



Impact of macroeconomic variables on the growth of insurance companies in Nigeria

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General Note

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ABSTRACT

This study is an empirical analysis on the effect of macroeconomic variables on the growth of insurance companies quoted on Nigeria Stock Exchange from 1990-2019. Data for the study was obtained from the statistical review of Central Bank of Nigeria and the annual reports of the nine (9) insurance companies used for the research work. The variables used are gross domestic product (GDP), exchange rate, inflation rate interest rate and unemployment rate. Return on asset was used as the proxy for the independent variables. STATA 13 was used to analyze the data. The study discovers that among the five macroeconomic variables used for the study, only GDP, inflation rate and exchange rate significantly affect the growth of insurance companies in Nigeria for the period under consideration. The study recommends that Nigerian Government should make and implement policies that can boost the economy so that the profitability of insurance companies can be enhanced. Nigerian Government should introduce programs that will reduce the inflation rate and unemployment rate in Nigeria in order to encourage the growth of businesses like insurance firms. Insurance companies in Nigeria should watch out for macroeconomic variables that can threaten their growth.

Keywords: macroeconomic variables; Insurance companies; unemployment

1. BACKGROUND TO THE STUDY

Insurance companies play crucial roles in the growth and development of nations. They indemnify businesses and individuals who suffered different forms of losses thereby ensure the growth and development of nations via helping individuals and businesses to manage risks. Deyganto and Alemu (2019) opined that insurance is a form of risk management used to hedge against the risk of a contingent loss. It involves the transfer of the risk of potential loss from one entity to another, in exchange for a price known as premium (Ullah, Faisal, & Zuhra, 2016). Insurance companies operate in an environment; the environment can affect their growth positively or negatively. The environment is classified into micro-economic environment or macro-economic environment (Berhe, & Kaur, 2017).

Each of this environment has variables which could post risk that can threaten the existence and growth of the companies if measures are not taken to manage them. The micro-economic environment (also known as internal environment) comprises of the activities within the various insurance companies. These activities are within the control of the organizations. The macroeconomic environment (also known as external environment) is the environment outside the various companies in the industry. Unlike the micro environment, the variables in this environment are beyond the control of the companies. The companies can only make its plans or activities to meet up with the demand of the macro environment. The variables in this environment are the market, gross domestic product (GDP), interest rate, inflation, exchange rate, rate of unemployment among others.

The insurance business is generally classified into life insurance and Non-life insurance (Ufomadu, 2017; Osinuga 2016; Mishra & Mishra, 2008). Each of these classifications contributes a certain percentage to the economy growth of various nations. The contribution of the industry to economic growth varies from continent to continent and from one nation to another. For instance, looking at the 2019 Swiss Sigma report on the activities of insurance companies in Africa, you would notice that the Nigerian insurance industry is lagging behind other African countries in almost every aspect.

Consider the aspect of the contribution of insurance premium to the GDP of nations in Africa as an example, you will observe that the Nigerian insurance industry contribute the least (less than 1%) in comparison with other African countries like Egypt and Algeria (above 1%), Kenya and Zimbabwe (above 3%). Another example is insurance market penetration. A clear lag is also seen when the level of market penetration of Nigerian insurance sector is compared with what is obtainable in other African countries like Kenya and South Africa which boast of insurance penetrations of 2.9% and 14% respectively while that of Nigeria is below 1% (Nigeria Insurance Sector Review 2019; Nwafor, 2017).

