EFFECT OF INSURANCE SECTOR CLAIMS SETTLEMENT CAPACITY ON INSURANCE DEMAND IN NIGERIA, 2007-2022

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Keywords:	Abstract:
Claims settlement, gross premium, life insurance claims, non-life insurance claims	*This study investigated the effect of insurance sector claims settlement capacity on insurance demand in Nigeria using annualized time series data from 2007 to 2022. The specific objectives of the study were: to determine the effect of life insurance claims settled on the gross premium income of Nigeria's insurance industry; to find out the effect of non-life insurance claims settled on the gross premium income of Nigeria's insurance industry; and to ascertain the effect of total claims settled on gross premium income of Nigeria insurance industry. Expected Utility Theory propounded by Daniel Bernoulli in 1738 was adopted as the theoretical framework. While ex-post facto research design was used for the study. The stationarity test was carried out using the Augmented Dickey-Fuller unit root test. Three hypotheses were tested in line with the objectives of the study at a 5% level of significance utilizing the Error Correction Mechanism (ECM) Test. It was discovered that: life insurance claims settled had a significant negative influence on the gross premium income of Nigeria's insurance industry with a probability value (0.0329) and coefficient of (-0.118607); non-life insurance claims settled had a positive but non-significant influence on gross premium income of Nigeria insurance industry with the probability value (0.2406) and coefficient of (0.020914); total insurance claims settled had significant positive influence on gross premium income of Nigeria insurance industry with the probability value (0.0063) and the coefficient of (0.050550). It was therefore concluded that the Nigerian insurance sector claims settlement capacity had a significant influence on the gross premium income of the Nigerian insurance sector. This implies that Nigerian insurance sector claims settlement capacity had significant influence on the demand for insurance in Nigeria between 2007 to 2022 because the probability value of the f-statistics (0.003005) was below 0.05 level of significance. It was therefore recommended that more effort should be directed towards prompt settlement of genuine life insurance claims so as to improve awareness and demand for Insurance in Nigeria. Effort should be made by insurance companies to improve non-life insurance claims settlement to benefit*

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from its positive effect on insurance demand in Nigeria. Nigerian Insurance Industry regulators should enhance their supervisory frameworks to ensure that genuine claims of both life and general insurance business are settled promptly.

1.1 Introduction

Claims settlement is an important aspect of the insurance business in that poor claim settlement records of an insurance company may spell doom for such a company, while a good reputation for good claim settlement on the other hand may mean prosperity concerning the acquisition of more business. In other words, the claim settlement decision of an insurance company can make or mar its fortunes (Agu, 1999). Oshinloye (2009) asserts that the Nigerian Insurance industry will experience growth and development as long as they are prepared and ready to settle all genuine claims on time. Augustine and Bamidele (2013) state that the image problem suffered till today by insurance companies in Nigeria is mainly because of what is seen as the insurance companies' posture of "smile to collect premium and frown to pay claim. The insuring publics do not even trust the insurers because they believe that they would always look for a way out at time of payment even when the claims are genuine.

Insurance companies sell protection to their customers who pay premiums, and hold investments to cover future claims (Stroud, 2016). Thus, prudent claims administration strategy promotes customer satisfaction and loyalty as it helps to develop a perception of membership or belonging within a particular group of customers, thereby providing the company with opportunities to retain existing customers while attracting new ones. In other words, claims settlement is the activity of insurance companies that truly portrays what they are there for [Braers, 2004 & Onosede, 2013]. Chiejina (2017) states that insurers take in premiums based on anticipated loss costs, keeping a small portion to cover operating expenses, and investing the rest until needed to pay claims or to hold aside to cover extraordinary losses. To operate profitably, insurers must earn more from premiums, which are invested across a range of asset classes, than they pay out in claims.

Many studies affirmed that prompt claims settlement contributed to organization performance, while some disagreed with the assertion that claims payment contribute to the insurance companies' performance. For instance, Butler and Francis (2010) discovered that prompt claims settlements has positive and significant relationship with insurance performance in terms of customer satisfaction and loyalty. Albert cited in Pandey (2007) notes that one of the reasons for low penetration of insurance business in the country is due to insurers' delay in settling claims. Insurance

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business is based on trust, but is fraught with fraud as perpetrated by the various actors in this sector in Nigeria. Daniel (2013) also discovers that failure to settle claims and delay claims settlement are the causes of insurance failure in Nigeria.

Hewitt (2006) also found that prompt claims settlement by insurance companies influence customer loyalty in advance countries. However, findings of Bates and Atkins (2007) and Ndubuishi (2008) conflicted with previous studies. They discovered that claims payment could be very costly as claims constitute the largest cost of an insurer and this has contributed to poor performance of insurance companies. This study therefore is set out to investigate whether claims settlement had influenced insurance demand in Nigeria between the periods 2007 to 2022.

