Global Journal of Education, Humanities and Management Sciences (GOJEHMS);
Vol.3 No.1, March 2021, pg.115 - 124; ISSN(Print): 2705-2494; ISSN(Online):2705-2486

IMPACT OF NET CLAIM RATIO AND NET RETENTION RATIO ON FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN NIGERIA

SALAUDEEN, TAJUDEEN OLAJIDE
Department of Insurance
School of Business and Management
Federal Polytechnic Offa, Kwara State
jaydeeontop@gmail.com
+2348162378121

&

SALAM, RAFIU ADEKUNLE
Department of Insurance
School of Business and Management
Federal Polytechnic Offa, Kwara State
salamrafiu@gmail.com
+2348057987843

&

MUDASHIRU, GANIYAT ABIOLA
Department of Insurance
School of Business and Management
Federal Polytechnic Offa, Kwara State
mudashiruganiyat@gmail.com
+2347031847673

Abstract
Regardless of the fact that insurance companies are imperative part of Nigerian economic system, Nigerian insurance companies have been facing several challenges on how to meet up with their profitability goal effectively and efficiently. This study investigated the impact of Net Claim ratio and Net Retention ratio on financial performance of insurance companies in Nigeria. This study adopts the Correlation research design. The data were obtained from secondary sources through the annual reports of listed insurance companies in Nigeria. The sample size of Ten insurance companies were randomly selected for this study. Multiple regression techniques were used for the analysis. Data was analyzed via regression analysis. The results revealed that, Net Claim ratio and Net Retention ratio have insignificant impact on financial performance of insurance companies in Nigeria. The study concluded that Net claim ratio (NCR) and Claim ratio (NCR) have insignificant impact on financial performance of insurance companies in Nigeria. The study therefore recommended that rather than see reinsurance as a cost centre, insurance executives should view it as an important risk management mechanism.
Keywords: *Net Claim ratio, Net Retention ratio, Financial Performance, Insurance*.

1.1 Introduction

Every facet of human endeavour is exposed to loss of varying degrees, which instills fear in the mind of individuals and business owners. There are evidences that individuals and business organizations have learnt to manage these inexplicable loss exposures by contracting it to a third party through an arrangement called insurance contract (Salaudeen, 2021). Insurance is a contract, represented by a policy, wherein an individual or business organization is reimbursed or receives financial protection from an insurance company upon the happening of an insured event. Therefore, insurance renders a service that is essentially a risk transfer mechanism. Every sphere of life endeavour is faced with one risk or the other. These risks are so numerous and affect everyone either as individuals, corporate organizations, society or nation as a whole. Hence, risk is an uncertainty concerning loss, injury or gain (Loomba, 2014). This assertion presumes that the thrust of risk from insurance point of view includes unpredictability, adverse deviation, uncertainty and possibility of unfortunate occurrence which are all linked to economic losses. Though, unpredictability of risk may not be eradicated, it may however be reduced or managed. The process of managing risk is known as risk management. Insurance therefore is seen as the driving force of modern or formal risk management because it seeks to discover the source, from which risk may emanate, evaluates its impact on an organization or individual and apply appropriate treatment to it (Loomba, 2014; Oluoma, 2014). As individuals and business organizations transfer their risk to the insurance companies for protection against any eventualities, so also the insurance companies employ reinsurance as risk management technique to manage their loss exposures.

The role of reinsurance in insurance companies cannot be overemphasized as it plays significant impact on economic development of any nation. Abass and Obalola (2018) stressed that, reinsurance arrangement is fundamental to insurance companies' operations because it serves as a major risk management mechanism often used to cushion loss experience. Oluoma (2014) opined that, in addition to its basic functions of risk pooling, spreading and loss indemnification, insurance is said to be a catalyst of economic growth by promoting long-term savings, encouraging accumulations of capital, and channeling those funds to productive investments. Insurance companies as the paramount financial organizations in any surviving economy, have as their prime business and function, the accepting of unwanted risk on behalf of the insuring public. They accept various types of risk in the expectation of being able to generate an adequate return on capital from the premiums charged and indemnify the insured at the point of claims in case of any eventuality of loss .

