

# Financial System Broadening and Insurance Business Performance in Nigeria, 1996-2019 ARDL Co-integration Model Approach

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# ABSTRACT

A considerable amount of scholarly works have examined the link between financial system broadening and economic performance using varieties of econometric models. Although, most of these studies have concentrated attention on the economic performance, none of the studies had examined a co-integrating relationship between financial system broadening and insurance performance in Nigeria. Some efforts have been made on the nexus between financial system broadening and economic performance, though not comprehensive enough to model this nexus. This has created gap in the literature which needs to be filled. It is in view of this that this study examines the cointegration relationship that existed between financial system broadening and insurance in Nigeria. Financial system broadening was represented by banking system services such as extended money supply services and extent of private sector credits while insurance performance is represented with insurance profitability. The time series data was collected from the Central Bank of Nigeria Statistical Bulletins. Multiple classical linear regression analysis was used in this analysis. Special cointegration relationship using auto regressive distributed lag was used in the analysis through eviews 10.0. The findings reveal that financial system broadening via aggregate money supply and private sector credits had a long run relationship with insurance performance in Nigeria. The study has contributed to the economic performance literature with a better understanding of the role of financial system deepening and its association with insurance performance which spurns economic growth. This study provides valuable knowledge to policy makers and economic managers, to refine their current policies and subsequently improve financial system broadening and economic performance through insurance based polices.

Keywords: Insurance Performance; Financial System Broadening; ARDL

# 1. Introduction

It is worthy saying that sound financial systems are essential for macro-economic stability, as demonstrated by the global financial crisis called global financial meltdown. It is also true that vibrant financial markets also play a critical role in channeling resources into productive investment and fostering insurance business performance which interns promote economic growth. The performance of the economy has become sine gua non with global influence and competitive advantage. The case of US, China, Japan, Germany and the rest of the world top ten rankings by economic growth is a case in point. Nigeria ranks number twenty- two in the global ranking by economic performance by the World Bank in 2018. (Nguena and Abimbola, 2013) It is the goal of every country, therefore, to join this enviable position of economic performance. Countries go to any length to improve their economic performance. The recently negotiated china loan deals have been linked to economic interests of the parties involved. Nigerian economy has been terribly hurt by the economic sanctions imposed by the US and Europe. Europe led by Germany, France and UK need china economic potentials. The rest is history. There is no one-size-fits-all way to measure country economic performance. Rather, translating the complex forces responsible for the performance of any economy into quantifiable indicators of performance requires an in-depth examination of hundreds of underlying factors. However, several scholars have accepted financial system broadening as a driver of economic performance in both developed and developing economies. It has become one of the commonly adopted strategies for improving performance. To put it succinctly, financial system broadening (FSB) refers to the art of increasing the ratio of money supply relative to the gross domestic product or some other index such as interest rate, unemployment rate and poverty rate. It simply refers to liquid money, suggesting that the more liquid money is available in an economy, the more opportunities exist for continued economic performance which insurance business activities is one of the trusts. Effective financial system broadening strategy is, therefore, desirable in both short and long term. FSB is fast becoming a competitive economic policy or strategy for both developed and developing economies. It leads to improvement or increase in the pool of financial services that are tailored to all the levels in the society. It ensures continued and sustainable growth and supports the notion that development in the financial system leads to development of the economy as a whole. FSB has continued to assume increasing recognition across the globe among policy makers, scholars and development-oriented agencies. Its importance derives from the promise it holds as a tool for economic development through effective insurance business utilization, particularly in the areas of poverty reduction, employment generation, wealth creation, improving welfare and security, and general standard of living. In Nigeria, the major tools for FSB are (a) Agent Banking (b) Know-Your-Customer Requirements (c) Financial Literacy (d) Consumer Protection (e) Linkage Banking (f) Implementation of the SME Development Fund (g) Credit Enhancement and (h)insurance intermediation activities or Programmes. According to the Central Bank of Nigeria, the global pursuit of financial broadening as a vehicle for economic development had a positive effect in Nigeria as the access to liquidity rate increased from 20 % in 2008 to 46.3 % in 2010 and to 53.0 % in 2012 to 60 % in 2014,62.8% in 2017 and 65% in 2018 (Emenuga,2019). Financial systems represent a cornerstone of economic development. To ensure that resources are efficiently mobilized and allocated among different players, financial systems must be adequately regulated and also expanded to offer a wide range of instruments and services. Financial system broadening has been a very important topic in Nigeria. However, despite this attention, very limited progress has been made in this area. The purpose of this study, therefore, is to examine the extent to which financial system broadening dynamics have implications for insurance business performance of Nigeria. In order to achieve this objective, the following broad objectives was created, implication of Financial system broadening through aggregate money supply (AMS) insurance business performance in Nigeria. implication of Financial system broadening through credit to private sector (CPS) on insurance business performance in Nigeria and finally a long run relationship existing between Financial system broadening and insurance business performance in Nigeria. The remaining part of this study is dedicated to literature review, methodology, data presentation, conclusions and recommendations and policy implications. The literature review section is further divided into conceptual, theoretical and empirical review. Methodology is also further divided into research design, sources of data, model specification and apporrari expectation data, the next section covers the presentation of model variables, unit root presentation, and other test statistics as well as result