1.2 Statement of the Problem

Claim settlement is the defining moment in the relationship between insurance companies and their customer as it creates the chance to show that the money spent paying premiums was worth the expense. In the same vein, claim provides an insurer the opportunity to make a favorable impression on the policyholder. The reputation of any insurance company depends to a large extent on the sort of claims service provided by that insurance company to its policyholders. Therefore, effective claims management and prompt settlement of valid claims is an important function of insurance companies.

Nigeria insurance company's attitude to claims settlement has in the past provoked a lot of public criticism and even attracted the attention of governments (Harry, 2012). Worthy of note though, is the tremendous improvement in claims settlement in the Nigerian insurance industry because of increased regulation and supervision of the industry over the last decade. Insurance claims reported during the fourth quarter of 2022 stood at N318.2 billion representing a thirty-one (31.2%) percent Quarter on Quarter growth. In a similar pattern, the net claims paid were reported at N244.3 billion, growing at about eighteen percent (17.9%) during the same period. The Non-Life business pulled about 50.8 per cent representing N164billion while on the Life business, a total of N159.3 billion was reported as claims, indicating a proportion of 49.2 percent of all registered claims during the period. The data reveals an impressive development with regards to claims settlement in Nigeria (NAICOM Annual Report, 2022).

On the other hand, NAICOM Annual Report, 2022) indicted that the gross premium income generated as at the fourth quarter of 2022 stood at N726.2billion, representing a growth proportion of about thirty-Six per cent (36.3%), quarter on quarter and indeed, about eighteen per cent (17.8%) year on year. Similarly, in 2021 Nigeria insurance sector recorded a substantial

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growth at the rate of 23 percent to close at N631billion in gross premium income, obviously at a sharp progression compared to the 1.3 per cent growth recorded in the prior period of the COVID-19 ridden economy. The Non-life sector accounted for 57.9 per cent, growing by three points more in proportional relevance while the life Insurance business contributed 42.1 per cent of the gross premium income generated. What could be the reason for this positive stride in the gross premium income generated by the Nigerian insurance sector? Could it be because of the improvement in claims settlement recorded over the years? Existing empirical literature show that there is no consensus as to whether claims settlement affect demand of insurance. Nwite *et al.* (2020) found that total insurance claims had positive but none significantly impact on insurance penetration and density (insurance demand) in Nigerian. Other studies found a positive and significant effect, impact or relationship between claims settlement and insurance business (Ofori-Attah, 2012; Unachukwu *et al.*, 2015; Caren & Mwangi, 2017; Ntwali *et al.,* 2020). While on the other hand, the study of Ugwuanyi *et al.* (2021) found that claims settlement negatively affected insurance companies earned premium. It is against this backdrop that this study therefore, aims to shed light on the effect of insurance sector claims settlement capacity on insurance demand in Nigeria using time series data from 2007 to 2022.

1.3 Objectives of the Study
The broad objective of the study was to determine the effect of insurance sector claims settlement capacity on insurance demand in Nigeria. While the specific objectives of the study include, to:

➢ Access the effect of life insurance claims settled on gross premium income of Nigerian insurance industry;

➢ Examine the effect of non life insurance claims settled on gross premium income of Nigerian insurance industry; and

➢ Ascertain the effect of total claims settled on gross premium income of Nigerian insurance industry.

1.3 Research Hypotheses
Hypotheses of the study were stated in null forms.

H$_{O1}$: Life insurance claims settled had no positive and significant effect on gross premium income of Nigerian insurance industry.

H$_{O2}$: Non life insurance claims settled had no positive and significant effect on gross premium income of Nigerian insurance industry.

H$_{O3}$: Total insurance claims settled had no positive and significant effect on gross premium income of Nigerian insurance industry.

1.5 Significance of the study
Insurance Industry Regulators: They will understand the influence of insurance sector claims settlement capacity on insurance demand in Nigeria. This will enable NAICOM and other market regulators of the industry to make

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informed adjustment in their regulatory and supervisory frameworks aimed at further enhancing the demand for insurance products in the Nigeria insurance sector.

Insurance Companies: They will understand the effect of insurance sector claims settlement capacity on insurance demand in Nigeria.

Scholars: The outcome of this study will be a vital source of literature to future researchers in respect of impact of insurance sector claims settlement capacity on insurance demand in Nigeria.

1.6 Scope of the Study

The study exclusively determined the influence of insurance sector claims settlement capacity on insurance demand in Nigeria using time series data from 2007 to 2022. The base year of 2007 was chosen given that it was the deadline given for the implementation of 2005 recapitalization. The variables used in the study were: life insurance claims, non-life insurance claims and total insurance claims as the independent variables. While gross premium income was used as dependent variable for the study.