The management of the risks assumed by insurance companies is therefore, fundamental to the success of their operations (Soye & Adeyemo, 2017). One reason for an upward importance of insurance is the role it plays in mitigating sudden and devastating occurrences that can cripple financially individuals and corporate organizations (Yinusa & Akinlo, 2013). Abass and Obalola (2018) identified Net Claim ratio and Net Retention ratio among other proxies of reinsurance. These dimensions of reinsurance have been

reported to be correlated with sustainability and financial performance of insurance companies (Obonyo, 2016; Soye & Adeyemo, 2017).

Regardless of the fact that insurance companies are imperative part of Nigerian economic system, Nigerian insurance companies have been facing several challenges on how to meet up with their profitability goal effectively and efficiently. Consequently, the determinants of insurers' profitability have fascinated the attention of practitioners, investors, researchers, financial markets analysts and insurance regulators. Adeniyi, Adeyinka and Babayaro (2019) reported that, insurance companies in Nigeria are struggling to perform as most of them are not adequately worthwhile except for some companies which accomplished some revenues. Thus, through ceding of insurance to reinsurer, insurance company tends to broaden their horizons through underwriting risk and improves its solvency. By implication, it most likely to lead to adverse effect in the long run (Obalola & Abass, 2016).

Burca and Batrinca (2014) view the idea of the process of risk transfer to reinsurer as something that is not cost effective as it may be expensive because the cost of reinsurance might be higher than the actuarial rate of the transferred risk, especially for insurance company that have spent reasonable year with considerably underwriting experience. Although other studies have been conducted on the nexus between reinsurance and financial performance of insurance company, but to the best of researcher's knowledge, there is no recent study in Nigeria that incorporate Net Claim ratio and Net Retention ratio in relation to financial performance of insurance company in Nigeria. This very dimension in the context Nigeria has notably been neglected and there is need to conduct this study. In view of this, examine the impact of Net Claim ratio and Net Retention ratio on financial performance of insurance companies in Nigeria demand an investigation.

1.2 Objectives of the of the Study

i. To access the impact of Net Claim ratio on financial performance of Nigerian insurance companies in Nigeria.
ii. To investigate the impact of Net Retention ratio on financial performance of Nigerian insurance companies in Nigeria.

1.3 Hypotheses of the Study

$H0_1$: Net Claim ratio has no significant impact on on financial performance of Nigerian insurance companies in Nigeria.

$H0_2$: Net retention ratio has no significant impact on financial performance of Nigerian insurance companies in Nigeria.

2.0 Literature Review

2.1 Empirical Review

Abass and Ojikutu (2019) investigated the nexus between capital and demand for reinsurance by non-life insurance companies in Nigeria. The study employed longitudinal descriptive research design using stratified sampling technique. The study used Return on Asset (ROA) as surrogate for capital while product diversification and reinsurance price were used to denote demand for reinsurance. The study adopted structural equation mode

using panel vector autoregressive framework and Granger causality test. The results demonstrate that demand for reinsurance by non-life insurance companies in Nigeria is highly dependent on their availability of capital. The study recommends that non-life insurance companies in Nigeria must take into cognizance availability of adequacy of capital before assuming risks.

