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CONTRIBUTION OF NON-LIFE CLAIMS TO INSURANCE PENETRATION IN NIGERIA

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Abstract
This study investigated the contribution of non-life claims to insurance penetration in Nigeria. Specifically, the study sought to examine the impact of fire, motor and marine insurance business on insurance penetration in Nigeria. The research employed ex-post facto method. Therefore, secondary data was used in the study. The Data were taken from Central Bank of Nigeria Statistical Bulletin of 2018 and National Insurance Commission annual industry data publication of various years. Multiple regression analysis was applied as analysis technique. It was found that fire insurance claims settlement and marine insurance claims settlement did not significantly impact on insurance penetration in Nigeria while motor insurance claims settlement did significantly impact on insurance penetration in Nigeria. Given the findings it was concluded that not all classes of non life insurance sector significantly contribute to insurance penetration in Nigeria. Based on the conclusion of the findings of the study it was recommended that the insurance industry should create an umbrella under which traders are enjoined to buy group fire insurance policies in their interest against unexpected fire outbreaks that usually engulf our market places and also the law enforcement agencies should use data of national insurance industry data bank to determine the genuineness of motor policies presented by drivers and more marine voyages should be covered by local insurers to insurance penetration can be widened.

Keywords: Contribution, Non- life, Claims, Insurance, Penetration

1. Introduction

One primary factor that influences the choice of insurance firm's customers is the claims settlement practice in the insurance industry. Claim is the image mirror of the industry as it showcases the relationship the insurer and the insured as it stands to prove the benefit of paying premium and trusting the promises of indemnity made by the insurer at the beginning of the contract. There are indications that insurance companies are groaning under the weight of a surging claims portfolio as more risks crystallize, despite efforts to stem the tide (Onuoha, 2019). The latest financial reports of leading insurers show an escalation of claims volume, rising faster and overshadowing the growth recorded in premium income. The industry's total Gross Premium Written, GPW, grew by 12.4 percent to N226.8 billion against N201.7 billion recorded in 2017. But the total claims expenses on the other hand went up by 16.5 percent to N98.9 billion from N84.9 billion recorded in 2017. The same trend was witnessed recorded in the previous year when GPW grew by 9.7 percent while claims expenses went up by 30.3 percent (Onuoha, 2019). Industry operators have expressed worry that the trend would pose threat to the industry's survival in the medium term if not checked.

However, it is common knowledge that insurance is not very popular with the Nigerian populace and that the nation is grossly underinsured (Smart, 2019). The low insurance penetration could be attributed in part to that notion that Nigerian insurers don't settle claims (Smart, 2019). These could slow the growth of the Nigerian insurance industry and hence low insurance penetration. Despite the lingering apathy for insurance by the Nigerian populace the Nigerian Insurance Industry continues to record increased claims payments as is typical in periods of recession. In 2016, net claims paid by operators amounted to an estimated ₦100 billion ($327.9 million at ₦305/$), a 19% growth over the preceding year. This translated to an average loss ratio of 43.7% (FY2015: 43%). The Industry's performance continues to be upheld by investment income which reached an estimated ₦54.5 billion ($178.7 million at ₦305/$) in 2016 on the back of favourable yields on government securities. Overall, the Insurance Industry's return on equity (ROE) which hovered at around 8.4% in 2016 (FY2015: 8.6%) is expected to weaken slightly in 2017 as the economy recovers from the recession. The Industry's low ROE reflects its weak profitability compared to the average yield on 364-day treasury bills of 13.7% in 2016 (CMIA, 2017). The National Insurance Commission (NAICOM) reported that a total of N145 billion was paid as claims to policyholders by insurance companies in the third quarter (PremiumTimes, 2018).

The Insurance industry in Nigeria is segmented into life, non-life and re-insurance, with non-life insurance accounting for the bulk (48.7%) of total Gross Premium Written (GPW) while life and re-insurance account for 30.1% and 21.2% respectively. Thus it seen that the non-life insurance sector has the highest rate of patronage (Proshare, 2018). Across this segment, the most prominent insurance products are motor insurance, general accident, fire, oil & gas and marine insurance. It is so given that it records the highest number of risk exposures.

This positions it as likely to be having high number of applications for claims settlement. 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. A company may be run, very efficiently and soundly in every respect; its policies may be delivered promptly and renewals handled efficiently, but an unreliable and inefficient claims department could ruin the reputation of the company. Policyholders naturally lose confidence in the insurance company the moment they discover that the company is either reluctant to pay or delays without good reasons the betterment of genuine claims. This implies that claims are of importance to an insurer as it can make or mar the level of penetration of insurance in the society. Hence, the central objective of the study was to investigate the impact of non-life insurance sector claims on insurance penetration in Nigeria.