Could this negative indices of the growth of Nigerian insurance industry be attributed to the effect of the weak variables in the macroeconomic environment like GDP, inflation rate, exchange rate, interest rate and rate of unemployment as suggested by Dewi, Tan Lian Soei and Surjoko (2019), Sambo (2016), Ademola and Badaru (2016), Nyandema and Lagat (2016), Kemuna (2015) and Kituku (2014)? This is the question that this research work would attempt to answer. The objective of the study is: To examine the effect of Gross Domestic Product (GDP) on the return on Asset (ROA) of the insurance companies in Nigeria. To determine the effect of inflation rate on the ROA of insurance companies in Nigeria. To assess the effect of exchange rate on the ROA of insurance companies in Nigeria. To ascertain the effect of interest rate on the ROA of insurance firms in Nigeria. Lastly, to determine the effect of rate of unemployment on the ROA of insurance firms in Nigeria. The research null hypothesis is stated below:

H₁: GDP does not affect the ROA of insurance companies in Nigeria.

H₂: Inflation rate does not affect the ROA of insurance companies in Nigeria.

H₃: Exchange rate does not affect the ROA of insurance companies in Nigeria.

H₄: Interest rate does not affect the ROA of insurance companies in Nigeria.

H₅: Rate of unemployment does not affect the ROA of insurance companies in Nigeria.

The independent variables of this study is the macroeconomic variables which comprises of Gross Domestic Product (GDP), inflation rate, exchange rate, interest rate and rate of unemployment while the dependent variable is the return on asset (ROA) of the insurance companies within the period of the study. The period of the study is from 1990-2019.

2. LITERATURE REVIEWS

2.1 Conceptual Framework

This study briefly reviewed various concepts on the effect of each of the independent variable on the dependent variable. The purpose of the reviewed is to look at the effort of previous researchers in this area and the various positions they took thereby enabling the researchers to take a stand base on it discovery. The review are as thus:

2.2. Gross Domestic Product (GDP) and the growth of firms: GDP is the total volume of goods and services produced in a country over a given period of time, the higher the goods and services produced in a country, the higher the GDP. High GDP means that there are jobs available for the citizens of a country (vice versa) and availability of jobs empower the citizens to purchase or pay for various insurance covers thereby increase the asset of the various insurance companies in Nigeria. Various studies conducted on the effect of GDP on the growth of firms portray conflicting result. For instance, Dewi, Tan Lian Soei and Surjoko (2019), Alomari and Azzam (2017), Berhe and Kaur (2017) and Sambo (2016), discovered a direct relationship between GDP and the growth while few scholars like Illoabuchi (2019) discovered an insignificant relationship between GDP and the growth of firms.

2.3. Inflation rate and the growth of firms

Inflation is the persistent increase in the prices of goods and services in a country. The higher the inflation rate, the lower the purchasing power of the citizens of that country and hence, the lower the payment of insurance covers or the lower the ability of the people in the country to purchase insurance cover. Scholars who research on the growth or profitability of firms using inflation as a variable came up with different result. For example, the following researchers discovered that inflation affect the growth of firms; Deyganto, and Alemu, (2019), Alomari and Azzam (2017) and Ademola and Badaru (2016) while scholars like Kemuna (2015) has contrary opinion.

2.4. Exchange rate and the growth of firms:- Exchange rate is the value of naira to foreign currency (mostly dollar). The higher the exchange rate, the higher the cost of goods and services. In Nigeria, most of the goods, machine and experts we use are imported. The higher the exchange rate, the lower the purchasing power of Nigerians and also the lower the willingness to buy insurance cover or pay for the existing insurance cover. This is because high exchange rate reduce the purchasing power of individuals. Nyandema and Lagat (2016), Helhel (2015), Kituku (2014) in their various studies on the effect of exchange rate on the growth of firms discovered that exchange rate positively affect the growth of firms in a significant way while Kemuna (2015) and Mwanza (2014) are of the opinion that exchange rate does not have a significant effect on the growth of firms.

2.5. Interest rate and the growth of firms: This is the amount charge on the loans collected from financial institutions especially banks. The interest charge on insurance firms by banks in terms of loan and other services affect their profitability, it makes them to use a good percentage of their profit to pay the loan they borrowed. It also scared insurance firms from collecting loans to boost their services as well as enlarge their scope. Nyandema and Lagat (2016), Kemuna (2015) opined that interest significantly affect the profitability of firms while studies of scholars like Deyganto and Alemu (2019) discovered that interest rate does not affect the profitability of firms.

