



## EFFECTS OF FINANCIAL INCLUSION ON THE GROWTH OF INSURANCE PREMIUM IN NIGERIA, 1981-2018.

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**Abstract:** The broad objective of this study is to examine the effect of financial inclusion on insurance premium in Nigeria, 1981 - 2018. Specifically the study seeks to: Measure the effect of broad money supply on insurance premium in Nigeria, Determine the effect of private sector credit on insurance premium in Nigeria, Investigates the effect of financial savings on insurance premium in Nigeria. Auto regressive distributed lag model was used for analysis using historic data derived from central bank of Nigeria statistical bulletin. Result reveals that Credits to the Private Sector have negative and significant effect on Insurance premium in Nigeria. Broad Money Supply have positively and significant effects on Insurance premium in Nigeria. Saving have positive and significant impact on Insurance premium in Nigeria. Economic growths have positive and significant impact on Insurance premium in Nigeria. In view of this, it was concluded that broad money supply, saving statistics positively and significantly impact on Insurance premium in Nigeria while credit to private sectors have negative and non-significant impact on Insurance premium in Nigeria. The following recommendation was made; Efforts should be made by regulatory authorities to regulate the fluctuations of interest which affects economic productivity and in fact, insurance productions. Expanded broad money supply will regenerate economic hob thereby allowing insurance business to thrive. Savings make insurance activities. It is only through saving that life assurance products are created. Sound and economic growth helps to energize the economy and ensure productivity.

**Keywords:** Financial inclusion, insurance premium, private sector credit, broad money supply, saving

### 1.1 INTRODUCTION

Financial inclusion is a financial ideas created to improve economic conditions through increased competitive efficiency within financial system and markets thereby indirectly benefiting financial and non-financial sector of the economy. Financial deepening also helps in increasing the provision and choices of financial services which would come through its financial infrastructure. Nzotta and Okereke (2009) stated that financial deepening is the ability of financial institutions in an economy to effectively mobilize savings for investment purposes. Financial deepening vigorously attracts the reservoir of savings and idle funds and allocates same to entrepreneurs, business, households

and government for investments projects and other purposes such as insurance services with a view of returns which forms the basis for economic growth. The growing importance of stock market, insurance services and banking activities around the world has recently opened a new avenue of research into the relationship between financial deepening and economic growth (Arestis, Demetriades and Luintel, 2001). The general idea that economic growth is related to financial deepening was first highlighted by Schumpeter in 1911.(Okoli 2010). The financial deepening role in economic growth has received much attention. However, the focus has been almost entirely on bank based financial deepening measures, while ignoring the possible



impact of stock market development and insurance based activities. Financial reforms have been a regular feature of the Nigeria financial system. The Central Bank of Nigeria (CBN) has been trying hard to ensure that the financial sector in Nigeria maintain a considerable depth and remain liquid with a view to competing effectively within the global financial market. The reforms have evolved in response to the challenges posed by developments in the system such as systemic crisis, globalization, technological innovation and financial crisis. The reforms often seek to act proactively to strengthen the system, thus, there is need to deepen the financial sector and reposition it for growth and integration into the global financial system in conformity with international best practices.

In the view of Ndebbio (2004) opines that financial inclusion means an increase in the supply of financial assets such as insurance services in the economy. Therefore, the sum of all the measures of financial assets gives us the approximate size of financial deepening. That means that the widest range of such assets as broad money, value of shares in the stock market, money market funds, etc, will have to be included in the measure of financial deepening. In his study, Ndebbio (2004) note that if the increase in the supply of financial assets is small, it means that financial deepening in the economy is most likely to be shallow, but if the ratio is big it means that financial deepening is likely to be high. He further went on to stressed that developed economies are characterized by high financial deepening, meaning that the financial sector in such countries has had significant growth and improvement, which has, in turn, led to the growth and development of the entire economy. Furthermore, studies have suggested that the financial sector is the conduit through which financial deepening is manifested.

However, the extent to which these depths have affected insurance business has been a grey area among scholars who only concentrates on the effects of these depths to the economy. Among financial intermediaries, the insurance companies play important role, they are the main risk management tool for companies and individuals (Arena, 2008). Through issuing insurance policies, they collect funds and transfer them to deficit economic units for financing real investment. The importance of insurance is growing due to the increasing share of the insurance sector in the aggregate financial sector in almost every developing country. Luke (2011) opines that insurance

companies, together with mutual and pension funds, are one of the biggest institutional investors in stock, bond and real estate markets and their possible impact on the economic development will rather grow than decline due to issues such as widening income disparity and globalization.