The specific objective of the study is to examine the impact of fire, motor and marine insurance claims settlement on insurance penetration in Nigeria. The period of the study cover from 1985 to 2018. The classes of the non-life insurance business covered in this study include Motor insurance, Fire insurance and Marine insurance. The choice of 1985 as base year was that it marked the introduction of Structural Adjustment programme, an economic reform plan aimed to develop the country. The choice of motor, fire and marine insurance was based on their being the classes of non-life insurance that had the most demand for claims settlement (Proshare, 2018).

2. Literature Review

Non-Life insurance

In section 2 (1) (2) and (3) of the statute governing insurance in Nigeria, Insurance Act 2003, insurance business were classified into Life and General insurance businesses or Non-life insurance. Non-life insurance deals with all loss effects that arise in the event of mishap to a thing (idea, contract, event, facility, and property) caused by fire, burglary, theft accident etc. non life companies also covers machinery against breakdown, there are policies that covers the hull of ships, marine cargo fire. The policies are usually an annual contract**.** The word "claim" according to Kapoor (2008) cited in Yusuf and Abass (2013) emanated from the Latin word, "Clamare" which means to "call out". Barry (2011) cited in Unachukwu, Afolabi and Alabi, (2015) defined insurance claims as all activities geared towards monitoring insured's compensation, restitution, repayment or any other remedy for loss or damage or in respect of doing their obligations. Claims are a legal request made by the insured to her insurance asking for an indemnity of the contract.

Motor Insurance is one of the common classes of insurance requested for by the insuring public. It is designed to protect the insured for loss of or damage to his vehicle, damage to Third Party property including bodily injury and death to Third Parties caused by accident. Motor insurance is designed to provide cover against losses and liabilities that the driver may suffer as a result of accident, theft or certain other events relating to their vehicle. Allwords (2014) defined motor insurance as insurance purchased by the owner of a vehicle to cover losses due to traffic accidents or theft. It covers physical damage caused to your vehicle and any other vehicles you might come in contact with.

Marine Insurance express terms or by usage of trade be extended so as to protect the insured against losses on inland waters or any land risk which may be incidental to any sea voyage (Marine Insurance Act, 1909). In simple words the marine insurance includes: cargo insurance which provides insurance cover in respect of loss of or damage to goods during transit by rail, road, sea or air, hull insurance which is concerned with the insurance of ships (hull, machinery, etc.). Fire insurance is a contract under which the insurer in return for a consideration (premium) agrees to indemnify the insured for the financial loss which the latter may suffer due to destruction of or damage to property or goods, caused by fire, during a specified period. A fire insurance policy cannot be assigned without the permission of the insurer because the insured must have insurable interest in the property at the time of contract as well as at the time of loss (Oluoma , 1999)

Insurance Penetration

Penetration rate indicates the level of growth of insurance sector in a country. Penetration rate show the ratio of premium underwritten in a given year to the GDP. The performance of the industry has a link between the claims settled by the insurance industry and its penetration. Yet Proshare (2018) report on insurance industry in Nigeria shows that Nigeria has the lowest insurance penetration level (0.3%) amongst notable African countries – South Africa (14.7%), Kenya (2.8%), Angola (0.8%) and Egypt (0.6%). Similarly, the sector's insurance density (a measure of industry gross premium per capita) is still one of the lowest when compared to peers – South Africa (US$762.5), Egypt (US$22.8), Kenya (US$40.5) Angola (US$30.5) and Nigeria (US$6.2). Despite growing at a faster pace than the economy, Nigeria's insurance sector is still the least underdeveloped compared to peers.

Empirical studies on factors that impact on insurance, specifically its penetration in Nigeria they largely examined the impact of claims on it. However, their considerations failed to look at the nexus between claims and insurance penetration from a sectoral point of view, taking cognizance of the non-life sector as the sector with the highest number of claims in the industry. Based on this premise this study sought to investigate the impact of non-life insurance sector claims on insurance penetration in Nigeria.