#### 2. Review of Related Literature

# **Conceptual Review**

Nguena and Abimbola (2013), financial system deepening is a multi-faceted process that involves the interaction of a number of markets, instruments and stakeholders. Put it in simple terms, financial system broadening refers to a process in which institutions and financial markets: (i) facilitate goods and services exchange (ii) mobilize and pool

savings of a large number of investors (iii) acquire and process information about the companies and the potential investment projects and therefore allocating public savings to the most productive uses, (iv) follow investments and exert corporate governance, and (v) diversify and reduce liquidity risk and inter-temporal risk (Levine, 2005; King and Levine, 1993). In other words, financial deepening can be understood as a process by which the range of products and players widens, deadlines extend and services play a role in risk coverage and diversification. FSB is often classified into two categories: FSB through aggregate money supply and FSB through credit to private sector. CBN Statistical Bulletin (2018), between 1960 and 2017, aggregate money supply stood at N109,824.15 trillion and credit to private sector stood at N99,087.86 trillion. Thus, total liquid asset available to the economy between 1960 and 2017 stood at N208,912.01 trillion. Meanwhile, within the same period, aggregate GDP at current prices stood at N489, 163.34 trillion.

# **Economic Performance**

Economic performance is measured traditionally by (a) economic growth (b) inflation (c) unemployment (d) current account. However, of these indicators, economic growth is usually the most importance and given the greatest credence for economic performance. It is frequently used for comparisons and is probably the most prominent statistic. For all its limitations, GDP is widely used across the world for measuring economic growth. It gives a rough guide to the level of economic activity in the country. For all its faults, GDP gives a useful guide to the economic cycle and is an indicator for monetary policy and fiscal policy of the country. The support for the use of GP to measure economic performance is that GDP is measurable, that is, it is objective. Perhaps, the negative side of GDP comes when it is relied on too much. For example, a rise in GDP signals improvement in economic performance, and yet there is a rise in poverty because the growth does not translate into development (reduction in poverty, unemployment and gap between the rich and the poor). This is often the case in Nigeria and in quite a number of developing economies, where economic growth does not take into account income distribution and therefore does not lead to economic development (reduction in poverty, unemployment and gap between the rich and the poor). Thus, growth in GDP could primarily benefit the top income strata, a situation often described as the 10/90 rule in Nigeria, where 90 % of the country's wealth is in the hands of 10 % of the people. This scenario explains why Nigeria is often referred to as paradox because of the rising poverty in the midst of rising economic growth. A good economic performance, therefore, should results in reduction in poverty, unemployment and the gap between the have and have not.

# **Indicators of Financial System Broadening**

# **Money Supply**

Money supply exerts considerable influence on economic activity in both developed and developing economies. The low level of money supply in Nigeria has been responsible for the state of the economy. Nigeria ranks 22 on the world economy ranking according to the World Bank in 2018. It is in this light that the recapitalization in the banking sector in 2005 must be commended. However, despite that the Nigerian financial system remained by and large relatively underdeveloped because of lack of sufficient financial intermediation and financial deepening which the economy requires for sustainable economic growth. According to the statistics provided by the CBN, between 1960 and 2018, total money supply stood at N109,824.15 trillion. This is small relative to other emerging economies like Brazil, Russia, India, Indonesia, and China. In an attempt to tie money supply to economic growth, scholars are examining the role of financial structure, which presupposes that the level of money supply drives economic growth.