Adebisi (2011) is of the view that insurance companies are similar to banks and capital markets as they serve the needs of business units and private households in intermediation. The availability of insurance services is essential for the stability of the economy and can make the business participants accept aggravated risks. By accepting claims, insurance companies also have to pool premiums and form reserve funds. So, insurance companies are playing an important role by enhancing internal cash flow at the assured and by creating large amount of assets placed on the capital market. The role of insurance in the development of Nigerian economy cannot be over - emphasized. It mitigates the impact of risk and positively correlates to growth as entrepreneurs cover their exposures, otherwise risk-taking abilities are hampered. Thus, a strong and competitive insurance industry is a compelling imperative for Nigeria's economic development. Therefore the extent to which extended broad money supply and private sector credit, financial savings and economic growth has affected the improvement in the procurement of insurance premium is a subject of research and debate among scholars.

Over the past few decades, financial deepening and economic growth has attracted significant attention from finance and development experts and has been debated extensively. This debate can be characterized into two main theoretical propositions: the supply-leading hypothesis and demand-leading hypothesis. Supply leading hypothesis suggest that financial deepening spurs growth. The hypothesis contends that the development of financial market can create and expand liquidity, mobilize savings and promote the growth of an economy. The demand following hypothesis suggest that any early efforts to deepen the financial system without correspondent increase in the financial system might lead to a waste of resources It is argued that financial deepening is merely an outcome of growth in the real sector of the economy which could be allocated to more useful purposes in the early stages of growth.



Beside, others studies on financial inclusion was anchored on stock market development and capital market liquidity as well as economic growth, none of the previous studies attempted to examine the effect of these depth on insurance business activities. In order to fill this gap, this study wants to examine the effects of financial inclusion reform on the insurance premium in Nigeria, 1981-2018.

The broad objective of this study is to examine the effect of financial inclusion on insurance premium in Nigeria, 1981 - 2018. Specifically the study seeks to determine the effect of private sector credit on insurance premium in Nigeria. Measure the effect of broad money supply on insurance premium in Nigeria, Investigates the effect of financial savings on insurance premium in Nigeria..

#### **CONCEPTUAL REVIEW: CONCEPT OF FINANCIAL INCLUSION**

Nwaogwugwu (2008) stated that Financial inclusion refers to the increased provision of financial services with a wider choice of services geared towards the development of all levels of society. The World Bank (2000) further contends that financial inclusion encompasses the increase in the stock of financial assets. From this perspective, financial deepening implies the ability of financial institutions in general, to effectively mobilize financial resources for development. This view accepts the fact that a financial system's contribution to the economy depends on the quality and quantity of its services and the efficiency with which it performs them. The size of the financial sector is usually measured by two basic quantitative indicators: “monetization ratio” and “intermediation ratio”. Whereas monetization ratio includes money-based indicators like money supply ratio to gross domestic product, intermediation ratio consists of indicators concerning to bank-based measures like private sector credit ratio to gross domestic product and capital market-based measures such as market capitalization ratio to gross domestic product (Ndebbio, 2004).

**Financial inclusion and Economic Growth:** Economic growth means the growth in a nation’s real gross domestic product (an increase in a nation’s output of goods and services) or the physical expansion of the nation’s economy. (Antwi, Mills and Zhao, 2013). Economic growth can be illustrated as an upbeat change on the output of a nation’s manufacturing goods and services, stretching over a certain period of time (Kanu &

Ozurumba, 2013). In the view of Ndebbio (2004), financial deepening means an increase in the supply of financial assets in the economy. Therefore, the sum of all the measures of financial assets gives us the approximate size of financial deepening. That means that the widest range of such assets as broad money, value of shares in the stock market, money market funds, etc, will have to be included in the measure of financial deepening. In his study, Ndebbio (2004)note that if the increase in the supply of financial assets is small, it means that financial deepening in the economy is most likely to be shallow, but if the ratio is big it means that financial deepening is likely to be high. He further went on to stressed that developed economies are characterized by high financial deepening, meaning that the financial sector in such countries has had significant growth and improvement, which has, in turn, led to the growth and development of the entire economy. Furthermore, He suggested that the financial sector is the conduit through which financial deepening is manifested.

