third condition, or actually an implication, is that when the conditions are satisfied, there exist a joint-long-run causality, which moves from the independent (MPR, SLR, SDR, CCR, CAR, LEV, and NSFR) variables to the dependent (FIR) variable. This implies that the predictors (put together) actually possess causal or substantial effects on theeconomic performance of Nigeria, in the long-run.

Table 4.5: FIR Model VEC Granger Causality/Block Exogeneity Wald Tests

Dependent variable: D(FIR)

Excluded	Chi-sq	Df	Prob.
D(MPR)	23.77092	2	0.0000
D(SLR)	16.95175	2	0.0002
D(SDR)	9.040662	2	0.0109
D(CRR)	25.84525	2	0.0000
D(CAR)	2.351695	2	0.3086

D(LEV)	1.460361	2	0.4818
D(NSFR)	5.229692	2	0.0732
All	63.31091	14	0.0000

Source: Eviews Output

In Table 4.5, it is revealed that, first, on a joint note, there is evidence for group-joint-short-run causality flowing from the totality of the predictors (MPR, SLR, SDR, CCR, CAR, LEV, and NSFR) to the economy-level performance (FIR) variable. The observed chi-sq. is 63.31 [0.0000].The associated observed prob of 0.0001 is less than the critical default prob (0.10), making room for the rejection of the null hypothesis of "no significant causality". Thus, there is joint-short-run causality flowing from the exogeneous to the endogenous variables, as in Table 4.5. At the individual levels, significant causality is not seen to move from CAR to FIR with the posted Chi-sq. stat of 2.352 [0.309]. It is, thus, revealed that the observed prob is greater than the default probability of 0.10 at 10% significance level. This makes a null hypothesis that CAR does not significantly cause FIR in the short-run to be accepted. Similarly, LEV has a Chi-sq. of 1.460 [0.48] and with the observed prob. (0.48> 0.10), it becomes clear that LEVdoes not causes FIR quite significantly in the short-run, as well.The NSFR variable recorded a Chi-sq. of 5.229 [0.073]. This prob, being less than the default (0.073 < 0.10) indicates that the rejection of the notion that NSFR does not significantly cause FIR is the proper decision.Invariably, NSFR causes RCG, in the short-run. By these inferences, only one (NSFR) out of the international financial architecture (IFA) variables cause FIR,significantly, in the short-run; two of them (CAR and LEV) did not.

On the side of the domestic FA predictors, the MPR variable posted a Chi-sq. value of 23.771 [0.0000].With this result, MPR is significantly causal in its relation with FIR. It is easy to see that the posted prob of 0.0000< 0,10 (default prob). which makes for the rejection of a null hypothesis of no significant causality. MPR causes FIR, substantially, in the short-run. For the SLR variable, which posted a Chi-Sq. value of 16.952 [0.002],the study finds it appropriate to reject the null hypothesis of no significant causality since the observed 0.002> 0.10. SLR does cause FIR, in the short-run. For the SDR variable, the case is not different, judging by the calculated Chi-sq. of 9.04 [0.0109]. With this result, the study fails to accept the null hypothesis that SDR does not cause FIR, in the short-run. SDR causes FIR. The last of the DFAs is the CRR variable, which has a Chi-sq. value of 25.845 [0.0000]. This, like the other DFA variables considerably causesFIR, in the short-run. All the four DFAs are fully causal in relating with FIR.

5.0 Conclusion and Recommendations

5.1 Conclusion

The robust analyses done in this study revealed very interesting points. Domestic financial architecture affects and charts causative paths for economic performance of Nigeria. Secondly, international financial architecture causally influences Nigerian general economic performance. Put together, the combination of the domestic and international financial

architectural postscripts actually bring about positive and considerable boost to performance of the economy of Nigeria.

5.2 Recommendations

Firstly, the NSFR was also seen to move in the same causative direction with both the RCG and NSFR. Increasing the ratio to always remain above the previously established mean would be a policy in the right direction. It should therefore be made to be above 58.02 % because of its capacity to boost both banking and general economic performance.

Secondly, the MPR displayed both negative and positive significant effects, just like the SLR, as revealed in the course of the analysis, but mostly positive. The SDR was more positive than the SLR and more influential. Given the dictates of the counter-balance theory, where a policy can be positively causative in a sector but negatively causative in another sector, and also where what obtains in the part may differ from what happens in the whole, then it is appropriate to ensure that the MPR revolves around its established mean of 12.3% more or less. And since the SLR and SDR have now been placed on basis points around the MPR, such basis points should favour the SDR than the SLR. This will kind of cushion the effects of any arising excessive cost of borrowing syndrome.

Finally, the cash reserve ratio, being a limiting factor against credit operation, being a liquidly management tool, should be made to revolve around the mean and nothing more. It should not exceed the rate of 18.74% in any given year. This is in view of the highly negative outlook in its effect on the rate of credit generated.

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