2.6. Unemployment rate and the growth of firms: Unemployment is the total number of people who have the ability and requirement to work but there is no work for them to do hence, they are idle. High rate of unemployment may affect the profit of insurance firms negatively because it may reduce the purchase of insurance covers. High unemployment may also increase the payment of claim to the insured that lost their jobs thereby reduce the fortune of insurance companies. Studies of Dewi, Tan Lian Soei, and Surjoko (2019) and Illoabuchi (2019) showed that unemployment does not affect economic growth while the study of Ademola and Badaru (2016) revealed that unemployment affect the economy.

2.7 Theoretical Framework: Balance theory

The underpinning theory for this research work is the balanced theory. This is because balance theory talks about the sensitivity of organizations to their environment as well as the sentiment attached to it (Miles, 2012; Heider, 1958). The theory states that organizations are aware of their surroundings as well as the events that take place in their environment through a process of perception. The theory asserts that environment affect organizations and the organizations also cause changes in the environment. The environment is divided into two; macroeconomic environment and microeconomic environment. The variables in either of the environment can determine the success or failure of the organization(s).

2.8 Empirical review

Various literatures were reviewed for the purpose of this study. Among these literatures are: Deyganto, and Alemu, (2019), they examined factors affecting financial performance of insurance companies operating in Hawassa city administration, Ethiopia. The target population of the study was 17 General insurance companies operating in Ethiopia. Ordinary least square model was employed by the researchers to analysis the data through SPSS version 20. The result of the study showed that out of eight (8)

explanatory variables incorporated in the model, five (5) variables such as underwriting, premium growth, solvency ratio, growth rate of GDP, and inflation rate have significant effect on financial performance of the insurance companies operating in Hawassa city Administration. Whereas, there insurance, company size and interest rate have no significant effect on financial performance of the insurance companies of Hawassa city Administration.

Dewi, Tan Lian Soei, and Surjoko (2019) examined the impact of macroeconomic factors on firms' profitability: Evidence from fast, moving consumer good firms listed on Indonesian Stock Exchange from 1998-2016. The variables used for the study are unemployment level, inflation rate, GDP, exchange rate and ROA. Using multiple regression, the study revealed that only GDP has significant influence on firms' profitability. It therefore means that unemployment, inflation and exchange rate does not have influence firms profitability significantly.

Iloabuchi (2019) analyzed the effect of unemployment on the economic growth of Nigeria from 1999-2017. Using OLS and pair-wise granger causality to analyze the data obtained from Central Bank of Nigeria (CBN), the study revealed that there is a negative and insignificant relationship between unemployment and GDP (growth rate) in Nigeria whereas population growth affects the GDP in Nigeria in a positive and significant way.

Alomari and Azzam (2017) examined the effect of firm's micro and macroeconomic factors on performance of Jordanian insurance companies from 2008-2014. Using return on assets (ROA) as the dependent variable, the study revealed that liquidity, leverage and under writing risks have negative and significant effect on the performance of Jordanian insurance companies. It also discovered that size of the company, market share, inflation and GDP have positive and significant effect on the profitability of the Jordanian insurance industry.

Berhe and Kaur (2017) studied the key factors that affect the profitability of insurance companies in Ethiopia. The researchers used internal and external variables to study the profitability of insurance companies in Ethiopia. The internal variables used are; company size, capital adequacy, leverage ratio, liquidity ratio, and loss ratio while the external variables are; market share, growth rate of GDP and inflation rate from 2005-2015. Seventeen (17) insurance companies were used for the study. The regression result revealed that company size, capital adequacy, liquidity ratio and growth rate of GDP were the major factors that significantly affect the profitability of insurance companies in Ethiopia. It also revealed that leverage ratio, loss ratio, market share and inflation rate have insignificant effect on insurance companies profitability in Ethiopia.