#### **Broad money supply**

Broad Money is the most inclusive method of calculating a given countries money supply. Adebisi (2011) stated that the money supply is the totality of assets that households and business can use to make payments or to hold as short term investments, such as currency, funds in bank account and anything of value resembling money. The formula for calculating money supply varies from country to country, but broad money is always the farthest reaching; narrow money includes fewer elements in the calculation. Since cash can be exchanged for many different financial instruments, and it can be placed in various restricted accounts, it is not a simple task for economic to define how much money is currently in a given economy. Therefore the money supply is measured in many different ways. Economists use a capital letters “M” followed by a number to refer to the calculation that they are using in a given context. Economists have found close links between money supply, inflation and interest rates. Central banks, such as Central Bank of Nigeria (CBN), use lower interest rates to increase the money supply when they want stimulate the economy. Conversely in an inflationary setting, interest rates are raised and the money supply diminishes, leaching to lower prices. In simple terms, if there is more money to go around, the economic tends to accelerate, with business having easy access to financing. If there



is less money in the system, the economy cools off and prices may drop or stop rising in this context, broad money is one of the measures that central banks use to determine what interventions, if any, they choose to make in the economy. (Ayodele,2006). Money supply is the entire stock of currency and other liquid instruments circulating in a country's economy as a particular time. Also referred to as money stock, money supply includes safe assets, such as cash, coins, and balances held in checking and savings accounts that business and individuals can use to make payments or hold as short-term investments. Economists analyze the money supply and develop policies revolving around it through controlling interest rates and increasing or decreasing the amount flowing in the economic. (Ayodele,2006).

#### **Credit to the private Sector**

Ayodele (2014) opines that Credit to private sector refers to financial resources provided to the private sector, such as through loans, purchases of non-equitable securities, and trade credits and other accounts receivable, that establish a claim for payment. One of the indications or signs (but not the only one), of economic development and increasing share (role) of private sector in the national economy or GDP of certain country. Referring to the data from the world bank, an economic measure of domestic credit to private sector (% to GDP) means that financial resources like loans and non-equitable securities are provided to the private sector by financial institutions like banks, insurance companies, and other financial corporation's all measured as percentages with respect to GDP (or national size of economy). The higher this measure is, the higher financial resources or financing is to private sector in a country and so the greater opportunity and space for private sector to develop and grow. The better the private sector gets and bigger role it has in the national economy, the better is generally the health and development of the economy of this country is. In general, this is one important indicator or measure of economic developmental degree and success because it shows the well being and goodness of private sector working hand in hand with public or governmental sector credit in Nigeria increased 23069635.07 percentages in October of 2016 over the previous month. Private sector credit in Nigeria averaged N7953460.45 million from 2000 until 2016, reaching an all time high of N23069635.07 million in October 2016 and a record low of N440872.30 million in January of 2000. (Okolo,2014)

#### **Concept of Broad Money Supply (M<sub>2</sub>)**

CBN (2018) defines Broad Money is the most inclusive method of calculating a given countries money supply. The money supply is the totality of assets that households and business can use to make payments or to hold as short term investments, such as currency, funds in bank account and anything of value resembling money. The formula for calculating money supply varies from country to country, but broad money is always the farthest reaching; narrow money includes fewer elements in the calculation. Since cash can be exchanged for many different financial instruments, and it can be placed in various restricted accounts, it is not a simple task for economic to define how much money is currently in a given economy. Therefore the money supply is measured in many different ways. Economists use a capital letters "M" followed by a number to refer to the calculation that they are using in a given context. Economists have found close links between money supply, inflation and interest rates. Central banks, such as Central Bank of Nigeria (CBN), use lower interest rates to increase the money supply when they want stimulate the economy. Conversely in an inflationary setting, interest rates are raised and the money supply diminishes, leading to lower prices. In simple terms, if there is more money to go around, the economic tends to accelerate, with business having easy access to financing. If there is less money in the system, the economy cools off and prices may drop or stop rising in this context, broad money is one of the measures that central banks use to determine what interventions, if any, they choose to make in the economy. (Ayodele,2006). Money supply is the entire stock of currency and other liquid instruments circulating in a country's economy as a particular time. Also referred to as money stock, money supply includes safe assets, such as cash, coins, and balances held in checking and savings accounts that business and individuals can use to make payments or hold as short-term investments. Economists analyze the money supply and develop policies revolving around it through controlling interest rates and increasing or decreasing the amount flowing in the economic. (Ayodele,2006).

