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## **EFFECT OF REGULATORY INSTRUMENTS ON FINANCIAL PERFORMANCE OF INSURANCE FIRMS IN NIGERIA**

**Sukana, Danjuma Tusha, PhD**

Department of Business Administration, Ave Maria University  
Piyanko, Nasarawa State

**Eneche, Friday Sunday, PhD**

Department of Accounting, Ave Maria University Piyanko, Nasarawa  
State

### **Abstract**

*This study investigated the effect of regulatory instruments on financial performance of insurance firms in Nigeria. While claims reserves and operational risk management were used as the proxies for regulatory instruments, financial performance was measured by return on assets. The study adopted ex-post facto research design. The sample of the study constituted 15 insurance companies listed on the Nigerian Exchange for the periods of 2015-2024. Based on the outcome of the Hausman specification test, the study adopted the Random effect regression model. The results from the analysis revealed that both claims reserves and operational risk management had a positive and significant effect on financial performance of insurance firms in Nigeria. The study concluded that the two regulatory instruments used in the study have a positive and significant effect on financial performance of insurance firms in Nigeria for the period studied. The study recommended that the NAICOM should mandate insurance firms to set aside a sum not less than ten percent of the premium paid on each insurance policy as claims reserves. The study also recommended that the NAICOM should mandate all insurance firms to fully integrate operational risk management (ORM) into enterprise risk management (ERM).*

**Keywords:** Regulatory Instruments, Claims Reserves, Operational Risk Management, Financial Performance

### **1. Introduction**

The Federal Government of Nigeria has saddled the National Insurance Commission (NAICOM) with the responsibility of regulating the insurance industry in Nigeria. This regulation of insurance firms in Nigeria is aimed at imposing both standards of conduct and compliance for managers and appropriate procedures for internal controls in order to maximize opportunities for pooling funds from many insured entities so as to settle for losses which can eventually occur to these companies. This means that regulation should be an integral part of the insurance industry in order to maintain the solvency of insurance firms. Solvency indicates that insurance firms have the financial capacity to meet both their short-term and long-term obligations.

The regulation of Nigeria's insurance industry by the NAICOM is aimed at ensuring that insurance firms operate efficiently and effectively. This is an important

element for the various stakeholders of the insurance industry including owners, managers, employees, insurance brokers, investors and policyholders, who expect insurance firms to be able to create sustainable value. Hence, the NAICOM has continued to make deliberate efforts to enhance the efficiency and effectiveness of insurance firms in Nigeria through regulation using some regulatory instruments such as claims reserves and operational risk management.

Claims reserve refers to an amount of money set aside to meet future payments associated with claims incurred but not yet settled at the time of a given date. It is a reserve of money that is set aside by an insurance company in order to pay policyholders who have filed or are expected to file legitimate claims on their policies. Claims reserve became a vital regulatory instrument when the NAICOM observed that non-payment of claims is attributable to inadequate claims reserve which is one ugly habit that is giving the insurance industry a poor reputation and threatening

the future of Nigerian insurance sector (Agbo, et al., 2022). The regulatory authority believes that the image problem suffered by insurance companies in Nigeria in the past, is mainly due to the attitude of insurance companies which people describe as “smile to collect premium and frown to pay claim”. NAICOM has always emphasized that any insurance company that does not effectively handle its claims services, would ruin its image, and hence affect the sales and marketing of its insurance products.

In a similar vein, the National Insurance Commission has identified operational risk as an important issue affecting the insurance industry in Nigeria that must not be relegated to the background (NAICOM, 2021). By definition, operational risk is the risk of adverse change in the value of capital resources resulting from operational events such as inadequacy or failure of internal systems, personnel, procedures, or controls, as well as external events. The NAICOM asserted that risk of losses caused by flawed or failed processes, policies, systems or events, if left unaddressed can cause reputational damage, monetary loss, client attrition/churn, low premium income, competitive disadvantage, employee-related problems which would not only affect the financial performance of an insurance firm but ultimately lead to its failure.

This explains the reason for the regulatory focus on operational risk management over the years by the National Insurance Commission since its inception in 1997. The regulatory authority in 1997 directed that operational risk management should become not just an important but an integral feature of a sound risk management practice in all insurance firms in Nigeria. The policy directive requires insurance firms to establish key control functions: risk management, actuarial (life business only), compliance, internal audit, external audit and information technology.

The question however is, have these regulatory efforts aimed at achieving a financially healthy insurance sector by the National Insurance Commission (NAICOM) contributed to the optimal performance of insurance firms in Nigeria? It is against this backdrop that this study examined the effect of regulatory instruments on financial performance of insurance firms in Nigeria.