Theoretical Framework

The theoretical framework for the study is the Endogenous "AK" Growth Theory. According to Endogenous "AK" growth theory, an economy's long-run growth rate depends on its saving rate. The endogenous "AK" growth theory offered by Pagano (1993) assumes that financial intermediation could affect economic growth through three channels namely: changing productivity of capital, savings funneled to investment and savings rate. In other words, financial development reduces the loss of resources needed to allocate resources, encourage greater savings ratio, and increase capital productivity. The theory assumes that only one type of goods is produced with capital as the only input factor.

$Yt = AKt$ …..... (1)

Where Yt = Output, t = Time, K = Capital, and A = Capital Productivity.

This implies that capital stock in time t + 1 is given as:

$Kt = It + (1-d)\ Kt\text{-}1$ …..... (2)

Where d = rate of depreciation and I = investment. The implication is that if a fixed fraction(s) of output (y) is saved and there is a fixed rate of depreciation (d), the rate of aggregate net investment is given as:

$dk/dt = sy - \partial t$ …..... (3)

This implies that the growth rate (g) is driven by:

$g = (1/y)\ (dy/dt) = (1/k)\ (dk/dt) = SA - \partial$ …..... (4)

The non-life insurance sector by paying claims reduces the loss of resources needed to allocate resources. By so doing, the non-life insurance sector allows economic agents to continue their respective endeavors that would have stopped due to the occurrence of the event they insured against. This sustains demands or consumptions for goods and services which encourage production and employment which result in multiplier effect on economic growth. As more are produced and consumed more insurance cover is applied for. In other words, by creating an environment of greater security, non-life insurance sector fosters development of the wider insurance industry.

Empirical Review

Ogunnubi (2018) empirically investigated the impact of claims management on the profitability of non-life insurance companies in the Nigeria insurance industry. The study revealed that there is no significant relationship between claims management and profitability of non-life insurance companies in Nigeria.

Ullah, Faisal and Zurah (2016) analyze the determinants that serve as significant predictors of non-life insurance firms' profitability in Bangladesh. It analyzes panel data of eight different insurance companies—selected using convenience sampling method from the years 2004-2014 to assess whether any significant relationship exists between Profitability (ROA), and certain independent variables - Underwriting Risk, Expense Ratio, Solvency Margin, Premium Growth, Asset Growth, and Company Size using an Ordinary least squares (OLS) regression model. This paper found significant inverse relationship between Underwriting Risk, and Size, with Profitability (ROA). There is also a significant positive relationship between Expense Ratio, Solvency Margin, and Growth, with the Profitability (ROA).

Ortyński (2016) identifies the determinants of the performance of general insurance companies in Poland using a panel dataset consisting of a firm specific factors and macroeconomic factors over the period 2006-2013. Six financial performance measures are used to capture different aspects of the insurance operations. These performance measures are related to nine cited business-specific and macroeconomic variables, chosen on the basis of relevant theory and literature. A weight least square (WLS) method and intergroup method for each of six performance models are used to estimate the parameters of these models. The empirical results prove that there is a statistically significant relationship between the following variables with profitability performance being- negatively affected by underwriting activity (represented the net claims ratio variable) and by the net operating expenses variable. It was also shown that the size of a company has positive relationship with its

profitability. The study also confirmed statistically significant and positive relationships between profitability ratio of technical activity and the macroeconomic variable (rate of GDP) as well as positive impact of the motor gross written premiums ratio variable on the profitability ratio of technical activity.

Njuguna and Kimani (2016) assessed the effect of financial factors on insurance penetration in Nakuru town, Kenya. The financial factors examined included administrative costs and agency costs. Blau administrative cost theory, agency theory, and S-curve theory guided the study. This study adopted a cross-sectional survey research design. The study focused on the 417 employees working with insurance firms in Nakuru town. A sample of 61 respondents was selected using stratified random sampling method. The study used a self-administered semi-structured questionnaire to collect data. The research questionnaire was pilot tested. Data analysis involved the use of means, modes and standard deviations. Inferential statistics included Pearson's Product Moment Correlation and multiple regression analysis. Findings were presented in tables. The study found that all the financial factors investigated had significant relationship with insurance penetration. The study concluded that insurance firms incur administrative and agency costs that hamper insurance penetration. The study recommended that insurance firms need to arrest escalating costs associated with administrative functions and agency.

3. Research Method

The research employed *ex-post facto* method. Ex post factor research refers to a research study in which the researcher has independent variables that he cannot manipulate during the study. Secondary data were used in the study. The data were taken from Central Bank of Nigeria Statistical Bulletin of 2016 and National Insurance Commission data publication of various years.