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Claims Settlement

An insurance claim is a notification to an insurance company requesting payment of an amount due under the terms of the policy. Yadav (2014) state that insurance claims is a right of the insured under a contract of insurance. The insurer promises to save the insured or nominees/assignees of the insured on the happening event or risk insured. Irukwu (1989) defines an insurance claim as an insurance extract in which the insurer undertakes to indemnify the insured against a loss, which may or may not arise at a future date or to pay a certain amount of money in the happening of a certain event.

Life Insurance Claims

Life insurance claims represent the proportion of claims (benefits) paid by the life insurance companies to their policyholders at the time of death or maturity of the policy (Irukwu, 1989).

Non-Life Insurance Claims

Non-life insurance claims represent the proportion of claims paid by non-life insurance companies to their policyholders at the time of loss (Irukwu, 1989).

Total Insurance Claims

Total insurance claims represent all the claims paid by both life and non-life insurance companies to their policyholders at the time of loss or maturity of the policy by stipulated terms (Nwite *et al.,* 2020)

2.1.2 Gross Premium Income

Gross premium income includes premium from new insurance agreements, from renewed insurance agreements, changes of existing agreements and received reinsurance premium (Bokšová, 2010). Gross premium income is the total direct and assumed premium written by an insurer before deductions for reinsurance and ceding commissions. This includes additional

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and/or return premiums. Written does not imply collected but is the gross policy premium to be collected as of the issue date of the policy, regardless of the payment plan. In relation to a Contract of Insurance, the amount of premium payable by the insured in respect of that contract, excluding any excise taxes levied on premiums and receivable by the Insurer but without any deduction for commissions or other acquisition expenses (Dubai Financial Services Authority, 2004).

2.2 Theoretical Framework
Expected Utility Theory

This paper adopted Expected Utility Theory as the theoretical framework for the study. The theory was propounded by Daniel Bernoulli in (1738) as a tool to solve the St. Petersburg Paradox. The theory is used to estimates the likely utility of an action – when there is uncertainty about the outcome. It suggests the rational choice is to choose an action with the highest expected utility. Expected utility theory is used as a tool for analysing situations where individuals must make a decision without knowing which outcomes may result from that decision, i.e., decision making under uncertainty. These individuals will choose the action that will result in the highest expected utility, which is the sum of the products of probability and utility over all the possible outcomes.

The decision made will also depend on the person's risk aversion and utility over other agents. This theory notes that the utility of money is not necessarily the same as the total value of money. This explains why people may take out insurance policies to cover themselves for the variety of risks. The expected value from paying for insurance would be to lose out monetarily. But, the possibility of large-scale losses could lead to a serious decline in utility because of diminishing marginal utility of wealth. The choice of this theory was based on its usefulness in evaluating situations without immediate payback, such as decisions to buy insurance. When one weighs the expected utility to be gained from making payments in form of insurance premium to insurance company for a guaranteed income or compensation at the happening of an insured contingency and the expected utility of retaining the premium amount and spending it on other opportunities and products, insurance seems like a better option.

2.3   Empirical review

Viswanadham (2005) studied claims settlement operations of Life Insurance Companies in India with the objectives of evaluating performance in terms of both maturity and death claims before and after IRDA period. Claim settlement processing time expressed in speed ratios and adjudicatory measures of the corporation to redress the grievances of policyholders in settlement of claims. The study concluded that corporation should provide efficient service with courtesy in the matters of claim settlements. A

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satisfied customer will be a brand ambassador for the insurance company; claim settlement should be given more importance.

Ofori-Attah (2012) studied the effects of slow claims settlement on the sales and marketing of insurance products; a case study of enterprise insurance co. Ltd Takoradi branch Ghana. The research utilized qualitative research method and Computer software was used to further process the data. The result established that prompt and satisfactory claims payment had positive effects on the sales and marketing of insurance products.

Kalani el al. (2013) examined claim settlement ratio of LIC with other insurance companies in India. Study observed that there are cases of frauds in claim settlement that may happened but if the policyholder uses proper precautions he will prevent himself from fraud. LIC of India provides better corporate services for settling the customers claim. D-mat may improve transparency and efficiency of the claim settlement. Authors studied comparison of claim settlement ratio of LIC with other life insurance industry and survey of policyholders and opinions regarding claim settlement.

Yusuf and Dansu (2014) examined the relationship between claims cost and profitability in the Non – life sector of the Nigerian insurance industry. Data were generated from the financial statements of ten (10) insurance companies covering a period of ten years (2002 – 2011). Data were analyzed using descriptive statistics, coefficient of determination (R2), ANOVA (F), standard error test, test of correlation (T), multiple linear regression and ordinary least square Regression techniques. The results revealed that PBT (profitability) correlates directly with Net Claims and Expense Ratio but correlates inversely with LR (Loss Ratio).