#### **Insurance Income**

Insurance income can be referred to as the revenues that an insurer receives as premium paid by its customers for insurance products. When a customer effect an insurance policy (product), such as health insurance policy the customers (policyholders)



cost for a specified term the policy is called the premium income. An insurance company's premium income is revenue that is derived from premiums paid by policyholders. Premium, are paid for all types of insurance policies including health, automobile and home. A premium is the cost paid for coverage under the policy for a certain period of time. This excludes other sources of revenue such as investment income.(Nwite,2008)

### **THEORITICAL FRAMEWORK**

#### **ECONOMIC GROWTH THEORY**

The theory that guides this study is the theory of economic growth. This theory has its origins in the work of McKinnon [1973] and Shaw [1973]. It was Patrick [1966], however, who published the seminal work on the relationship between financial development and economic growth. He hypothesized two possible relationships, a “demand-following” approach, in which financial development arises as the economy develops, and a “supply-leading” phenomenon, in which the widespread expansion of financial institutions leads to economic growth (Arestis, Nissanke and Stein, 2005). Led by seminal papers of McKinnon [1973] and Shaw [1973], a significant number of studies have pointed out that financial liberalization can exert a positive effect on growth rate as interest rate levels rise towards their competitive market equilibrium, while resources are efficiently allocated. Arestis (2005) states that the relationship between financial development and economic growth has received a great deal of attention throughout the modern history of economics. Nkurunzizi (2002) further argue that even in the absence of monetary factors explained above, a country may still uncover that goods manufactured locally are seen as inferior in quality to the same good manufactured abroad. Thus, demand arises for foreign exchange to purchase the perceived high quality of these foreign goods

#### **EMPIRICAL REVIEW**

Iyoboyi (2017) investigated the Bank and Non-bank financial deepening and economic growth; the Nigerian experience using the bound testing approach to cointegration. He discovered cointegrated relationship between economic growth and financial deepening. The study also showed that, during the period of study, while there is bidirectional causality between bank financial deepening and economic growth, causality runs from economic growth to non-bank financial deepening. The results of the investigation are in favor of the financial-growth

cum growth financial hypothesis. For the period under study. Nigerians economic growth is sensitive to changes in financial deepening, past level of growth and the openness of the economy.

Obafemi, Oburota and Amoke (2018) studied the relationship between financial deepening and domestic investment in Nigeria while using the Granger causality Endogenous structural break methodology. They discovered a unidirectional causality; running from financial deepening has a statistically significant impact on domestic investment. The investigators also recommended increased integration of the credit and thrift societies, cooperatives, rural savings organization etc, into the mainstream formal financial sector in order to shore up the mobilization of savings for investment.

Obafemi and Udah (2017) carried out an empirical sector reforms on Agricultural and manufacturing sectors in Nigeria using the various decomposition and impulse response paradigms to test whether or not financial sector variables stimulate the growth of output in agricultural and manufacturing sectors of Nigerian economy. The result of the investigation suggested that relaxing the financial development constraints and deepening the financial sector is crucial to boost economic growth in the identified two sectors.

Luka (2017) conducted an empirical investigation on financial deepening and economic development of Nigeria with an ordinary least squares analytical framework. The profounder discovered that 27<sup>th</sup> of the variables under consideration affect GDP per capital while 73% of other variables not captured in the model also affect GDP per capital and adjusted R<sup>2</sup> of 16.7% show the robustness of the model. A trend analysis was also done in the study. At the end, of the study, it was found that financial deepening index was very low in Nigeria over the years. It was also discovered that the four explanatory variables, as a whole were useful and had a statistical relationship with financial deepening. But three of the variable; trend openness (TROP), inflation rates (INFLA) and ratio of money supply relative to gross domestic product (M2/GDP) had a significant relationship with financial deepening based on GDP per capita.

Kisaka (2017) investigated on the effect of financial deepening on the performance of Smallholder farmers in Homa Bay country, Kenya using the multiple regression analysis. The coefficient of determination indicated that 65% of variation in



SHF was attributed to assets, loans, share capital and deposits. It was found that a 1% rise in share capital would result in 1.74% drop in performance of SHF if all other variables remain constant. Hence, share capital and deposits are negatively related to performances of SHF. It was also found that 1% rise in loans would lead to 0.96% rise in performance of SHF and that 1% rise in private credit drive 1.03% rise in performance of SHF. Therefore, loans and other forms of private credit negatively influence the performance of small holder farmers.

Ani (2016) investigated on the effect of foreign exchange reforms on financial deepening; evidence from Nigeria using OLS regressions. The findings of the resulting time series analysis shed considerable light on the degree, dimension and direction of the determinations of financial depth. First, the ratio of FDI to GDP, ratio of market capitalization of listed equities to GDP and real interest rate have positive relationship with financial deepening while exchange rate has a negative relationship with financial deepening. Secondly, among the determinants of financial depth only the ratio GDP to real interest rates posted a significant relationship with foreign exchange. Overall, the evidence from the non-spurious regression results suggests that foreign exchange reforms in Nigeria have not had the desired positive effect on the depth of the Nigeria.