Abass and Obalola (2018) investigated the impact of reinsurance utilization on the performance of non-life business in the Nigerian insurance market. The study employed mixed method research design. The quantitative aspect of the study made use of financial performance measures through data obtained from the annual accounts of all the forty one (41) non-life insurance companies operating in Nigeria from 2006 to 2015, the qualitative study measured the non-financial performance through semi-structured interview from heads of reinsurance department of non-life insurance companies in Nigeria. The study used profitability PT (ROA and ROE) as surrogates of financial performance while reinsurance dependence RD (RCR and RDCP) was used to denote reinsurance utilization. For the quantitative approach, longitudinal descriptive research design was employed while the qualitative employed exploratory research design. The quantitative study adopted regression analysis using logarithmic transformation of model while the qualitative study adopted thematic content analysis. The findings of the study established statistical significant influence between dependent variable (performance) and independent variable (reinsurance utilization) since the p-value of the partial regression coefficients is less than 0.05. The qualitative results validated the findings of the quantitative study. It is therefore recommended that non-life insurance companies in Nigeria should develop other risk management mechanisms apart from reinsurance protection and at the same time improve their overall performance (both financial and non financial). If these are pursued, it will simultaneously increase their retention threshold and risk appetite and on the long run reduce the rate at which reinsurance will be utilized.

Aduloju and Ajemunigbohun (2017) examined the relationship between ceding office gross premium income, underwriting profit and financial stability with primary data obtained from 246 respondents selected from the ceding companies in Nigeria through the use of structured questionnaire. The secondary data used was retrieved from the 2014 and 2015 published financials. Descriptive research design was employed and the sampling technique adopted was purposive in nature. The data was analyzed with the use of correlation analytical method. The findings of the study which was reported to corroborate previous studies showed that reinsurance purchase increases significantly the insurers' premium income. It was also discovered that profitability of the firms are connected to changes in reinsurance utilisation and has a positive relationship with it. It was established in the study that purchasing reinsurance reduces insurers' insolvency risk by stabilizing loss experience and increasing capacity. In the present study, data from 2015 to 2019 was used which considered as a gap in this study. Other variables were also considered such as solvency margin and loss reduction which were not captured in this study.

2.2 Theoretical Framework

This study used Ruin Theory and Enterprise Risk Management Theory as the theories underpinning the study.

2.2.1 Ruin Theory

The general assumption of ruin theory was based on collective risk theory is that insurance company decision making incorporates ruin probabilities. Insurance operation is considered as a stochastic process in discrete time with continuous steps and single absorbing barrier (Cummins & Nye, 1981). Ruin probabilities are manifested in safety-first decision making and constraint utility maximization. For safety first decision making, the rule is to maximize expected net income and constraint utility maximization rule is to optimize expected utility of the net worth (Cummins & Nye, 1981).This study is hinged on ruin theory. Ruin theory is concerned with the study of stochastic processes that represent the time evolution of a surplus of a stylized non-life insurance company (Gerber & Loisel, 2012). The theory describes an insurance company who experiences two opposing cash flows: incoming cash premiums and outgoing claims. In an event when the capital becomes negative, one can conclude that ruin occurs.

2.2.2 Enterprise Risk Management Theory

The concept of risk management emerged in the mid 1900"s as a formal part of the decision-making processes within companies. On the other hand, enterprise risk management was as a result of integrating financial risks and insurance risks. Enterprise Risk Management (ERM) entails the process of coming up with strategies for identifying and managing potential and imminent risks that may affect the organization. According to Tseng (2007), Enterprise Risk Management (ERM) is a concept that aims at the adoption of an approach that is systematic and consistent to manage all a firms risks encountered. It is a firm's concept involving an entity's components such as the people, brand expertise, skills, business values, the regulatory environment.

An effective enterprise risk management enables management to constantly be informed about risks that could occur which is possible through constant monitoring of its exposure and being positioned to strategy of change or direction that makes sure that risks level is acceptable. As humans, mistakes are bound to happen due to bad judgment especially in making decisions, errors, collusion between two or more individuals in control, relative costs and benefits involved in risk response and control establishment and the overriding of a firm's risks management decisions by the management.