Unachukwu *et al.* (2015) investigated the effect of claims settlement on the performance of Nigerian insurance companies with special reference to the selected insurance companies in Ilorin metropolis. Linear regression analysis was employed to analyze data collected with aid of Statistical Package for Social Science (SPSS). The result confirmed that prompt claims settlements has positive significant effect on customer satisfaction and loyalty respectively.

Caren and Mwangi (2017) investigated the effect of underwriting and claims management practices on the performance of general insurance firms in East Africa from 2010 to2014. The findings show that there was a significant positive relationship between underwriting and claims management practices and non-financial performance, but the relationship with financial performance was insignificant.

Torbira (2018) investigated the impact of insurance risk management through the window of claims payment on the growth in output level of GDP in Nigeria. Claims payment – economic growth model was patterned after multivariate regression, causality and dynamic model of

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linear formation. The result revealed that, in the long run, insurance claims paid on fire, accident, motor vehicle, employers' liability and marine policies significantly impact of the output level of GDP in Nigeria.

Afolabi (2018) studied the Effect of Claims Payments on Profitability in The Nigerian Insurance Industry for the period's 2011 to 2016 using descriptive statistics and the multiple regression techniques. The result reveals that ROA (profitability) has an indirect relationship with LR (loss ratio) and NC (net claims), but a direct relationship with ER (expense ratio). It further reveals that net claims have a significantly positive impact on loss ratio.

Ntwali *et al.* (2020) assessed the effects of claims management on financial performance of insurance companies. The study used descriptive approaches to collect quantitative and qualitative data using questionnaire and interview guide. The study established that there is a positive correlation between claims planning, claims control and claims management on ROE.

Nwite *et al.* (2020) studied the impact of claims settlement on the development of Nigerian insurance industry**.** Using Ordinary Least Squares (OLS) regression technique, they found that: total insurance claims had positive but none significantly impact on Insurance penetration and insurance density in Nigerian.

Ugwuanyi *et al.* (2021) evaluated the performance of motor insurance companies in Nigeria. Panel data obtained for their study comprised operational data on premium earned and direct claims settled by insurance companies Nigeria over a period of six (6) years. They found that direct claims settlement negatively affected insurance companies' earned premium.

2.3.1 Gap in empirical Review

Based on the empirical review carried out the gap that necessitated this study include:

1. To the best of my knowledge and evident from empirical review, no previous study was carried out in relation to life insurance claims and demand for insurance. Moreover, the two previous studies on life insurance claims: Kalani *et al.* (2013) Viswanadham (2005) which were on life insurance were not carried out in Nigeria.

2. In terms of Non life insurance claims and total insurance claims, existing empirical literature show that there is no consensus as to whether claims settlement affect demand of insurance. Nwite *et al.* (2020) found that total insurance claims had positive but none significantly impact on Insurance penetration and density (insurance demand) in Nigerian. Other studies found a positive and significant effect, impact and relationship between claims settlement and insurance business (Ofori-Attah, 2012; Unachukwu *et al.*, 2015; Caren & Mwangi, 2017; Ntwali *et al.,* 2020). While on the other hand, the study of Ugwuanyi *et al.* (2021) found that claims settlement negatively affected insurance companies earned premium. Hence, the need to embark on this study.

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3.0 METHODOLOGY

3.1 Research Design

Ex-post facto research design was adopted for this study. This is a type of research which aims at determining the relationship or the effect of one variable on another and the variables involved are not manipulated by the researcher (Onwumere, 2020). The choice of this research design was based on the fact that the researcher utilized time series data to carry out this study.

3.2 Area of the Study

The study was conducted in Nigeria. It focused on effect of insurance sector claims settlement capacity on insurance demand in Nigeria.

3.3 Nature and Sources of Data

Already existing statistical data were used for this study. Data were sourced from Central Bank of Nigeria Statistical Bulletin, National Insurance Commission's (NAICOM) and NIA-Digest for various years.