Montiel (2005), Emenuga (2006) and Osikoya (2012) examine the effect of financial depth (money in circulation) on economic growth and suggest (a) improved efficiency of financial intermediation (b) improved efficiency of capital stock and (c) increased national savings rate.

# **Credit to Private Sector**

Credit to the organized private sector refers to the financial resources provided to the organized private sector by financial institutions, such as through loans, purchases of no equity securities, and trade credits and other accounts receivable, which establish a claim for repayment. Credit facilities to the organized private sector are very important for economic growth. CBN 2019, total credit to the organized private sector over the study period amounts to N99,087.86 trillion. Granting credits to the organized private sector will transfer funds that are created by banks to real sector of the economy, thereby creating job opportunities and reducing poverty level. This requires consistent and vigorous efforts and strategies on the part of the CBN and deposit money banks. Okorie (2013) finds increase in

private sector credit leads to increase in private domestic investment by 6% in Nigeria. Also, Mamman and Hashim (2013) find that credit to private sector contributes about 96.1% to real sector growth in Nigeria. Kolawole and Omobitan (2014) find significant and positive impact of credit to private sector in Nigeria.

#### **Insurance Business Activities**

Insurance is defined by different writers in various ways. Each of these definitions refers to policyholders from the effect of any economic loss occurring to them as a result of pre-defined risk insured. Aneke (2010) defines insurance as a risk mechanism by means of a common pool into which each policyholder pays a fair and equitable premium according to the risk he or she brings to the pool.

On the other hand, Anyanwoncha, (2008) define insurance as an agreement or contract between two parties known as the insured and the insurer whereby the insured pays a relative amount of money called premium to the insurer who undertakes to indemnify him at the occurrence of the loss insured based on the teams and conditions of the policy. Some were defining insurance as a social device, some as a contract, some as an institution, some as a discipline, some as a pool of risk, like the pooling school of thought and the transfer school of thought. The technical school also defined insurance in their own way. According to the pooling school of thought definition, insurance is defined as a pool of risk where people that are exposed to the same peril contribute into a pool of fund from which the unfortunate is made fortunate. The transfer school of thought defined insurance as a risk transfer mechanism whereby the policyholder called the insured contribute into a common pool out of which the unfortunate is made fortunate. The transfer school of the risk insured, so that if a loss occurs, the insurer will put the insured in the same position he/she was prior to the loss (Coyle, 2007).

The ability to place the affected individual(s) in or near his former position requires prompt claims settlement. To ensure prompt settlement, the capital of the insurer must be sufficient to accommodate such claims. Also, the integrity of the owners of the insuring firm or the insurers further determines the willingness of the insurer to settle due claims. This enhances the public confidence in the firm and affects the quantity of business the insurer or insurance company's transaction. The aim of every business enterprise is the owner's wealth (Emeka, 2009). Insurance Companies aims too could not be different, but the prospective policyholders aim is to obtain cover from an insurer who could settle his claims without actions, delay or extra costs should the risk insured occur. Hence, prospective policyholder would prefer patronizing such insurer for some obvious reasons. Some of these reasons could be past claim history of the insurance company. The capital base, the involvement of expatriate or government in its gross premium income (G.P.I) of the firm among others.

#### **Theoretical Review**

#### **Economic Growth Theory**

This is a theory propounded by Harrod and Domar in 1948. It is a theory that assigned a key role to investment in the process of economic growth. But they lay emphasis on the dual character of investment. Firstly, it creates incomes, and secondly, it augments the productive capacity of the economy by increasing its capital stock. The former may be regarded as the 'demand effect' and the latter the 'supply effect' of investment. Hence, as insurance business is taking place, real income and output will continue to expand. However, for maintaining a full employment equilibrium level of income from year to year, it is necessary that both real income and output should expand at the same rate at which the productive capacity of the capital stock is expanding. Otherwise, any divergence between the two will lead to excess or idle capacity, thus forcing entrepreneurs to curtail their investment expenditures. Ultimately, it will adversely affect the economy by lowering their incomes and employment is to be maintained in the long run, net investment should expand continuously. This further requires continuous growth in real income at a rate sufficient enough to ensure full capacity use o f a growing stock of capital. This required rate of income growth may be called the warranted rate of growth or 'the full capacity growth rate'

#### **Empirical Review**

Three scholarly positions emerged from empirical studies on the link between financial system broadening and economic performance. In the first position are scholars who argued that financial system broadening and economic performance are positively correlated.

