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RESEARCH ARTICLE

IMPACT OF UNDERWRITING RISK NET CLAIMS AND PREMIUM ON THE PROFITABILITY OF INSURANCE COMPANIES IN NIGERIA

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ABSTRACT

Background: The Insurance sector is ladened with the sole responsibility of risk bearing and management. This is very important to any economy especially the developing economies like Nigeria where there is absence or little presence of enabling environment for businesses, low life-expectancy and wavering government policies. It is also important for the Insurance sector to stay alive to perform the duty of rescuing the economy from peril. For the sake of sustainability, Insurance companies must decide on what processes to focus on to drive profitability. **Objective:** The aim of the present study is to examine the significant effect of three important concepts in insurance: Net Premium, Net Claims and Underwriting Risk as predictors of profitability. **Methods:** The data used was extracted from the NAICOM annual publication between years 2010 to 2016. All data for available insurance companies published in the NAICOM report were used. Three models were fitted from multiple OLS and the stepwise regression analysis. **Results:** Net claims and underwriting risk were significant predictors of profitability ($p < 0.05$) while the net claim is a negative confounder and not significant at predicting profitability of insurance companies ($p > 0.05$). **Conclusion:** The profitability of Nigeria Insurance companies within the examined years have been driven significantly by Net claims and underwriting risks while net premiums was not a determinant of profitability. Nigeria Insurance companies must pay attention to their risk assessment systems and not only the drive for premiums or sales.

INTRODUCTION

The insurance industry plays an important role in any economy as the risk-bearer or custodians of risks. Economic activities are such that promises some level of reward to the executor, however, every reward comes with a corresponding level of risk; the higher the risk, the higher the reward or profit. Individuals and organizations seek to eliminate risks attached to their activities hence they transfer it to insurance companies by buying appropriate policies. On the occurrence of such peril, the insurer, that is, the insurance company becomes responsible for restoring normalcy (Born, 2011). It is therefore important for insurance companies as well to ensure due diligence in the estimation of risks, the probabilities and severities that surround it. Failure of insurers to accurately estimate the likelihoods and severities of risks can lead them into losses (Thomas & Piman, 2004). Underwriters are those responsible for making these estimates. The possibility of loss for the Insurer is also a pure risk, which is usually mitigated through processes such as reinsurance and investments. The process of deciding on or coming up with insurance policies and appropriate cost is referred to as underwriter.

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When an Insurer makes a profit after accounting for the investment income, such is called underwriting profit, otherwise, in a case of loss after accounting for investment income, it is called underwriting loss (Adams & Buckle, 2003). Hence, Insurers take with outmost importance every process and policies that enable them to reduces the chances of losses and its effect on their organization reputation, productivity or solvency. When avenues contributing to profit or losses are identified, Insurers can then channel appropriate resources to control such in their favour. In a developing economy such as in Nigeria, estimating risks on the part of the insurer can be a little more complex due to facilities and infrastructures that either obsolete or absent hence the susceptibility to/happenstance of peril when compared to the developed economies is high. Hence, this study evaluates underwriting profit/loss, net premium and net claims as predictors of profitability. The paper fitted three models; one from the OLS multiple regression and two from the stepwise multiple regression. The major objective is to suggest actionable steps to drive profitability for Insurers from the insights deduced from the extracted data. The term insurance originated from several languages and ultimately means the guarantor bear something that might or might not happenin the future to the insured. (Kasmir, 2015).Insurance premium is the payment made by the insured (customer) to theguarantor (Insurance company) in return for services for the transfer of the risk to theguarantor.

In different aspects of insurance, premium has different applications, for example, in life insurance they are compensation in advance for the bearing of risks owned by the insured (customer) by the guarantor through an agreed sum of money (benefits)against the risk/peril of old age and death (Djojosoedarso, 2003). Claim is the exercise of the customer's rights to demand that the Insurance company bears the cost of peril which has happened in form of coverage for lossesbased the pre-existing agreements as madeinaccordance the policy (Amrin, et al., 2011). Financial performance is a display of the company'sfinancial indexes and condition in a given duration of period (usually annually). This usually combines all income making activities of the company during the said duration reflecting the level of financial health of the company (Jumingan, 2006).

MATERIALS AND METHOD

The study made use of secondary data between the year 2000 to 2016 as published by the apex insurance institution in Nigeria – NAICOM. The duration of the obtained data is as a result of what was available in the NAICOM website, there has been no report from the institution since then. However, the data entails the measures from each insurance company in Nigeria within the period under study. Descriptive statistics was used to obtain the characteristics of each variable while Pearson correlation was used to investigate the direction and strength of the relationship between them. The OLS model was fitted to test the effect of independent variables (underwriting risk and retention rate) on the dependent variable (profitability). The tests are carried out at 95% confidence level; hence, the null hypotheses are rejected when the significant (p) value is less than 0.05. The model is presented as:

$$P_{U,NP,NC} = \beta_0 + \beta_1 U + \beta_2 NC + \beta_3 NP + \varepsilon_{1,2,3}$$