3.4 Model Specification

The study adopted a multivariate model of Charles and Fabian (2014) which was specified as:

$INFR = f(MS, INT, EXR)$

The linear equation of their model was written as:

$INFR_t = ß_0 + ß_1 MS_t + ß_2 INT_t + ß_4 EXR_t + £_t$

Where: INF = Inflation Rate; MS = Money Supply; INT = Interest Rate; EXR = Exchange Rate

ß = Constant Term $ß_1 - ß_3$ = Parameters of the variables to be estimated, $£_t$ = Error Term

In order to adequately capture the broad objectives of this study, their model was modified as follows:

The functional relation of the model was given as:

$GWP = f(LIC, NIC, TIC) \dots (i)$

While the general model was specified as follows:

$GWP = β_0 + β_1 LIC_{t_1} + β_2 NIC_{t_2} + β_3 TIC_{t_3} + μ \dots (ii)$

Where:

GWP = Gross Written Premium, LIC = Life Insurance Claims,

NIC = Non-life Insurance Claims, TIC = Total Insurance Claims,

$β_0 - β_3$ = Constant parameters; μ = error term

3.5 Description of Variables

3.5.1 Independent Variable

Variables used in this study (Life Insurance Claims, Non-Life Insurance Claims and Total insurance claims.

Life Insurance Claims: This refers to the total value of all life insurance claims paid by the Nigerian insurance industry. It covers all the life claims that the Nigerian insurance industry paid to their clients for the periods under review.

Non-Life Insurance Claims: This refers to the total value of non-life insurance claims paid by the Nigerian insurance industry. It covers all the non-life claims settled by the Nigerian insurance industry for the periods under review.

Total insurance claims: This refers to the total value of all life and non-life Claims paid for by the Nigerian insurance industry. It covers all

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the claims that the insurance industry paid to their clients for the periods under review.

3.5.2 Dependent Variable

Gross Premium Income: This refers to the total value of all life and non-life insurance premium written by the Nigerian insurance industry. This was used to proxy insurance demand.

3.6   Method of Data Analysis

Data for the study were subjected to stationarity test using The Augmented Dickey-Fuller unit root test. Thereafter, a test of Model adequacy was run. This was estimated using Coefficient of Correlation (R) and Adjusted Coefficient of Determination (AR^2) and Durbin Watson parameters. The Durbin Watson Statistic is a number that tests for autocorrelation in the residuals from a statistical regression analysis. The Adjusted Coefficient of Determination (AR^2) is a modified version of R^2. It indicates how well terms fit a curve or line, but adjusts for the number of terms in a model. The Least Square multiple regression method was used for data analysis utilizing Error Correction Mechanism (ECM) Test. While hypotheses were tested using p-value at 5% level of significance.

4.0   DATA PRESENTATION AND ANALYSIS

4.1   Data Presentation

This study determined the effect of insurance sector claims settlement capacity on insurance demand in Nigeria from 2007-2022. Insurance demand served as the dependent variable and was proxied with gross written premium which represents actual demand for insurance in monetary terms. While insurance sector claims settlement capacity was decomposed into three independent variables: Life claims, Non-Life claims and total insurance claims settled by the Nigerian insurance Industry. The dataset is an annualized time series report sourced from NAICOM and NIA-Digest for various years required for empirical analysis as adopted in line with the model which was specified in section three.

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4.2 Data Analysis

4.2.1 Descriptive Statistics

Table 4.3: Descriptive Statistics Test Result

	LOGGWP	LOGLIC	LOGNIC	LOGTIC
Mean	11.70150	9.470723	9.905899	8.338846
Median	11.71961	9.224771	9.777017	10.11280
Maximum	13.35572	11.92080	11.42756	12.39743
Minimum	10.27359	7.321651	7.464051	4.775477
Std. Dev.	1.006407	1.354675	1.042499	3.273232
Skewness	0.107984	0.285545	-0.445415	-0.066569
Kurtosis	1.504584	1.977272	2.400050	1.100897
Jarque-Bera	2.663398	1.600802	1.345770	4.228373
Probability	0.264028	0.449149	0.510234	0.120731
Sum	327.6420	265.1802	277.3652	233.4877
Sum Sq. Dev.	27.34711	49.54888	29.34372	289.2793
Observations	16	16	16	16

Source: Authors Computation from E-views, 2023

The condition for normal distribution is that the skewness value falls within the range of 0 and 1; the kurtosis value falls within the range of -3 and 3, and the probability value of the Jarque-Bera statistic is greater than 5 percent level of significance (that is, 0.05). Thus, the descriptive statistics result above shows that the skewness, kurtosis values and Jarque-Bera probability value for the values of all the variables under study: log value of gross written premium (explained), life insurance claims, non-life insurance claims, total insurance claims (independent variables) for the sampled period 2007-2022 are (0.107988, 1.504584, *p-value= 0.264028*), (0.285545, 1.977272, *p-value=0.449149*), (-0.445415, 2.400050, *p-value= 0.510234*) and (-0.066569, 1.100897, *p-value= 0.120731*) respectively. Since the skewness, kurtosis and probability values stated above are in conformity with the decision rule stated earlier, therefore, all the variables under study follow a normal distribution.

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4.2.2 Unit Root Test

Unit root test was used to explore the nature of the time series data.