3.1 Research Methodology

This study adopts the Correlation research design. The data were obtained from secondary sources through the annual reports of listed insurance companies in Nigeria. The population of the study comprises all the entire fifty-eight registered insurance companies within Nigerian insurance industry. The sample size of Ten insurance companies were randomly selected for this study. Multiple regression techniques were used for the analysis. The model for this study is given as;

$Y= a_0+\beta_1 X_1 +\beta_2 X_2 +e$, hence

ROA=$f\,(NCR_1 X_1+NRR_2 X_2+\epsilon..)$

Where:

Y= Return on asset (ROA)
$\boldsymbol{a_o}$= Autonomous
$\boldsymbol{x_1}$= Net claim ratio (LOR)
$\boldsymbol{x_2}$=Net retention ratio (NRR)
β= coefficient of independent variables
e **=**is error term.

4. Result and Discussions

4.1. Unit Root Analysis

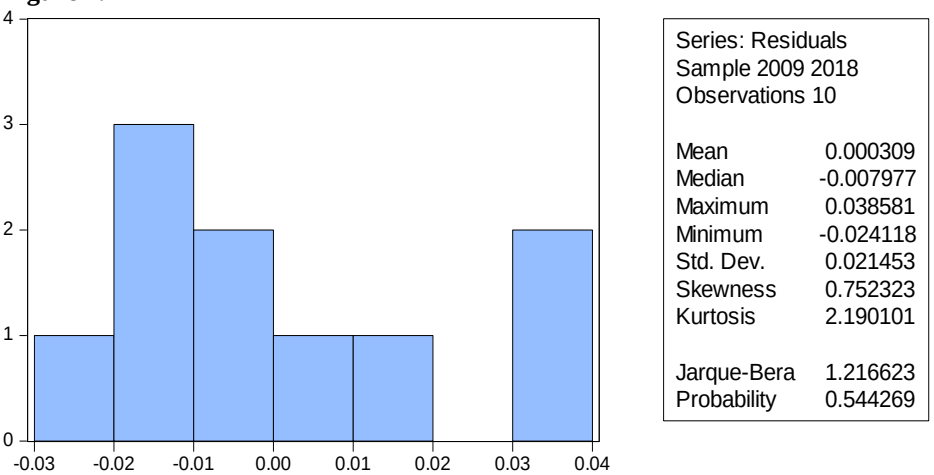
The unit root test is a pre-test carried out before the regression analysis; the test of unit root was done to establish the stationary properties of the variables considered for the research.

Table 4.1.1. Unit root table

variables	ADF t-statistic at the difference	ADF t-statistic Value	5% Critical value	Probability	Order of integration
ROA	2nd	3.399834	--2.006292	0.0047	2(0)
NRR	2nd	-6.214099	-2.006292	0.0001	2(0)
NCR	2nd	-5.216498	-2.006292	0.0004	2(0)

4.2. Normality Test

Figure 1.



Normality is carried out to determine whether the data do not follow a normal distribution. The Jarque-Bera stands at the point of 1.2116623 with the associated p-value of 0.544269. Since the p-value is greater than 0.05% level of significance, the decision of the study is to fail to reject the null hypothesis because the research has no enough evidence to say the data do not follow a normal distribution. This indicates that the data is normally distributed, and it shows a sign of a good regression line.

4.3 Correlation Analysis

The table below shows the correlation matrix among dependent and independent variables.

Table 4.3.1. Correlation Table

Variables	ROA	NCR	NRR
ROA	1		
NCR	0.246859	1	
NRR	-0.161196	-0.462893	1

i. The correlation result in Table 4.3.1 shows that net claim ratio (NRR) has positive correlation with return on asset of Nigeria insurance industry within the period of this study. It refers that when these ratios increases, the profitability Nigerian insurance companies will move up.

ii. However, net retention ratio has negative correlation with return on asset of the Nigeria insurance companies, which means that the Nigeria insurance companies have not fully utilize reinsurance cover in their businesses.

iii. The coefficient estimates of correlation in the above table shows 0.247 for loss ratio. This implies that NCR is positively correlated with return on asset. However, net retention ratio has -0.161coefficient number which is negative correlation contrast to the above variables.