Odhiambo N.M (2009) Carried out an empirical investigation on interest rate reforms, financial deepening economic growth in Kenya, using cointegration and error-correction models, the observer was able to discover a strong support for the positive impact of interest rate liberalization on financial deepening in Kenya-although the strength to the level of depending ratio. He also discovered financial depth to granger cause economic growth in Kenya.

Obamuyi and Demegin (2012) investigated the impact of interest rate reforms and financial deepening in Nigeria using the co-integration and vector error correction model (EMC) to determine the long and short run dynamics of the model. They discovered that there exists a long run relationship between financial deepening and interest rates. They also observed that interest rate reform has a positive and significant effect on financial deepening in Nigeria.

Omnwumere (2015) carried out a research work on financial deepening indicators and economic growth in Nigeria: A causality and impact analysis with the aid of Johansen co

integration test. The error correction model as well as the granger causality test was also employed. Their findings revealed that there is a long run relationship between economic growth, broad money supply and private sector credit has negative and non significant impact on growth. The granger causality test results should that neither broad money supply nor private sector credit is granger causal for economic growth and vice versa.

Alenoghena (2014) conducted an empirical investigation on capital market, financial deepening and Nigerian's economic growth using Augmented Dickey- fuller (ADF) test and estimates the error correction mechanism model. His study revealed that stock market capitalization, Narrow money diversification (involving credit to private sector) and interest rate significantly impacted the promotion of economic growth of the country.

Mohan (2015) investigated the impact of financial deepening on economic growth in Indian perspective using Autoregressive Distribution lab (ARDL) bound testing approach of estimating co-integration among variable. Their findings suggest that there exist an equilibrium relationship in long run between financial deepening and economic development. Results also suggest that financial deepening causes economic growth in the long run and also in the short run.

Ogbonna&Karimo (2017) investigated on financial deepening and economic growth nexus in Nigerian using the Toda-Yamanoto augmented granger causality test. They discovered that the growth-financial deepening nexus in Nigeria follows the supply leading hypothesis. This means that it is financial deepening that leads to growth and not growth leading financial deepening.

Okoli(2013) investigated on evaluating the nexus between financial deepening and stock market in Nigeria using Garch (1,1) model. The result of her empirical evaluation revealed that financial deepening ( $FD_{1t}$ ) measured as the ratio of value of stock traded to GDP do not affect the stock market and there is no news about volatility. But financial deepening ( $FS_{2t}$ ) measured as the ratio of market capitalization to GDP affect the stock market. It indicated that financial deepening reduces the level of risk (volatility) in the stock market. The result also recorded that the conditional volatility of returns is slightly persistent.

Nzotta&Okereke (2009) examined financial deepening and economic development of Nigeria an empirical investigation



employing the two stage least squares analytical framework. At the end of the study, they found that financial deepening index is low in Nigeria over the years. They also found that the mine explanatory variables, as a whole were useful and had a statistical relationship with financial deepening. But four of the variables lending rates, financial savings ratio, cheques GDP ratio and the deposit money banks/GDP ratio had a significant relationship with financial deepening.

**KNOWLEDGE GAP**

Certainly, different views of the world have been compared and empirical evidences can equally be seen to have some bearings on such comparism. Worrisomely, the current investigations and techniques on financial deepening and insurance productivity are still a subject of debate due to disputes arising in insurance contribution to economic growth of some nations. Hence, existing studies both in American continent, Asian, Europe, Africa and Nigeria in particular centered their research mostly on financial deepening and insurance. More adequately captured are some deepening indices such as credit to the private sector, broad money supply and economic growth. Hence, a gap was identified, and the gap is centered on deviating from financial deepening reforms on economic growth, capital market and foreign direct investment to financial inclusion and insurance premium in Nigeria.

In reality, this work attempt to deviate from the previous study on financial deepening and economic growth in Nigeria by studying the effects of financial inclusion on insurance income in Nigeria Thus; resulting in a gap .This gap is reflected in currency of the research in Nigeria (1981-2018), methodology in Nigeria, Autoregressive Distributed lag (ARDL) and finally in Literature, most of the work on financial deepening and economic growth was done in sub Sahara Africa and Nigeria and was done using OLS, None of the study was done in Nigeria used ARDL

**METHODOLOGY**

**Research design**

This study adopted the *exposit-facto* research design. The *exposit-facto* research design is described as *after-the-fact research* (Onwumere, 2009). 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 2000 to 2018.