Ademola and Badaru (2016) studied the impact of unemployment and inflation on economic growth in Nigeria from 1981 – 2014. Using ordinary least square (OLS), the study revealed that unemployment and inflation affect economic growth in Nigeria within the period of the study.

Nyandema and Lagat (2016) examined the influence of foreign exchange rate fluctuations on the financial performance of commercial banks listed at the Nairobi Securities Exchange from 2006-2013. The variables used are exchange rate fluctuations, inflation rates, interest rate and performance indicators (return on equity and return on investment). Using multivariate linear regressions, the discovered that there is a strong and positive relationship between foreign exchange and the financial performance of commercial banks in Kenya.

Kemuna (2015) examined the effect of foreign exchange rate on volatility on profitability of insurance firms in Kenya. The independent variables used for the study are foreign exchange rate, interest rate, annual growth rate of productive workforce(ages 15-64), and inflation rate while return on asset (ROA) is the dependent variable. Using regression model SPSS to analyzed the data obtained from 49 insurance firms in Kenya, the study revealed that foreign exchange rate volatility, GDP growth rate and inflation negatively affect the ROA of insurance industry in Kenya while interest rate positively affect the ROA of insurance industry in Kenya.

Helhel (2015) investigated the foreign exchange rate exposure and its determinants on performance of manufacturing firms in Turkey from 2005-2014. The independent variable is foreign exchange while return on capital equity (ROCE) is the dependent variable. Using Jorion (1990) regression model, the study reveal that foreign exchange fluctuations determined the performance of manufacturing firms in Turkey.

2.9. Gap in the literature

A close look at the above studies will revealed that most of the studies on insurance industry were not carried out in Nigeria and they were not purely on macroeconomic variables (Deyganto and Alemu 2019; Alomari & Azzam 2017; Berhe & Kaur 2017; Kemuna 2015). The studies conducted on macroeconomic variables in Nigeria were not carried out on insurance industry (Iloabuchi 2019; Ademola & Badaru 2016). The studies conducted on macroeconomic variables in Nigeria did not use variables like exchange rate, GDP and interest rate despite their relevance in determining the profitability of insurance firms. This study therefore, used macroeconomic variables (GDP, inflation rate, exchange rate, interest rate and rate of unemployment) to measure the growth of insurance companies in Nigeria for a period of twenty nine (29) years.

3. METHODOLOGY

This study used correlation research design. Correlation research design is appropriate because it assists in understanding the influence of macroeconomic variables like GDP, inflation rate, exchange rate, interest rate and rate of unemployment on the growth of listed insurance firms in Nigeria. The population of the study is the nine (9) insurance firms that are listed on Nigeria Stock Exchange as at October 2019 and have been operating either in 1990, 1991, 1992 or 1993 to 2019. The selection of nine (9) insurance firms is due to the fact that most of the insurance firms listed on Nigeria stock exchange (as at 2019) came into existence one or two decades ago (See the names of the insurance firms on the appendix below). It is a time series study.

The study used secondary data extracted from the annual reports of listed insurance firms in the Nigerian Stock Exchange as well as the fact books of Central Bank of Nigeria (CBN). STATA version 13 was used for data analysis. The statistical package was used for descriptive and inferential statistics. Descriptive statistics was used to determine the effect of macroeconomic variables on the ROA of insurance firms in Nigeria.