4.4 Regression Analysis

In an attempt to analyze how insurance companies hedge their risks through reinsurance coverages, how the explanatory variables ($\boldsymbol{x_1} - \boldsymbol{x_4}$) affect the dependent variables (Y). In presenting the estimated model coefficients, the equation obtained from the linear function regression result is given as:

$Y = a_0 + \beta_1 X_1 + \beta_2 X_2 + e$, hence

ROA$= f\,(NCR_1 X_1 + NRR_2 X_2 + \epsilon..)$

Where:

Y= Return on asset (ROA)

$\boldsymbol{a_o}$= Autonomous

$\boldsymbol{x_1}$= Net claim ratio (LOR)

$\boldsymbol{x_2}$=Net retention ratio (NRR)

β= coefficient of independent variables

$\boldsymbol{e}$ **=**is error term.

Table 4.4.1: Regression Table

Dependent Variable: ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.012451	0.048643	0.255971	0.8053
NCR	0.061407	0.115575	0.531317	0.6116
NRR	-0.005888	0.040678	-0.144757	0.8890

R-squared	0.063742	Mean dependent var	0.026010
Adjusted R-squared	-0.203760	S.D. dependent var	0.022070
S.E. of regression	0.024215	Akaike info criterion	-4.360387
Sum squared resid	0.004104	Schwarz criterion	-4.269611
Log likelihood	24.80193	Hannan-Quinn criter.	-4.459967
F-statistic	0.238285	Durbin-Watson stat	0.956073
Prob(F-statistic)	0.794117		

$Y= a_0+\beta_1 X_1 +\beta_2 X_2+\dots \dots b_n x_n$, hence
ROA=$a_0+NCR_1 X_1 + NRR_2 X_2 + \cdots \dots b_n x_n$
ROA=$0.012451_0+0.061407_1 X_1+(-0.005888)_2+\dots \dots b_n x_n$

The multivariate regression equation above shows the hedging of risks by insurance companies through reinsurance covers. From the regression table above, the sign of the coefficient of NCR is positive. This implies that ROA will increases by 6.14%, with a percent increase in the efficient loss ratio management of insurance companies in Nigeria. Also, the insurance industry in Nigeria will experience an increase of 9.30% in its return on assets (ROA), if there is a percent increase in its net claim ratio (NCR). In relations to utilization, this implies that loss ratio has significant impact on profitability of insurance companies in Nigeria.

However, the regression model in table 4.4.1 reveals that net retention ratio (NRR) has negative effect on the profitability of insurance industry in Nigeria. The sign of coefficient of this variable on ROA is negative. This implies that a percent increase in net retention ratio (NRR) will reduce the profitability (ROA) of insurance business in Nigeria by 5.88% if other variables are held constant.

The regression table above reveals that R-square is 0.063742 this means that 6.37% of Y (ROA) are jointly explained by the two explanatory variables (NCR, and NRR). The remaining 92.63% variation of Y can be explained by other variables not considered by

this study. The statistical significance of the coefficients of the explanatory variables, which could be established from the Standard Error, T-Statistic and the probability value of each coefficient, the results show that none out of the two independent variables (NCR and NRR) are statistical significant because their p-values are greater than 0.05% level of significant.

4.5. Post Analysis Test
4.5.1. Heteroskedasticity Test

Table 4.5.1.1. Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.453354	Prob. F(2,7)	0.6529
Obs*R-squared	1.146758	Prob. Chi-Square(2)	0.5636
Scaled explained SS	0.453594	Prob. Chi-Square(2)	0.7971

From the results of Breusch-Pagan-Godfreytest, the study rejected heteroscedasticity of disturbances hypotheses and accepted homoscedasticity, since the P = 0.5636 of Fisher's F-statistics is >0.05 significance level. Therefore, in line with the above model and judging by the probability value of the observed R-squared, the residuals for the model show that they are homoscedastic in nature.