Table 4.4: Result of the Unit Root Test

VARIABLES	ADF test Statistics	5% critical Value	Order of Integration
LOGGWP	-3.533846	-3.195026	I(1)
LOGLIC	-4.138851	-1.954414	I(1)
LOGNIC	-4.357160	-3.587527	I(0)
LOGTIC	-4.688725	-1.954414	I(1)

Source: Authors Computation from E-views, 2023

From the result of the stationarity test conducted through E-view statistical software, log value of gross written premium, life insurance claims and total insurance claims are stationary at first difference, I(1) whereas log value of non-life insurance claimsis stationary at level form, I(0). Since all the variables are not stationary at level, there is the need to conduct a cointegration test so as to ascertain if there is long run relationship among the variables under study.

4.2.3 Co-integration Test

To test for co-integration among the variables, we carried carry out using ADF test on the regression residuals as proposed by Gujarati (2004). The ADF unit root test on the residuals work with the same decision rule as unit root test. Accept the null hypothesis if the Augmented Dickey-Fuller test statistic is lower than the 5% level of significance, otherwise, reject the null the hypothesis. The co-integration test result is summarized as follows:

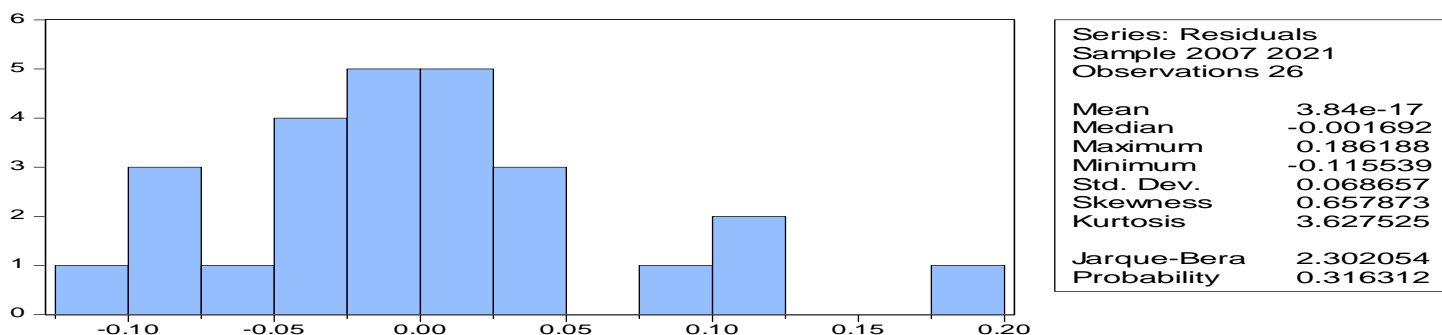**Table 4.5: Co-integration Test Result**

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-3.762494	0.0356
Test critical values:	1% level		-4.356068	
	5% level		-3.595026	
	10% level		-3.233456	

Source: Authors Computation from E-views, 2023

In the E-view generated co-integration test result above, the ADF test statistics (-3.762494) is greater than the 5% critical value (-3.595026) in absolute term. This implies that the residuals are stationary (that is, the variables are co-integrated or that the linear influence of the independent variables cancels out) and the variables have long-run relationship.

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4.2.4: Normality Test and Interpretation

Fig. 4.1: Output of Normality Test
Source: E-views Output, 2023
Based on the probability value (0.316312) of the normality test which is above the 0.05 level of significance, the null hypotheses is accepted which implies that the residual are normally distributed. From the normality table, the Jaque-Berra does not draw close to zero (0) as stated, in order words the residual are normally distributed.

4.3 Test of Hypothesis
Table 4.6: Multiple Regression Result for Test of Hypotheses

Dependent Variable: D(LOGGWP)
Method: Least Squares
Date: 08/11/23   Time: 12:31
Sample (adjusted): 2007 2022
Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.089948	0.174031	-0.516852	0.6107
D(LOGLIC)	-0.118607	0.051931	-2.283946	0.0329
LOGNIC	0.020914	0.017317	1.207722	0.2406
D(LOGTIC)	0.050550	0.016640	3.037854	0.0063
ECT(-1)	-0.251945	0.232496	-1.083649	0.2908
R-squared	0.518343	Mean dependent var		0.115052
Adjusted R-squared	0.426599	S.D. dependent var		0.098927
S.E. of regression	0.074911	Akaike info criterion		-2.174003
Sum squared resid	0.117843	Schwarz criterion		-1.932061
Log likelihood	33.26203	Hannan-Quinn criter.		-2.104332
F-statistic	5.649878	Durbin-Watson stat		1.862789
Prob(F-statistic)	0.003005			

Source: E-view output, 2023

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and Okeke, Daniel Chukwudi, Ph.D**

The multiple regression output shown in table 4.3 above was used to test hypothesis one, two and three.