Model Specification

The model adopted for this study is that of Olalekan (2018). The model was adopted because of its ability to describe a given system and the strategy used to approach a problem in the Nigeria business environment. Little modification was made to the model. The modification is in the variables used for the study. The researcher used *liquidity risk, claim loss ratio and premium growth as the independent variables while this study used GDP, inflation rate, exchange rate, interest rate and rate of unemployment as the independent variables*. The model is stated as follows:

$$ROA_{it} = \beta_0it + \beta_1GDP_{it} + \beta_2INFLARATE_{it} + \beta_3EXCHRATE_{it} + \beta_4INTRATE_{it} + \beta_5UNEMPLRATE_{it} + \epsilon_{it}$$

Where, Return on Asset (ROA) is proxy for firm growth, β_0 = constant, β_1 ... β_5 = the slope which represents the degree in which growth changes as the independent variable change by one unit variable. GDP = Gross Domestic Product, INFLARATE = Inflation rate, EXCHRATE = Exchange rate, INTRATE = interest rate, UNEMPLRATE = unemployment rate, ϵ = error term, t = measure of time, i = number of insurance firm observation. Where:

$ROA = Profit\ before\ tax / Total\ Asset$

$GDP = Gross\ Domestic\ product$

$INFLARATE = Inflation\ rate$

$EXCHRATE = Exchange\ rate$

$INTRATE = Interest\ rate$

$UNEMPLRATE = Unemployment\ rate$

Descriptive Statistics

This section provides the descriptive statistics of all the variables used in the study. The table below shows the descriptive statistics of the dependent and independent variables with minimum, maximum, mean, standard deviation and observation.

4. RESULTS & DISCUSSION

Table 4.1

Descriptive Statistics

	Mean	Std. D	Min	Max	Skewness	Kurtosis
ROA	3.4536	6.4199	-19.79	13.27	-1.4221	6.8947
INFR	18.260	16.893	5.39	72.84	2.0763	6.1583
INTR	19.306	3.7047	13.5	31.65	1.4209	5.3953
EXCR	123.62	93.557	8.04	365.5	0.7879	3.2875
UNER	4.3327	1.4683	3.5	8.389	2.1525	5.8636
GDP	4.559	3.9803	-2.04	15.33	0.4258	3.3283

Source: Researchers Computation, 2020

Table 4.1 presents the summary of the descriptive statistics for the parameters used specifically Returns on Asset (dependent variable), inflation rate, interest rate, exchange rate, unemployment rate and GDP (independent variable). As can be inferred from

the outcome of the result, ROA had an average of 3.4536 ranging between minimum of -19.79 to a maximum of 13.27 with associated dispersion value of 6.4199 which implies that ROA across the industry is significantly dispersed. The skewness and kurtosis value of -1.4221 and 6.8947 also shows that the data is normally distribution.

On the other hand, the result shows that the inflation rate of the listed insurance companies has a minimum of 5.39 and maximum of 72.84 of inflation. The average stood at 18.260. The level of dispersion to both sides stood at 16.893 while the skewness and kurtosis of 2.0763 and 6.1583 respectively shows that the data is normally distributed. The interest rate average of 19.306 ranging between minimum of 13.5 to a maximum of 31.65 with associated dispersion value of 3.7047 which implies that interest rate across the industry is significantly dispersed. The skewness and kurtosis value of 1.4209 and 5.39953 also shows that the data is normally distributed.

Exchange rate has an average of 123.62 ranging between minimum of 8.04 to a maximum of 365.5 with associated dispersion value of 93.557 which implies that exchange rate across the industry is significantly dispersed. The skewness and kurtosis value of 0.7879 and 3.2875 also shows that the data is normally distributed. On the other hand, unemployment rate of the listed insurance companies has a minimum of 3.5 and maximum of 8.389 of unemployment. The average stood at 4.3327. The level of dispersion to both sides stood at 1.4683 while the skewness and kurtosis of 2.1525 and 5.8636 respectively shows that the data is normally distributed.

Lastly GDP of the listed insurance companies has a minimum of -2.04 and maximum of 15.33 of GDP. The average stood at 4.559. The level of dispersion to both sides stood at 3.9803 while the skewness and kurtosis of 0.4258 and 3.3283 respectively shows that the data is normally distributed.

Correlation Analysis

Correlation analysis was used to test for multi-collinearity among the independent variables as well as the strength of the relationship between dependent and independent variables. The correlation matrix was presented in table 4.2.