**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

$$LNINSP_t = \beta_0 + \beta_1 LNCPS + \beta_2 LNM2_t + \beta_3 LNSAV_t + E_t$$

Where

INSP= Insurance premium, CPS = Credit to the private sector, M2=Broad money supply, SAV= Savings and GDP= Gross Domestic Product

**Approri Expectation:  $\beta_1, \beta_3, \beta_4 > 1, \beta_2 < 1$**

**Auto regressive Distributed lag model (ARDL)**

Auto regressive Distributed lag model (ARDL) formed the method of data analysis. ARDL was chosen over the ordinary least square regression (OLS) because ARDL is a dynamic model while OLS is a static model. (Pesaran and Shin, 1999).

**4.1 Data Presentation**

The Population of this study is from 1981 – 2018 and the sample of the secondary data was drawn from Statistical Bulletin of Central Bank of Nigeria from 1981 – 2018.The study used ex-post facto research design and time series data which are qualitative in nature.

Table 4.1: Secondary Data showing the variables under study:

	LNINSP	LNCPS	LNM2	LNSAV	LNGDP
1981	5.4555	2.1482	2.6721	1.8813	4.5467
1982	5.5165	2.3672	2.7595	2.0168	4.6152
1983	5.2564	2.4568	2.8724	2.2453	4.7010
1984	5.3263	2.5227	3.0019	2.3968	4.7559
1985	5.2744	2.5703	3.1023	2.5274	4.9022
1986	5.5379	2.7244	3.1696	2.6343	4.9023
1987	6.0075	3.0484	3.3128	2.9272	5.2633
1988	6.1875	3.3078	3.6411	3.1462	5.5732
1989	6.5118	3.4145	3.8263	3.1697	5.9461
1990	6.9213	3.5129	3.8599	3.3895	6.1583
1991	7.1672	3.7221	4.3225	3.6306	6.3020



1992	7.8020	4.0625	4.7105	4.0094	6.7746
1993	8.5039	4.8451	5.1073	4.4429	6.9936
1994	9.5832	4.9658	5.4366	4.7092	7.2440
1995	9.5123	5.1929	5.6661	4.6866	7.9750
1996	9.3139	5.4747	5.8461	4.9015	8.3020
1997	9.3003	5.7563	6.0246	5.1798	8.3402
1998	9.3663	5.8635	6.1901	5.2986	8.2914
1999	9.5885	6.0664	6.4496	5.62642	8.4508
2000	10.0226	6.2735	6.7784	5.95373	8.8118
2001	10.2748	6.6398	7.1499	6.19040	8.8385
2002	10.5391	6.8357	7.3175	6.3836	8.9613
2003	10.6791	6.9999	7.5779	6.4859	9.2016
2004	10.8217	7.2595	7.6641	6.6815	9.3423
2005	11.1193	7.5166	7.8993	7.1837	9.5895
2006	11.3093	7.7365	8.2422	7.4614	9.8290
2007	11.3975	8.2075	8.5428	7.8986	9.9358
2008	11.7477	8.8422	8.9882	8.3237	10.0980
2009	11.9390	9.1168	9.1496	8.6593	10.1183
2010	11.9661	9.2259	9.3087	8.6918	10.9080
2011	12.0768	9.2742	9.4069	8.7844	11.0505
2012	11.2346	9.5921	9.5391	8.9950	11.1804
2013	11.2976	9.6647	9.6260	9.0660	11.2909
2014	11.3637	9.7486	9.6951	9.3935	11.3968
2015	11.4287	9.8349	9.8268	9.3464	11.4525
2016	11.5610	9.9562	9.9815	9.4182	11.5277
2017	11.7080	10.0028	10.0159	9.4694	11.6414
2018	11.9431	10.0222	10.1298	9.6202	11.7579

Source: Central Bank of Nigeria Statistical Bulletin (2018)

INSP= Insurance premium, CPS = Credit to the private sector, M2=Broad money supply, SAV= Savings and GDP= Gross Domestic Product

Table 4.1 Shows Insurance premium and selected financial inclusion series such as Economic Growth credit to the private sector, broad money supply and savings collected from The from statistical Bulletin of Central Bank of Nigeria from see appendix 1.

The data is a set of log transform annualized time series require for empirical analysis as adopted from the model which was specified in chapter three; hence the variables were transformed for linearity.

#### 4.2 Data Presentation and Analysis

##### 4,2,1 Stationary Tests

Table 4.2 Shows Stationary Tests 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 of a test.

**Table 4.2: SUMMARY OF UNIT ROOTS TEST RESULTS**

Variable	PP Statistic	Critical Values @ 5%	Probability Value	Inference
LNINSP	-5.8272	-3.6584	0.0007	I(1)
LNCPS	-3.5374	-3.0207	0.0177	I(0)
LNLM2	-3.9218	-2.9604	0.0052	I(0)
LNSAV	-4.8590	-3.5584	0.0048	I(1)
LNGDP	-4.4765	-3.5584	0.0001	I(0)

Source: Extract from Appendix One e-view 10.