Ndebbio (2004) identifies the range of financial assets that can adequately approximate financial deepening. FD is represented by two variables: the degree of financial intermediation/development (M2/Y) and the growth rate in per capita real money balances (GPRMB). Estimations were done with ordinary least squares (OLS) multiple regression procedure. Three modeled equations, with justifications for each, were estimated and analyzed. A cross-country regression was used for 34 SSA countries. Two policy implications derive from the study: that SSA countries should strive hard to make real money balances grow, and that these countries should also come up with policies to improve financial development/intermediation. Financial deepening positively affects economic growth.

Hasan, Wachtel and Zhou (2006) use panel data for the Chinese provinces to study the role of financial deepening on growth rates. They suggest that the development of financial markets, legal environment, awareness of property rights and political pluralism are associated with stronger growth.

Odeniran and Udeaja (2010) examine the relationship between financial sector development and economic growth in Nigeria over the period 1960-2009. Four variables, namely; ratios of broad money stock to GDP, growth in net domestic credit to GDP, growth in private sector credit to GDP and growth in banks deposit liability to GDP were used to proxy financial sector development. The empirical results suggest bidirectional causality between some of the proxies of financial development and economic growth variable. Specifically, they find that the various measures of financial development granger cause output even at 1per cent level of significance with the exception of ratio of broad money to GDP. Additionally, they find that net domestic credit is equally driven by growth in output, thus indicating bidirectional causality. The variance decomposition shows that the share of deposit liability in the total variations of net domestic credit is negligible, indicating that shock to deposit does not significantly affect net domestic credit.

Chang and Wu (2012) investigate the threshold cointegration effect of financial deepening on economic growth in Taiwan over the period from 1981 to 2010. The results show that a threshold cointegration effect exists in relationship between financial deepening and economic growth. In short-run, economic growth has a significant and positive effect on financial deepening in the high-growth regime. In addition, the impact of financial deepening on economic development has a significant and positive effect in the high- and low- growth regimes. Thus, financial deepening can increase economic growth in Taiwan.

Idris (2012) examines the relationship between financial development and economic growth in Nigeria using data from 1981 to 2010. All the variables are stationary at first difference using the Augmented Dickey Fuller (ADF) and Phillip Perron (PP) tests. The Johansen Cointegration test result showed that there exists a positive relationship between financial development and economic growth.

Shittu (2012) examines the impact of financial intermediation on economic growth in Nigeria using time series data from 1970 to 2010 were used and were gathered from the CBN publications. For the analysis, the unit root test and cointegration test were done accordingly and the error correction model was estimated using the Engle-Granger technique. The paper establishes that financial intermediation has a significant impact on economic growth in Nigeria. Nkoro and Uko (2013) empirically examine the financial sector development-economic growth nexus in Nigeria. In doing this, the study employed the cointegration/Error Correction Mechanism (ECM) with annual dataset covering the period, 1980-2009. Five variables, namely; ratios of broad money stock to GDP, private sector credit to GDP, market capitalization-GDP, banks deposit liability to GDP and Prime interest rate were used to proxy financial sector development while real gross domestic product proxy growth. The empirical results show that there is a positive effect of financial sector development on economic growth in Nigeria.

Balago (2014) examines the relationship between Financial Sector Development and Economic Growth in Nigeria using time series data from 1990-2009 were fitted into the regression equation using various econometric techniques such as Augmented Dickey Fuller (ADF) test, Johansen Multivariate Co-integration Test, Ordinary Least Square Regression and Vector Error Correction Model (VEC). The result shows that development in financial sector variables viz: banking sector credits, total market capitalization and foreign direct investment positively affect economic growth variables.