Table 4.2: Correlation Test

	ROA	INFR	INTR	EXCR	UNER	GDP
ROA	1.0000					
INFR	-0.5404 0.0020	1.0000				
INTR	-0.3178 0.0870	0.4885 0.0062	1.0000			
EXCR	0.3951 0.0307	-0.4059 0.0260	-0.5792 0.0008	1.0000		
UNER	0.2294 0.2228	-0.1141 0.5482	-0.3526 0.0560	0.8169 0.0000	1.0000	
GDP	0.0161 0.9326	-0.4566 0.0112	0.0511 0.7887	-0.0270 0.8874	-0.3515 0.0568	1.0000

Source: Researcher Computation, 2020.

The table 4 show the correlation that exist between variables used in the study e.g. returns on asset, inflation rate, interest rate, exchange rate, unemployment rate and GDP.

The correlation between ROA, inflation rate, interest rate and exchange rate were significant while the correlation between ROA, unemployment rate and GDP were insignificant. Also, the correlation between inflation rate, interest rate, exchange rate and GDP were significant while the relationship between inflation rate and unemployment rate was insignificant.

The correlation between interest rate, exchange rate and unemployment rate were significant while the relationship between interest rate and GDP was insignificant. Exchange rate and unemployment rate have a significant relationship while the relationship between unemployment rate and GDP is insignificant. Lastly, unemployment rate has a significant relationship with GDP.

Table 4.3: Multi-collinearity Test

Variable	VIF	1/VIF
EXCR	5.92	0.169054
UNER	5.06	0.197646

INTR	2.02	0.494981
GDP	2.00	0.498762
INFR	1.98	0.506088

Source: Researcher Computation, 2020.

Also, the study tested for multi-collinearity using Variance Inflation Factor (VIF), the result shows absence of multi-collinearity among the study independent variables given the value of VIF for inflation rate, interest rate, exchange rate, unemployment rate and GDP to be 1.98, 2.02, 5.92, 5.06 and 2.0 respectively, which is less than 9.6 as suggested by Gujarati (2004). So, absence of multi-collinearity in the study model implies that the coefficient of independent variables can be rely on to predict the degree of influence on dependent variable.

Regression Analysis

Table 4.4

Test of Hypotheses

Variables	Coef.	Std. Err.	t	P> t
INFR -> ROA	.1043946	.0461158	2.26	0.033
INTR -> ROA	.0878288	.1042329	0.84	0.408
EXCR -> ROA	-.0337885	.0122645	-2.75	0.011
UNER -> ROA	1.293036	.7716638	1.68	0.101
GDP -> ROA	.3937721	.180596	2.18	0.039
R square	0.5192			
Prob > F	0.0023			

Source: Researcher computation, 2019.

The regression result is presented in table 4.4 above. The result shows R^2 of 0.5192 or 52%. This implies that the study independent variables (inflation rate, interest rate, exchange rate, unemployment rate and GDP) accounted for 52% variation on the dependent variable (Return on Asset), while the remaining 48% can be explained by other variables that are not included in the model. The result of F-statistics (p-value 0.00), is significant at 5% level. This implies that the study model is fit.

The coefficient of inflation rate was also discovered to have a positive and significant effect on profitability of listed insurance companies in Nigeria with coefficient value of .1043946 and p value of 0.003 statistically significant at less than 5%, therefore the null hypothesis which says inflation rate does not affect the profitability of insurance firms is hereby rejected. The findings reveal that a unit percent rise in the level of inflation rate will bring about .1043946 decrease in return on assets of insurance companies in Nigeria. The finding of this study is consistent with the findings of Deyganto and Alemu (2017), Berhe and Kaur (2019) but negate the findings of Iloabuchi (2019).