Model specification

The model used was based on Ajemunigbohun and Oreshile (2014) whose model is specified as:

$Y = f(X_1, X_2, X_3, X_4)$…….(i)

$Y = a_0 + X_1b_1 + X_2b_2 + X_1b_3 + X_1b4$ ……..... (ii)

Where:

a = Constant

X_1…… xn = Explanatory variables

bi …… bn = Parameters to be estimated (i= 1, 2, 3, ….. n)

Ui = Error term or disturbance term)

Y = Dependent variable (Motor Insurance Demand)

X_1 = Motorists' Risk Attitude

X_2= Income level

X_3= Insurance Price (Premium)

X_4= Government Regulation

In application to this study a modification was made by changing the variables to suit the specific objectives of the study. The model adopted is stated as:

$IP = \beta_0 + \beta_1TFICS + \beta_2TMOICP + \beta_1TMAICP + \mu$ … (iii)

Where: IP = Insurance Penetration

TFICS = Total Fire Insurance Claims Settlement

TMOICP = Total Motor Insurance Claims Payment

TMAICP = Total Marine Insurance Claims Payment

β_0 = Constant parameter

β_1 = Coefficient parameter of TFICS

β_2 = Coefficient parameter of TMOICP

β_3 = Coefficient parameter of TMAICP

μ = error term

4. Analytical Result

The models were estimated using multiple linear regressions. These tests were carried out at 5 percent level of significance. The decision rule is to reject the null hypothesis and accept its alternative if t-calculated is higher than t-tabulated. The test was carried out at 5 percent level of significance.

Table 1 Result of Unit Root test

Variable	Calculated value	Order of Integration	Test Critical value	
Insurance Penetration	-4.782384	1(0)	1% level	-3.646342
			5% level	-2.954021
			10% level	-2.615817
Fire Insurance Claims	-6.623103	1(0)	1% level	-3.646342
			5% level	-2.954021
			10% level	-2.615817
Motor Insurance Claims	-5.373286	1(0)	1% level	-3.646342
			5% level	-2.954021
			10% level	-2.615817
Marine Insurance Claims	-4.810901	1(0)	1% level	-3.646342
			5% level	-2.954021
			10% level	-2.615817

Source: Author's calculation using Eviews 9
Phillips Perron method was used to test for unit root. The results of the tests as reported show that at level all the variables were stationary.

Table 2 Descriptive Statistics

	FIRE	INSPEN	MARINE	MOTOR
Mean	0.177358	0.589294	0.107107	0.352092
Median	0.156411	0.517000	0.101377	0.314275
Maximum	0.929439	1.499000	0.394407	1.277281
Minimum	0.043200	0.294000	0.030165	0.122352
Std. Dev.	0.144141	0.272610	0.077020	0.212237
Skewness	4.293035	1.626146	1.901893	2.474707
Kurtosis	23.21144	5.958874	7.539624	11.70020
Jarque-Bera	683.1490	27.38747	49.69238	141.9360
Probability	0.000000	0.000001	0.000000	0.000000
Sum	6.030155	20.03600	3.641648	11.97111
Sum Sq. Dev.	0.685628	2.452427	0.195756	1.486477
Observations	34	34	34	34

Source: Author's calculation using Eviews 9

The values of mean of the respective variables are low showing that they do aggregate easily. Also, the values of median of the respective variables are low showing that the variables are not spread widely. The dispersion of the respective variables surrounding the mean is low given that difference between their respective minimum and maximum values is low. The standard deviation of the data in relation to their respective means each had lower value than their respective mean. This shows that the all variables have low volatility.

Table 3 Result of Hypothesis test
ependent Variable: INSPEN
Method: Least Squares
Date: 09/07/19 Time: 20:16
Sample: 1 34
Included observations: 34

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.736174	0.093075	7.909489	0.0000
FIRE	0.690357	0.498915	1.383716	0.1767
MOTOR	-0.743696	0.350880	-2.119520	0.0424

MARINE	-0.069750	0.705522	-0.098863	0.9219

R-squared	0.150413	Mean dependent var	0.589294
Adjusted R-squared	0.065455	S.D. dependent var	0.272610
S.E. of regression	0.263537	Akaike info criterion	0.280884
Sum squared resid	2.083549	Schwarz criterion	0.460455
Log likelihood	-0.775021	Hannan-Quinn criter.	0.342123
F-statistic	1.770429	Durbin-Watson stat	1.939261
Prob(F-statistic)	0.174049		

Source: Author's calculation using Eviews 9

From Table 3 the regression equation is derived as:
INSPEN = 0.736174 + 0.690357TFICS - 0.743696TMOICP - 0.069750TMAICP