From the result of the unit root test contained in table 4.2., GDP and Insurance premium are all integrated of order 1(1). On the other hand, other financial deepening series are all integrated at 1(1) and is stationary. Given this orders of integration, the ARDL Regression Method was given up in preference for this analysis which tolerates this stationary property.

##### 4,2,2 Descriptive statistics

	LNINSP	LNCPS	LNLM2	LNSAV	LNGDP
Mean	9.277988	6.230883	6.547226	5.863847	8.341359
Median	9.805629	6.170040	6.611111	5.790082	8.631386
Maximum	12.07686	10.02224	10.12981	9.620270	11.75793
Minimum	5.256458	2.148274	2.672158	1.881387	4.546746
Std. Dev.	2.406873	2.702102	2.555863	2.580118	2.399554
Skewness	-0.539970	-0.019390	-0.099921	0.015165	-0.194546
Kurtosis	1.768965	1.605231	1.587685	1.614071	1.728725
Jarque-Bera	4.246051	3.082565	3.221404	3.042722	2.798595
Probability	0.009669	0.0214106	0.039747	0.008414	0.006770
Sum	352.5635	236.7736	248.7946	222.8262	316.9716
Sum Sq. Dev.	214.3424	270.1502	241.7001	246.3093	213.0409



Observations	38	38	38	38	38	S.E. of regression	0.194900	Akaike info criterion	-0.220343
						Sum squared resid	1.025622	Schwarz criterion	0.175537
						Log likelihood	12.96617	Hannan-Quinn criter.	-0.082170
						F-statistic	602.0617	Durbin-Watson stat	1.934591
						Prob(F-statistic)	0.000000		

Source: Extract from Appendix One e-view 10.

Table 4.2 contains the basic measures of central tendency, spread and variations calculated on the level series of the dataset. Of particular interest is the Jacque-Bera (JB) statistics which is a test for normality must be equal to 3 It is a combined test of a skewness(S) of zero (0) and a kurtosis (K) of three (3), which are signs of a Mesokurtic distribution. In this case, however, the JB statistics shows that the variables are positively and negatively skewed and are leptokurtic.

Dependent Variable: LNINSP

Method: ARDL

Date: 08/03/19 Time: 12:49

Sample (adjusted): 1983 2018

Included observations: 36 after adjustments

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (2 lags, automatic): LNCPS LNM2 LNSAV

LNGDP

Fixed regressors: C

Number of models evaluated: 81

Selected Model: ARDL(1, 2, 1, 0, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNINSP(-1)	0.591974	0.113690	5.206926	0.0000
LNCPS	-1.188201	0.412077	-2.883445	0.0076
LNCPS(-1)	0.789887	0.372947	2.117960	0.0435
LNCPS(-2)	-1.616846	0.285179	-5.669580	0.0000
LNM2	0.480781	0.502149	0.957447	0.0468
LNM2(-1)	0.695319	0.540780	1.285769	0.2094
LNSAV	0.720875	0.397863	1.811867	0.0311
LNGDP	0.624461	0.180818	3.453535	0.0018
C	-1.081659	0.449233	-2.407790	0.0232
R-squared	0.994426	Mean dependent var		9.488653
Adjusted R-squared	0.992774	S.D. dependent var		2.292752

\*Note: p-values and any subsequent tests do not account for model

selection.

Source: Extract from Appendix One e-view 10.

Accept  $H_0$  if the sign of the coefficient of the parameter estimates is negative, otherwise reject  $H_0$  and accept  $H_1$  when the coefficient of the parameter estimates is positive, or Accept  $H_1$  if the sign of the coefficient is positive, otherwise reject  $H_0$ .

Given the coefficient of the parameter estimates of M2 as 0.48% and the probability of t-statistics of  $0.04 < 0.05$  which is significant, it shows that it is positively signed and statistically significant,

Result reveals that M2 is positively signed, the study accepted the alternate hypotheses and rejected the null hypothesis thereby concluded that broad money supply positively and significantly affected Insurance premium in Nigerian.

Given the coefficient of the parameter estimates of CPS has -1.19% and the probability of t-statistics of  $0.0076 < 0.05$  which is significant, it shows that it is positively signed and statistically significant,

Result reveals that CPS is negatively signed, the study accepted the null hypotheses and rejected the alternate hypothesis thereby concluded that Credit to private sector negatively and significantly affected Insurance premium in Nigerian.