Rahay& Yousefi (2015) offer the following findings on the financial deepening and economic growth nexus: (a) economic growth is guaranteed from financial deepening in most emerging markets, (b) the effect of financial deepening on economic growth is bell-shaped, and (c) the pace of financial deepening matters. In the second position are scholars who argued that financial system broadening and economic performance are negatively correlated.

Ardic and Damar (2006) analyze the effects of financial sector deepening on economic growth using a province-level data set for 1996-2001 on Turkey. Their results indicate a strong negative relationship between financial deepening and economic growth.

Oriavwote and Eshenake (2014) examine empirically, the implications of financial development for economic growth in Nigeria using time series data covering the period between 1990 and 2011. The cointegration technique with its implied Error Correction Mechanism (ECM) was applied. This commenced with the ADF unit root test, followed by the Johansen cointegration test. The Over parameterize and Parsimonious ECM was next and this was followed by the Vector Error Correction, diagnostic tests and Cholesky variance decomposition. The variables included Real Gross Domestic Product, Financial deepening which is a ratio of money supply to Gross Domestic Product, liquidity ratio, interest rate and credit to the private sector. Financial sector development has not significantly improved private sector development. In the final position are scholars who find no relationship or mix relationship.

Nzotta and Okereke (2009) empirically examine the nexus between financial deepening and economic growth in Nigeria between 1986 and 2007. They find that financial deepening index is low in Nigeria.

Rousseau and Wachtel (2009) show that the nexus between financial deepening and economic growth is not as strong in more recent data as it was in the original studies with data for the period from 1960 to 1989. First, they find that the incidence of financial crises is related to the dampening of the effect of financial deepening on growth. Excessive financial deepening or too rapid growth of credit may have led to both inflation and weakened banking systems which in turn gave rise to growth-inhibiting financial crises. Excessive financial deepening may also be a result of widespread financial liberalizations in the late 1980s and early 1990s in countries that lacked the legal or regulatory infrastructure to exploit financial development successfully. However, they find little indication that liberalizations played an important direct in reducing the effect of finance. Similarly, there is little evidence that the growth of equity markets in recent years has substituted for debt financing and led to a reduced role of financial deepening on growth.

Onwumere, Ibe, Ozoh, and Mounanu (2012) examine the impact of financial deepening on economic growth in Nigeria. Adopting the supply-leading hypothesis using variables such as broad money velocity, money stock diversification, economic volatility, market capitalization and market liquidity as proxies for financial deepening and gross domestic product growth rate for economic growth, they find that broad money velocity and market liquidity promote economic growth in Nigeria while money stock diversification, economic volatility and International market capitalization did not within the period studied (1992-2008).

Adekunle, Salami and Adedipe (2013) examine the impact of financial sector development and economic growth in Nigeria. The OLS method of the regression analysis was employed; the financial development was measured by ratio of liquidity liabilities to GDP (M2GDP), real interest rate (INTR), ratio of credit to private sector to GDP (CPGDP) while the economic growth was measured by the real GDP (RGDP). The study finds that only the real interest rate is negatively related. All the explanatory variables are statistically insignificant.

Ohwofasa and Aiyedogbon (2013) examine the level of development of financial deepening in the banking sector and the extent it has impacted on economic growth over the last two decades. Vector autoregressive (VAR) methodology and its derivatives, impulse response function and variance decomposition, were employed. The results of the VAR estimates revealed among other things that a one year lag of economic growth, gross national saving as a ratio of GDP (lag 1) and exchange rate (lag 1) have significant positive impact on current economic growth while the impact of GCF (lag 1) on the current level of economic growth was negative and statistically significant. It was also empirically discovered that PSC/GDP (lag 2) and GNS/GDP (lag 2) happened to be key determinants of M2/GDP. Similarly, the key determinants of PSC/GDP include its year 1 and 2 lagged values and GNS/GDP (lag 2) with GNS/GDP (lag 2) and PSC/GDP (lag 2) exhibiting negative impact. Finally, on the current level of GNS/GDP, it is observed that M2/GDP (lag 1) and PSC/GDP (lag 2) were also seen as its key determinant. Aye (2015) investigates the role of financial deepening in economic growth in Nigeria. Bootstrap rolling window approach was used to

account for potential time variation in the relationship with annual data on money supply as a ratio of nominal GDP and real GDP per capita from 1961-2012. Results indicate no causality between the two.