4.3.1 Test Hypothesis One

H$_0$: Life insurance claims settled has no significant influence on gross premium income of Nigeria insurance industry.

H$_1$: Life insurance claims settled has significant influence on gross premium income of Nigeria insurance industry.

Decision Rules: Accept alternate hypothesis if p-value is less than (0.05) level of significance, otherwise reject alternate hypothesis and accept the null hypothesis.

Estimated Model Result for Hypothesis one

Using extract from **Table 4.6** for test of hypothesis one, the regression result shows that the p-value was [0.0329], t-Statistic was (-2.283946) and the estimated coefficient for LOGLIC was (-0.118607). Based on the p-value of the first hypotheses (LOGLIC), the null hypotheses was rejected because the probability value (0.0329) is less than 0.05 level of significance. The estimated coefficient for LOGLIC of (-0.118607) has a negative sign.

Conclusion: Based on the p-value and the sign of the estimated coefficient which was (-), it was concluded that life insurance claims settled had significant negative influence on gross premium income of Nigeria insurance industry.

4.3.2 Test of Hypothesis Two
Restatement of Hypothesis Two

H$_0$: Non-life insurance claims settled has no significant influence on gross premium income of Nigeria insurance industry.

H$_1$: Non-life insurance claims settled has significant influence on gross premium income of Nigeria insurance industry.

Decision Rules: Accept alternate hypothesis if p-value of (t-statistic) is less than (0.05) level of significance, otherwise reject alternate hypothesis and accept the null hypothesis.

Estimated Model Result for Hypothesis Two

Using extract from **Table 4.6** for test of hypothesis two, the regression result shows that the p-value was [0.2406]; t-Statistic was (1.207722), and the estimated coefficient for LOGNIC was (0.020914). Therefore, based on the p-value of the second hypotheses (LOGNIC) the null hypothesis was accepted because the probability value (0.2406) is above the (0.05) level of significance.

Conclusion: Based on the p-value and the sign of the estimated coefficient which was (+), it was concluded that non-life insurance claims settled had non-significant influence on gross premium income of Nigeria insurance industry.

4.3.3 Test of Hypothesis Three
Restatement of Hypothesis Three

H$_0$: Total insurance claims settled have no significant influence on gross premium income of Nigeria insurance industry.

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H₁: Total insurance claims settled have significant influence on gross premium income of Nigeria insurance industry.

Decision Rules: Accept alternate hypothesis if p-value of (t-statistic) is less than (0.05) level of significance, otherwise reject alternate hypothesis and accept the null hypothesis.

Estimated Model Result for Hypothesis Three

Using extract from **Table 4.6** for test of hypothesis three, the regression result shows that the p-value was [0.0329]; t-Statistic was (3.037854) and the estimated coefficient for LOGTIC was (0.050550). Based on the p-value of the third hypothesis (LOGTIC), the null hypothesis was rejected because the probability value (0.0063) is less than (0.05) level of significance.

Conclusion: Based on the p-value and the sign of the estimated coefficient which was (+), it was concluded that total insurance claims settled had significant positive influence on gross premium income of Nigeria insurance industry.

4.2 Discussion of empirical results

1 Discussion of Result on effect of Life insurance claims and demand for Insurance

Using extract from **Table 4.6,** the regression result shows that the p-value was [0.0329], t-Statistic was (-2.283946); (R^2) was (0.518343) and the estimated coefficient for LOGLIC was (-0.118607). Based on the p-value of the first hypotheses D (LOGLIC), the null hypotheses was rejected because the probability value (0.0329) is less than 0.05 level of significance and it was concluded that life insurance claims settled had significant negative influence on gross premium income of Nigeria insurance industry. The estimated coefficient for LOGLIC (-0.118607) implies that, if other variables affecting gross written premium are held constant, a unit increase in life insurance claims will bring about a 0.118607 decrease in gross written premium on the average. Which implies that an increase in life insurance claims will lead to decrease in the gross premium income gap. The coefficient of determination (R^2) was (0.518343). This implies that 51.8343% of the variation in gross written premium is explained by the variations in LOGLIC, LOGNIC, LOGTIC on the average. The Durbin Watson statistics of (1.862789) fall within the zero autocorrelation regions.1.58<1.862789<2.42. This implies that there is no presence of autocorrelation problem in the model as the computed.