Given the coefficient of the parameter estimates of SAV as 0.72% and the probability of t-statistics of  $0.03 < 0.05$  which is significant, it shows that it is positively signed but statistically significant,

Result reveals that saving is positively signed, the study accepted the alternate hypotheses and rejected the null hypothesis thereby concluded savings have a positive and significant effect on insurance premium in Nigeria



**5.1 Summary of findings:**

1. Credits to the Private Sector have negative and significant effect on Insurance premium in Nigeria. Insurance premium in Nigeria was affected by high interest on credits and reduction of real wages which were some of the causes responsible for recession in Nigeria.
2. Broad Money Supply have positively and significant effects on Insurance premium in Nigeria. Insurance premium was affected through decreased oil prices, global economic slowdown, declined earning and insecurity in the country at all levels of Government.
3. Saving have positive and significant impact on Insurance premium in Nigeria. Savings help the household to plan rates value was affected through decreased in real sector activities such as production, distribution and transfers, global economic slowdown, declined earning and scarcity of commodities in the country at all levels of Government affects insurance business in Nigeria.

affects economic productivity and in fact, insurance productions.

2. Broad Money Supply have positively and significant effects on Insurance premium in Nigeria. Insurance premium was affected through decreased oil prices, global economic slowdown, declined earning and insecurity in the country at all levels of Government. Expanded broad money supply will regenerate economic hob thereby allowing insurance business to thrive.
3. Saving have positive and significant impact on Insurance premium in Nigeria. Savings help the household to plan. Saving rates value was affected through decreased in real sector activities such as production, distribution and transfers, global economic slowdown, declined earning and scarcity of commodities in the country at all levels of Government affects insurance business in Nigeria. Savings make insurance activities .It is only through saving that life assurance products are created.

**CONCLUSION**

The study investigated the effects of financial inclusion on Insurance premium in Nigeria, 1981 to 2018. The economic motivation of the study is anchored on the desire to find out the extent to which financial inclusion on Insurance premium in Nigeria, 1981 to 2018. In view of this, it was concluded that broad money supply, saving statistics and economic growth positively and significantly impact on Insurance premium in Nigeria while credit to private sectors have negative and non significant impact on Insurance premium in Nigeria. Therefore a macroeconomic variable as contained in the financial inclusion called financial development has been seen to have a serious positive implication on insurance activities in Nigeria. If financial inclusion series are to be maintained, insurance premium will continue to grow.

**RECOMMENDATIONS:**

1. Credits to the Private Sector have negative and significant effect on Insurance premium in Nigeria. Insurance premium in Nigeria was affected by high interest on credits and reduction of real wages which were some of the causes responsible for recession in Nigeria. Efforts should be made by regulatory authorities to regulate the fluctuations of interest which

**APPENDIX 1**

INSP	CPS	M2	SAV
234.05	8.57	14.47	6.56
248.77	10.67	15.79	7.51
191.80	11.67	17.69	9.44
205.69	12.46	20.11	10.99
195.29	13.07	22.30	12.52
254.16	15.25	23.81	13.93
406.50	21.08	27.57	18.68
486.65	27.33	38.36	23.25
673.09	30.40	45.90	23.80
1,013.67	33.55	47.42	29.65
1,296.24	41.35	75.40	37.74
2,445.69	58.12	111.11	55.12
4,931.92	127.12	165.34	85.03
14,519.15	143.42	230.29	110.97
13,525.13	180.00	289.09	108.49
11,091.33	238.60	345.85	134.50
10,941.58	316.21	413.28	177.65



11,688.25	351.96	488.15	200.07
14,597.28	431.17	628.95	277.67
22,531.46	530.37	878.46	385.19
28,981.29	764.96	1,269.32	488.05
37,765.89	930.49	1,505.96	592.09
43,441.81	1,096.54	1,952.92	655.74
50,100.83	1,421.66	2,131.82	797.52
67,465.56	1,838.39	2,637.91	1,316.96
81,583.75	2,290.62	3,797.91	1,739.64
89,104.89	3,668.66	5,127.40	2,693.55
126,470.30	6,920.50	8,008.20	4,118.17
153,127.12	9,102.05	9,411.11	5,763.51
157,336.81	10,157.02	11,034.94	5,954.26
175,756.75	10,660.07	12,172.49	6,531.91
75,710.86	14,649.28	13,893.22	8,062.90
80,635.67	15,751.84	15,154.64	8,656.12
86,138.87	17,131.45	16,238.52	12,008.24
91,921.36	18,675.47	18,525.22	11,458.13
104,931.98	21,082.72	21,624.63	12,310.71
121,549.31	22,092.04	22,363.43	12,957.22
153,757.75	22,521.93	25,079.72	15,067.12

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