#### Knowledge Gap

Financial system broadening studies through aggregate money supply (AMS) private sector credit and economic growth nexus abounds in the financial studies literature, None of the studies carried out above centered on financial system broadening and insurance business performance which forms the major thrust of this study in Nigeria and also a long run relationship existing between Financial system broadening and insurance business performance in Nigeria is another study that have not been equally done.

#### 3. Methodology

#### **Research Design**

This study adopted the exposit-facto research design. The exposit-facto research design is described as after-thefact research This is suitable for the work given that it is based on an already completed event and the researcher is meant to analyses the outcomes of the already completed event and draw reasonable conclusions

#### Nature and Sources of Data

All the data to be employed for this work will be time series, secondary and purely quantitative. They are drawn from sources such as The Statistical Bulletins of Central Bank. They are annualized time series data because they have a natural time ordering covering the period 1981 to 2019.

#### **Model Specification**

The study adopted Auto regressive Distributed lag model. (ARDL). The model for this work is specified following the special Classical multiple regression Model called

# INSPt=F (RM2/GDP, RCPS/GDP)

INSPt =  $\beta_0 + \beta_1 M 2 + \beta_2 CPS_t + \dots E_t$ 

LNINSPt =  $\beta_0 + \beta_1 RM2 + \beta_2 RCPS_{t+} \dots E_t$ 

Where, CPS = Credit to the private sector, M2=Broad money supply, INSP=Insurance profitability.

# Approvi Expectation: $\beta_1$ , $\beta_2$ , $\beta_3$ , $\beta_4 > 1$ ,

# **Ordinary Least Square Regression**

Auto regressive Distributed lag model (ARDL) as a method of data analysis. ARDL was given up for the ordinary least square regression (OLS) because ARDL is a dynamic model while OLS is a static model. (Pesaran and Shin, 1999). Hence, the unit root rule shows that the variables are all integrated at order one meaning that OLS is the preferable model. Dependent Variable: INSP=Insurance profitability

# 4. Data Presentation and Analysis

From appendix one, insurance performance as a proxy for insurance profitability measured in million naira was uses in this study as dependent variable. The proxy for financial broadening is ratio of broad money supply to economic growth and ratio of credit to private sector to economic growth all measured in ratio form.

Appendix two measures the variables in growth rate form. The growth rate forms of all the variables under study act as a diagnostic test. It helps to treat the variable from various ailments such as auto correlation where the result may be blue but baize. The variables of interest had an increasing rate

#### **Unit Root Test of Stationary**

#### Tests of Unit root using augmented dickey fuller

In an attempt to confirm the order of integration of the series under study thereby confirming their suitability for a linear combination in the form of a model, the unit root test following the form specified as augmented dickey fuller Test was used. The table below represents a summary of the unit root result that was stationary.

SUMMARY OF UNIT ROOTS TEST RESULTS				
ADF Statistic	Critical Values	Probability Value	Inference	
	@ 5%			
-5.0023	-3.6328	0.0031	l(1)	
-5.6504	-3.5366	0.0003	l(1)	
-5.0793	-3.5366	0.0011	l(1)	
	T ROOTS TEST RESULTS ADF Statistic -5.0023 -5.6504 -5.0793	ADF Statistic Critical Values   -5.0023 -3.6328   -5.6504 -3.5366   -5.0793 -3.5366	ADF Statistic Critical Values @ 5% Probability Value   -5.0023 -3.6328 0.0031   -5.6504 -3.5366 0.0003   -5.0793 -3.5366 0.0011	

Source: Author's e-view 10 output with data in Appendix, one

From the result of Augmented dickey fuller test contained in table above, LNINSP, RM2GDP, RCPSGDP, RTDSGDP are all integrated of order 1(1). meaning that is stationary at order 1. Given this different order of integration, the Ordinary Least Square Regression Method was in preference for the Autoregressive Distributed Lag Model which tolerates stationary property combination. In addition, the sample size is also good for OLS, Also, the variables INSP was log transformed to bring down the data size and ensure linearity. OLS is suitable because other variables are all integrated at order one.

#### Summary Descriptive Results

series. etc.