The coefficient of interest rate has a positive and insignificant effect on profitability of listed insurance companies in Nigeria with coefficient value of .0878288 and p value of 0.408 statistically higher than 5%, therefore the null hypothesis which state that 'interest rate does not affect the profitability' of insurance firms is hereby accepted. The findings reveal that a unit percent rise in the level of interest rate will bring about .3271559 increase in return on assets of insurance companies in Nigeria. The finding of this study is consistent with the findings of Deyganto and Alemu (2017) but contradict the finding of Nyandema and Lagat (2016) and Kemuna (2015).

Exchange rate has a significant effect on the profitability of insurance companies in Nigeria. The coefficient stood at -.0337885 and p value of 0.01 which is less than 5%, therefore the null hypothesis is hereby rejected. A unit percent increase as indicated in the result will lead to -.0337885 decrease in profitability of insurance firms in Nigeria. The result of the study is in support with the studies of Nyandema and Lagat (2016), Helhel (2015) but negate the findings of Kemuna (2015) and Mwanza (2014).

The coefficient of unemployment rate was also discovered to have a positive and insignificant effect on the profitability of listed insurance companies in Nigeria with coefficient value of 1.293036 and p value of 0.10 which is above the accepted 5%, therefore the null hypothesis which says that 'unemployment rate does not affect the profitability of insurance firms' is hereby accepted. The findings reveal that a unit percent rise in the level of unemployment will bring about 1.293036 increase in return on assets of insurance companies in Nigeria. The finding of this study is consistent with the findings Dewi, Tan Lian Soei and Surjoko (2019) and Iloabuchi (2016) but negate the findings of Ademola and Badaru (2016).

Lastly, GDP has a positive and significant effect on profitability of insurance companies in Nigeria. The coefficient of GDP stood at .3937721 with p value of 0.03 statistically significant at less than 5%, therefore the null hypothesis is hereby rejected. The findings reveal that a unit percent rise in the level of GDP will bring about .3937721 increase in return on assets of insurance companies in Nigeria. The finding of this study is consistent with the findings of Dewi, Tan Lian Soei and Surjoko (2019), Alomari and Azzam (2017), Berhe and Kaur (2017) but contrary to the study of Iloabuchi (2016).

5. CONCLUSION

This study empirically examined the effect of macroeconomic variables on the growth of twenty nine (9) insurance companies listed on Nigeria stock Exchange. STATA 13 was used to examine the effect of GDP, inflation rate, exchange rate, interest rate and unemployment rate on the profitability of insurance companies from 1990-2019. The regression result discovered that among the external environment variables (GDP, exchange rate, inflation rate, interest rate and unemployment rate) used for the study, only inflation rate, inflation rate and GDP affect the profitability of insurance firms in Nigeria (within the period of the study). This study concludes that macroeconomic variables therefore affect the growth of insurance firms in Nigeria.

Recommendations

Based on the findings of the study and the conclusions, the following recommendations were made:

- Nigerian Government should make and implement policies that can boost the economy so that the profitability of insurance companies can be enhanced.
- Nigerian Government should introduce programs that will reduce the inflation rate and unemployment rate in Nigeria in order to encourage the growth of businesses like insurance firms.
- Insurance companies in Nigeria should watch out for macroeconomic variables that can threaten their growth.

Suggestion for further study

This study only used five (5) macroeconomic variables to examine the growth of insurance companies in Nigeria. Future researchers can use other macroeconomic variables like market share, external debt ratio to measure the growth of insurance firms in Nigeria.

APPENDIX

S/N	NAME OF INSURANCE FIRM	YEAR OF OPERATION
1	AllCO Insurance	1990
2	Guinea Insurance	1990
3	Law Union and Rock Insurance	1990
4	NEM Insurance	1990
5	Prestige Assurance	1990
6	Royal Exchange Insurance	1990
7	WAPIC Insurance	1990
8	Lasasco Assurance	1991
9	Niger Insurance	1993

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Conflict of Interest:

The authors declare that there are no conflicts of interests.

Peer-review:

External peer-review was done through double-blind method.

Data and materials availability:

All data associated with this study are present in the paper.

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