Interpretation and Discussion of Findings

The regression coefficient points out that fire insurance claim had a positive relationship with insurance penetration while motor and marine insurance claims had negative relationship with insurance penetration. This shows that a unit increase in insurance penetration is dependent on
0.690357 basis point increase in fire insurance claims, 0.743696 basis point decreases in motor insurance claims and 0.069750 basis point decrease in marine insurance claims. An adjusted coefficient of determination of 0.065455 shows that fire, motor and marine insurance claims settlement can explain only 6.5455 percent variation in insurance penetration. Table 3 shows that the p-value of fire insurance claims was 0.1767, motor insurance claims was 0.0424 while marine insurance claims was 0.9219. The p-values of fire and marine were higher than the level of significance (0.05%). This shows statistical insignificance. P-value of motor was lower than the level of significance showing statistical significance. The individual influence of the each independent variable is outlined using the t-ratio. It was observed that t-calculated for the independent variables were 1.383716 for fire insurance claims, -2.119520 for motor insurance claims and -0.098863 for marine insurance claims. With each compared to t-tabulated, derived as $t\infty/2(n-k)$, t (0.05/2)(34-4) = (0.025)(30) = 2.042, it is seen that only motor insurance claims had a significant individual effect on insurance penetration. This is given that its t-calculated was higher than t-tabulated while that of fire and marine insurance claims were lower. Therefore, in line with the decision rule it was found that: Fire insurance claims settlement did not significantly impact on insurance penetration in Nigeria; Motor insurance claims settlement did significantly impact on insurance penetration in Nigeria; Marine insurance claims settlement did not significantly impact on insurance penetration in Nigeria.

5. Conclusion and Recommendations

This study examined the veracity of effect of the fire, motor and marine insurance claims on insurance penetration. Therefore we conclude that not all classes of non life insurance sector significantly impact on insurance penetration in Nigeria.

Based on the findings of the study it was recommended; that the insurance industry should create an umbrella policy under which central market traders are enjoined to buy group fire insurance in their interest against unexpected fire outbreaks that usually engulf our market places. This will draw in a large number of traders as insured expanding insurance penetration; the Federal Road Safety Corps and Nigerian Police Service should use data of National Insurance Industry Data bank to determine the genuity of motor policies presented by drivers. Knowing that a means is now in place to detect fake insurance policies more car owners and drives will go and buy genuine insurance policies. This can as well deepen insurance penetration.

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Appendices

Year	Insurance penetration (%)	Fire claims (%)	Motor claims (%)	Marine claims (%)
1985	0.358	0.0798	0.627315	0.131944
1986	0.358	0.0798	0.627315	0.131944
1987	0.301	0.1499	0.508227	0.030165
1988	0.357	0.1091	0.448709	0.199868
1989	0.548	0.1685	0.262101	0.394407
1990	0.426	0.2006	0.373573	0.121697
1991	0.508	0.2078	0.42595	0.14991
1992	0.509	0.1870	0.435576	0.132269
1993	1.499	0.0432	0.226258	0.044521
1994	0.570	0.2032	0.460123	0.100661
1995	0.325	0.1289	0.373517	0.122208
1996	0.329	0.2071	0.430627	0.115954
1997	0.300	0.2081	0.46557	0.063256
1998	0.294	0.1983	0.425774	0.0662
1999	0.713	0.1504	0.30806	0.18046
2000	0.486	0.1967	0.32049	0.078302
2001	0.525	0.1906	0.379003	0.1294
2002	0.492	0.2709	0.411123	0.131401
2003	0.448	0.178615	0.322903	0.131766
2004	0.436	0.225455	0.28767	0.112661
2005	0.348	0.223078	0.301022	0.102093
2006	1.321	0.087354	0.271841	0.137571
2007	0.581	0.071356	0.24653	0.075764
2008	0.490	0.162421	0.265566	0.085132

2009	1.020	0.244068	0.210432	0.07353
2010	0.736	0.14483	0.245636	0.055099
2011	0.721	0.141525	0.219345	0.047996
2012	0.713	0.116868	0.17006	0.038432
2013	0.710	0.929439	1.277281	0.297471
2014	0.702	0.110575	0.14423	0.03455
2015	0.725	0.106295	0.132232	0.032508
2016	0.729	0.102792	0.122352	0.030836
2017	0.729	0.102792	0.122352	0.030836
2018	0.729	0.102792	0.122352	0.030836