	LNINSPFM	CPSGDP	M2GDP	
Mean	10.93903	13.67333	16.20057	
Median	11.39535	14.02236	16.92073	
Maximum	12.06421	20.77330	21.30726	
Minimum	8.886605	6.313526	9.151674	
Std. Dev.	1.062677	5.669282	4.009913	
Skewness	-0.706750	0.014123	-0.281905	
Kurtosis	2.051883	1.144830	1.559106	
Jarque-Bera	2.896910	3.442454	2.394056	
Probability	0.234933	0.178847	0.302091	
Sum	262.5367	328.1600	388.8136	
Sum Sq. Dev.	25.97349	739.2374	369.8263	
Observations	24	24	24	
Source: Author Computation, 2020 e-view 10 output				

Table above 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 in raw form called level

As shown in time series data was collected from Central of Nigeria (CBN) Statistical Bulletin, 2020 over a period of twenty-nine years that were used in the study for analysis. What determines the normality distribution of the variables is that Jarque-bera must be tending towards 3 and probability of normality distribution must be significant. When these two hypotheses are normal, it shows that the distributions are normally distributed.

#### Measuring the cointegration relationship between financial deepening reform and economic growth in Nigeria

Null Hypothesis: ECT has a unit root Exogenous: Constant, Linear Trend Lag Length: 0 (Automatic - based on SIC, maxlag=4)

		t-Statistic	Prob.*
Augmented Dickey-Ful	ler test statistic	-5.923127	0.0004
Test critical values:	1% level	-4.440739	
	5% level	-3.632896	
	10% level	-3.254671	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(ECT) Method: Least Squares Date: 09/16/20 Time: 10:45 Sample (adjusted): 1998 2019 Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECT (-1) C @TREND ("1996")	-1.274904 -0.072545 0.005272	0.215242 0.089944 0.006424	-5.923127 -0.806560 0.820606	0.0000 0.4299 0.4220
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.649104 0.612167 0.190282 0.687941 6.899397 17.57352 0.000048	Mean depende S.D. dependen Akaike info crit Schwarz criteri Hannan-Quinn Durbin-Watsor	ent var t var terion on criter. n stat	-0.008412 0.305546 -0.354491 -0.205712 -0.319443 2.157212

# Source: Author Computation, 2020 e-view 10 output

From the above table, there is evidence to prove that there is a countertrading relationship existing amongst the variables of interest because the unit root the variable combined is stationary. Besides, the ADF statistics is more negative – 5.3291 then the critical vale @ 5% - 3.6328 and the probability value is statically significant 0.0004 which is less than 5%. All these evidence points to the direction that financial broadening series had a long run relationship existing with insurance profitability nexus in Nigeria.

Measuring the error correction terms existing between financial broadening and economic Insurance performance in Nigeria

# Dependent Variable: LNINSPFM Method: Least Squares Date: 09/16/20 Time: 11:37 Sample (adjusted): 1998 2019 Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.036313	0.849403	0.042751	0.9664
CPSGDP	-0.068550	0.028256	-2.426065	0.0267
M2GDP	0.099690	0.041706	2.390271	0.0287
LNINSPFM (-1)	0.944936	0.095759	9.867853	0.0000
ECT (-1)	-0.336798	0.238322	-1.413206	0.0019
R-squared	0.962813	Mean depende	ent var	11.11081
Adjusted R-squared	0.954063	S.D. dependen	t var	0.929164
S.E. of regression	0.199147	Akaike info crit	erion	-0.192832
Sum squared resid	0.674211	Schwarz criteri	on	0.055132
Log likelihood	7.121152	Hannan-Quinn	criter.	-0.134419
F-statistic	110.0371	Durbin-Watsor	n stat	2.205815
Prob(F-statistic)	0.000000			

#### Source: Author Computation, 2020 e-view 10 output

From the table above, Result reveals that there is a long run relationship because the ECT (-1) is correctly singe with negative -0.574566 and the probability value of the ECT (-1) is significant 0. 0097. This points to the evidence there that there is long run relationship which creates a convergence to long run equilibrium. This convergence is an error that needs to be corrected over time. However, to get the error correctional indices, it will determine the number of years, months and days it will take to correct this error if everything being constant meaning if more effect is done by monetary authority to control monetary instruments from its incessant fluctuations. Hence, it will take 1 divided 0.336798 which is equal to 2.97 meaning it will take two year, nine months and seven days to converge the error to long run equilibrium.