2 Discussion of Result on effect of Non-life insurance claims and demand for Insurance

Using extract from **Table 4.6**, the regression result shows that the p-value was [0.2406]; t-Statistic was (1.207722); (R^2) was (0.518343) and the estimated coefficient for LOGNIC was (0.020914). Therefore, based on the p-value of the second hypotheses (LOGNIC) the null hypothesis was accepted because the probability value (0.2406) is above the (0.05) level of

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significance and it was concluded that non-life insurance claims settled had positive but non-significant influence on gross premium income of Nigeria insurance industry. This implies that non-life insurance claims settled did not significantly influenced the demand for Insurance in Nigerian from 2007 to 2022. The estimated coefficient for LOGNIC (0.020914) implies that, if other variables affecting gross written premium are held constant, a unit increase in non-life insurance claims will bring about a 0.020914 increase in gross written premium on the average. The coefficient of determination (R^2) was (0.518343). This implies that 51.8343% of the variation in gross written premium is explained by the variations in LOGLIC, LOGNIC, LOGTIC on the average. The Durbin Watson statistics of (1.862789) fall within the zero autocorrelation regions.1.58<1.862789<2.42. This implies that there is no presence of autocorrelation problem in the model as the computed. This result contrasts with the findings of Ugwuanyi, Onwuegbuchunam, Bartholomew and Anikpe (2021).

3 Discussion of Result on effect of total insurance claims and demand for Insurance

Using extract from **Table 4.3,** the regression result shows that the p-value was [0.0329]; t-Statistic was (3.037854); (R^2) was (0.518343) and the estimated coefficient for LOGTIC was (0.050550). Based on the p-value of the third

hypotheses D(LOGTIC), the null hypotheses was rejected because the probability value (0.0063) is less than (0.05) level of significance and it was concluded that total insurance claims settled had significant positive influence on gross premium income of Nigeria insurance industry. This implies that total insurance claims settled significantly and positively influenced the demand for Insurance in Nigerian from 2007 to 2022. The estimated coefficient for LOGTIC (0.050550) implies that, if other variables affecting gross written premium are held constant, a unit increase in total insurance claims will bring about a 0.50550 increase in gross written premium on the average. The coefficient of determination (R^2) was (0.518343). This implies that 51.8343% of the variation in gross written premium is explained by the variations in LOGLIC, LOGNIC, LOGTIC on the average. The Durbin Watson statistics of (1.862789) fall within the zero autocorrelation regions.1.58<1.862789<2.42. This implies that there is no presence of autocorrelation problem in the model as the computed. This result conforms to that of Ofori-Attah (2012). In the same vain this result agrees with that of Nwite *et al.* (2020) in terms of direction but differs in terms of magnitude.

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS
5.1   Summary of Findings
Based on the analysis of data and test of hypotheses done in section four, the following were the findings of the study:

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1. Life insurance claims settled had significant negative influence on gross premium income of Nigeria insurance industry. With the probability value (0.0329) and coefficient of (-0.118607);

2. Non-life insurance claims settled had positive but non-significant influence on gross premium income of Nigeria insurance industry. With the probability value (0.2406) and coefficient of (0.020914);

3. Total insurance claims settled had significant positive influence on gross premium income of Nigeria insurance industry. With the probability value (0.0063) and the coefficient of (0.050550).

5.2   Conclusion

In line with the findings of the study, it was concluded that Nigerian insurance sector claims settlement capacity had significant influence on gross premium income of the Nigerian insurance sector between 2007 to 2022. This implies that Nigerian insurance sector claims settlement capacity had significant influence on the demand for insurance in Nigerian between 2007 to 2022 because the probability value of the f-statistics (0.003005) is below 0.05 level of significance. The coefficient of determination (R^2) was given as 0.518343. This implies that 51.8343% of the variation in gross written premium is explained by the variations in LOGLIC, LOGNIC, LOGTIC on the average. This is believed by the researcher to be relatively high.

More so, the study further conclude that the variables under study (log value of life insurance claims) had negative relationship on the gross written premium which implies that an increase in the study explanatory variables will lead to decrease in gross written premium in Nigeria on the average. Whereas non-life insurance claims and total insurance claims have positive relationship on the gross written premium in Nigeria which implies that an increase in life insurance claims and total insurance claims will lead to increase in income gap in Nigeria.

5.3   Recommendations

The following recommendations were made in line with the findings of the study:

1.   Since life insurance claims settled had significant negative influence on gross premium income of Nigeria insurance industry, it is expected that more effort should be directed towards prompt settlement of genuine life insurance claims so as to improve awareness and demand for Insurance in Nigeria.

2.   Given that non-life insurance claims settled had positive but non-significant influence on gross premium, effort should be made by insurance companies to improve non-life insurance claims settlement in order to benefit from its positive effect on insurance demand in Nigeria.

3.   Nigerian Insurance Industry regulators should enhance its supervisory frameworks to ensure that genuine claims of both life and general insurance business are settled promptly

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