Where: P is profitability, dependent variable
U is Underwriting risk
NC is Net Claim
NP is Net Premium
$\varepsilon_{1,2}$ is error estimate from the model
β_0 is constant of the model
β_1 and β_2 coefficient of the two independent variables

RESULTS

According to the data in this study, the average Net premium of Insurance Companies in Nigeria is 3727.14±5249.23 (Range 2.015 to 46923.82), Net Claims 1333.2±1609.64 (Range 32.99 to 10492.49), average under writing risk 1245±1973.32 (Range -1240 to 20556.64), while the average for profit after tax is 390.08±1067 (Range -1888.6 to 6568.49). There is a significant correlation between all the variables examined. Net claims and Net Premium have high correlation (r=0.666), however, it is lower than the 0.7 benchmark for multicollinearity problem to exist. Net claim has the highest significant effect on profit after tax (β=0.183, p<0.01). Net Claims has about 18.3% significant effect on profit after tax of insurance companies in Nigeria. Underwriting risk also has a significant effect on profit after tax of insurance companies in Nigeria (β = 0.11, p<0.05). Underwriting risk has about 11% significant effect on the profit after tax of insurance companies in Nigeria.

Table 1. Basic Description of Variables (Millions, ₦)

	μ	σ	Min	Max
Net Premium	3727.14	5249.23	2.015	46923.82
Net Claims	1333.2	1609.64	32.989	10492.49
Under writing Risk	1245.58	1973.32	-1240.3	20556.64
Profit After Tax	390.08	1067.54	-1888.6	6568.49

Table 2. Pearson Correlation Analysis

	Net Premium	Net Claims	Underwriting Risk
Net Claims	.666**(0.000)		
Underwriting Risk	.249** (0.003)	.201* (0.019)	
Profit After Tax	.347** (0.000)	.392**	.287** (0.001)

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Net premium has a low effect (β=0.023, p>0.05) and not significant. The impact of Net Premium is low and not significant on the profit after tax of Insurance companies in Nigeria.

$$Profitability = -76527476.46 + 0.11(U) + 0.183(NC) + 0.023(NP) + 11407643.41$$ ..model 1

The stepwise regression was fitted in two steps, Net claims was seen to have a lone significant impact on determining the profitability of Insurance companies (β=0.26, p<0.05). Net claims have about 26.0% impact on the profitability. In the second step fitted, underwriting risk and net claims were used to develop a predictive model, both of them significantly predicted profitability (β = 0.231 and 0.118, p<0.05, respectively).

Table 3. Multiple Regression Analysis

	Unstd. β	Std. Error	Std. β	Sig.
(Constant)	-76527476.46	114407643.41		0.505
Net Premium	0.023	0.021	0.113	0.283
Net Claims	0.183	0.069	0.276	0.009
Underwriting Risk	0.11	0.043	0.204	0.012

a Dependent Variable: Profit After Tax F=11.483 p=0.00, s.e= 962075417.15, Adj-R-sqr=0.188

Net claims and underwriting risk have about 23.1% and 11.8% impact on profitability respectively, jointly, they are able to predict about 18.7% of profitability. The addition of underwriting risk to the first model in the stepwise regression reduces the impact of the net claims from 26% to 23%, hence underwriting risk can be regarded as a negative-confounding variable.

$$Profitability = 43644243.24 + 0.26(NC) + 985813910.9$$ ……model 2

$$Profitability = -64126222.35 + 0.231(NC) + 0.118(U) + 962655315.6$$ …. model 3

DISCUSSION

The three models suggests that net claims is a significant predictor of Insurance companies; profitability. In the OLS model, net premium was not a significant predictor of profitability for insurance companies, the same was also excluded in the stepwise regression analysis. The present study supports the findings of past studies (Tajudeen & Francis, 2014) on the significant relationship between Net claims and profitability, also, the significant effect net claims have on the profitability of insurance companies.

In the Insurance sector of India, net premium was found to have negative effect on profitability, however, unlike the findings from the present study, underwriting risk has no significant relationship with profitability as presented in India (Charumathi, 2012).The present study does not supports evidence from Indonesia which presented that net claim and risk ratio does not significantly influences the profitability of insurance companies (Ono, et al., 20219). However, (Alamsyah & Wiratno, 2017) and (Pramita & E. Kiswara, 2014) supports the present study that net claims and net premium significantly affect profitability of insurance companies in Indonesia.

CONCLUSION

This study showed that the profitability of Insurance companies in Nigeria is not determined by the premiums they receive but their ability to avoid underwriting loss and the claims they pay. Insurance companies are to shift their outmost attention from premiums and pay more attention on rightfully evaluating risks so as to cover for losses and claims. There must be accurate framework of risk assessment which will adequately predict the chance of peril. Such systems would be useful for underwriters to make adequate evaluations and the claims paid will also be reduced. The findings from this study are applicable for insurance companies' policy development by ensuring that every premium must be properly and extensively evaluated for proper agreement.

Conflict of Interest: The author wishes to declare no conflict of interest on the study carried out.

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