# Conclusion

The study investigated the long run relationship existing between financial broadening and insurance performance in Nigeria, 1996-2019. The economic motivation of the study is anchored on the desire to find out the extent to which financial broadening cointegrated with insurance performance proxied by insurance profitability in Nigeria, 1996 to 2018. In view of this, it was concluded that financial broadening series and insurance profitability had a longing relationship in Nigeria Therefore a macroeconomic variable as contained in the financial broadening called financial development has been seen to have a serious positive implication on insurance profitability in Nigeria. If financial broadening depth, inclusion and financial developments are to be managed and maintained, Economy will continue to grow.

# **Implication of Findings**

It is therefore suggested that policy makers should not totally rely on short run dynamics but also use policy instrument to induce economic growth, and also use it to complement other macro-economic policies such as monetary, insurance regulation, and fiscal policies. More so, policies should be put in place to increase money supply to finance domestic production so that insurance activities will thrive.

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#### INSINC INSEXP CPSGDP YEAR INSPFM M2GDP 1996 13,150.56 5,916.14 7234.4 9.15 6.31 1997 7.69 16,519.02 6,499.40 10020 10.05 1998 7.67 17,846.47 7,174.28 10672 10.64 1999 14,643.86 5,923.18 8720.7 11.85 8.12 2000 22,531.46 5,629.52 16902 12.74 7.69 2001 28,981.29 9.40 6,110.52 22871 15.60 2002 37,765.89 7,839.71 29926 13.29 8.21 2003 8.24 43,944.68 9,415.21 34529 14.68 2004 50,495.91 12,084.03 38412 12.31 8.21 2005 67,746.31 12,402.40 55344 11.85 8.26 2006 82,361.89 12,774.47 69587 13.25 7.99 2007 105,379.28 25,133.24 80246 15.54 11.12 2008 157,206.02 37,412.55 119793 20.45 17.67 2009 189,960.45 61,969.15 127991 21.25 20.55 2010 200,375.98 53,815.35 146561 20.21 18.60 2011 233,752.88 60,204.76 173548 19.33 16.93 2012 125,699.49 27,196.49 98503 19.37 20.43 2013 135,909.84 29,305.09 106605 18.92 19.67 2014 148,111.83 31,690.13 116422 18.24 19.24 2015 161,506.08 34,474.49 127032 19.68 19.84 171,334.92 2016 37,673.13 133662 21.31 20.77 2017 195,323.33 41,884.92 153438 19.67 19.43 2018 208,029.77 47,707.01 160323 19.63 17.63 2019 217,064.48 53,350.45 163714 19.82 18.49

#### **APPENDIX 1**

SOURCES: CBN STATISTICAL BULLETTIN, 2019

#### **APPENDIX 2 GROWTH RATE OF THE VARIABLES**

YEAR	LNINSPFM	CPSGDP	M2GDP
1996	8.8866	6.3135	9.1516
1997	9.2123	7.6905	10.0514
1998	9.2753	7.6695	10.6373
1999	9.0734	8.1239	11.8505
2000	9.7351	7.6893	12.7359
2001	10.0376	9.4043	15.6048
2002	10.3064	8.2110	13.2891
2003	10.4495	8.2436	14.6818
2004	10.5561	8.2076	12.3075
2005	10.9213	8.2550	11.8451
2006	11.1503	7.9916	13.2504
2007	11.2928	11.1184	15.5397
2008	11.6935	17.6733	20.4510
2009	11.7597	20.5530	21.2509
2010	11.8951	18.5984	20.2059
2011	12.0642	16.9260	19.3273
2012	11.4978	20.4273	19.3731
2013	11.5768	19.6670	18.9214
2014	11.6649	19.2393	18.2365
2015	11.7521	19.8369	19.6773
2016	11.8030	20.7732	21.3072
2017	11.9410	19.4281	19.6667
2018	11.9849	17.6279	19.6293
2019	12.0058	18.4923	19.8249

SOURCES: FROM APPENDIX 1