Testing of Hypotheses
Hypothesis one
Net claim ratio has no significant impact on financial performance of insurance companies in Nigeria.
The result of the regression model reveals that net claim ratio has positive effect on the financial performance of insurance companies in Nigeria, but not significant, with the corresponding p-value of 0.6116 (> 0.05) level of significant in **Table 4.4**.1. Therefore, we failed to ***reject hypothesis1*** which says Net claim ratio has no significant impact on the profitability of Nigerian insurance companies.

Hypothesis two
Net Retention ratio has no significant impact on profitability of Nigerian insurance companies. The regression result above proved that net retention ratio has impacted financial performance of insurance companies in Nigeria negatively and insignificantly. **Table 4.4.1.** above affirms that, NRR has affected ROA insignificantly with the p-value of 0.8890 (>0.05) level of significant. Therefore, the study failed to ***reject hypothesis 2*** which says net retention ratio has no significant impact on financial performance of insurance companies in Nigeria.

5.1 Conclusion and Recommendation
Based on the findings of this work, the study concluded that Net claim ratio (NCR) has insignificant impact on financial performance of insurance companies in Nigeria. The study also concluded that Claim ratio (NCR) has positive but insignificant impact on

financial performance of insurance companies in Nigeria. The study therefore recommended that rather than see reinsurance as a cost centre, insurance executives should view it as an important risk management mechanism. The study therefore suggested for further studies to accommodate other proxies of reinsurance such as Net Commission ratio and Ratio of Ceded Reinsurance. Further studies should also be carried out using more insurance company with the data of several years so as to have a robust result.

References

Abass, O. A., & Obalola, M. A. (2018). Reinsurance utilisation and performance of non-life business in the nigerian insurance industry: a mixed methods approach.*The Journal of Risk Management and Insurance.*22(2), 18-30

Abass, O. A., & Ojikutu, R. K. (2019). Interactions Between Capital And Demand For Reinsurance; An Empirical Study Of Non-Life Insurance Business In Nigeria. *LASU Journal of Management Sciences*, 5(1), 42-53

Adeniyi, D. J., Adeyinka, A. J., &Babayaro, I. (2019). Insurance Companies and the Efficiency of Financial Intermediation in Nigeria.*American International Journal of Economics and Finance Research*, *1*(1), 21-33.

Aduloju, S. A., &Ajemunigbohun, S. S. (2017). Reinsurance and performance of the ceding companies: the Nigerian insurance industry experience. *Economics and Business*, *31*(1), 19-29.

Adeniyi, D. J., Adeyinka, A. J., &Babayaro, I. (2019). Insurance Companies and the Efficiency of Financial Intermediation in Nigeria.*American International Journal of Economics and Finance Research*, *1*(1), 21-33.

Burca, A. M., &Batrinca, G. (2014).The determinants of financial performance in the Romanian insurance market.*International Journal of Academic Research in Accounting, Finance and Management Sciences*, *4*(1), 299-308.

Obonyo, S. O. N. (2016). The effect of reinsurance programmes on financial performance of general insurance companies in Kenya, October. Finance, School of Business, University of Nairobi.

Oluoma, R. O. (2014). Impact of insurance market on economic growth in Nigeria. Unpublished thesis for the award of Ph.D. in Banking and Finance of the University of Nigeria, Enugu Campus. Retrieved from repository.unn.edu.ng:8080/xmlui/.../5369/OLUOMA% 20REMIGUS%2006.pdf.

Salaudeen, T. O. (2021). Hedging risk through reinsurance in the Nigerian insurance companies: do the benefits outweigh the costs? Unpublished MSc dissertation, University of Lagos, Nigeria.

Soye, Y. A., &Adeyemo, D. L. (2017). Evaluation of impact of reinsurance mechanism on insurance companies sustainability in Nigeria. *International Journal of Research, Innovations and Sustainable Development*, *7*(1), 1-14.