## **2. Literature Review**

### **2.1 Conceptual Review**

#### **Claims Reserve**

According to Oyedokun and Gabriel (2018), claims reserve refers to money set aside for a claim that has been reported but not settled or incurred but not reported. They explained that an insurance company assigns a claims reserve to each file that fits those descriptions, reflecting its best estimate of the eventual amount to be settled as claims. Claims reserve is a critical challenge for insurance firms and has dramatic consequences on their managerial, financial and underwriting decisions.

Therefore, since claims reserves are funds created for the purpose of paying anticipated claims under insurance policies, it is pertinent that upon receipt of a claim, the insurance company should review the claim to establish whether there is a potential exposure that a claim will have to be paid. If there is liability, the insurer must establish an estimated reserve, in an amount that is adequate to fully settle the claim.

Similarly, Brooks et al (2020) described claims reserve as money set aside by an insurance company in order to pay policyholders who have filed or are expected to file legitimate claims on their policies. They further explained that claims reserve is an actuarial estimate since the amounts liable on any given claim is not exactly known until settlement. According to them, the delay between event and settlement dates makes it necessary for the insurance company to set up "reserves" in respect of those claims yet to be settled. The reserves required at any time refer to the resources needed to meet the costs of all claims not finally settled at that time as they arise.

According to Carrato et al. (2018), claims reserves represent the core part of an insurer's balance sheet liability and the reliability of their valuation directly influences the financial strength of an insurance company. They further explained that claims reserve which is the total amount necessary to pay for the claims generated by the policies sold to clients should be predicted based on historical data analysis and expert judgement with maximum accuracy. They described the experts responsible for such predictions and analysis as Reserving Actuaries.

In their opinion, Gonga and Sasaka (2017) posited that claims reserve also known as insurance reserve is a certain amount of funding set aside by an insurance company to meet any future claims it may have to payout. They explained that the process begins with the insurance company formulating actuarial estimates of the levels of claim they can expect in the future for a particular type of insurance. While part of the premiums earned from the insurance policies are used to pay the claims, the rest will be set aside to add to the reserve. Also, part of the premiums may also be invested, and the returns on investment may also be added to the claims reserve. They further opined that insurance companies build up claims reserve over many years and may also pool different policies together. Notably, setting aside adequate claims reserves ensure that insurance companies can meet any claims made as set out in the insurance policy and in so doing fulfill their legal obligations.

### **Operational Risk Management**

Operational risk is the risk of loss resulting from inadequate or failed internal processes, human errors, system errors or external events. The basic components of operational risk are errors in information systems, failures in the control of financial reporting, planning and implementation of projects; inadequate organizational structure. In other words, operational risks in a wider sense include the risk of human resources (human capital risk), risk management (management control risk), the risk of a computer system (system risks), strategic risk (strategic risks), the risk of procedures (process risks), legal risk, the risk of loss of reputation (reputational risk), the risk of realization of a catastrophic event (disaster risk), a regulatory risk (regulatory risk) and political risk. Therefore, operational risk is capable of disrupting the smooth flow of business operations in an organization (Mwanja, 2021).

Peter et al. (2019) posited that the concept of operational risk is not new but came into prominence after the collapse of Barings Bank in 1995 as well as the Long-Term Capital Management (LTCM) crisis of 1998 which investigation revealed was caused by failure of operational risk management. Similarly, Cruz (2021) stated that the term “operational risk” was most likely first used following the infamous

bankruptcy of Barings Bank in 1995. According to him, the bankruptcy which was triggered by a \$1.3 billion loss due to a rogue trader, raised the consciousness of the financial industry to the fact that risks other than market or credit risk can result to substantial negative effects on a financial institution.

According to Amaya and Memba (2018) effective operational risk management will help insurance firms to identify the risks that they are exposed to, particularly those that are not within their expertise or experience to manage, thereby helping them to put effective mechanisms in place to reduce such risks and their associated impact if it crystallizes. However, they opined that for operational risk management to be effective, it should be incorporated at all levels of the company and observed that operational risks cannot be completely eliminated as they are constant, pervasive, and varied. Thus, operational risk management (ORM) never ends and should focus on reducing and mitigating key risks related to the organization’s day-to-day operations.

### **Financial Performance**

In simple terms, financial performance measures the extent to which an organization utilizes its resources optimally to generate value for stakeholders during a given period of time. It is an important indicator to the overall health of an organization and ultimately its survival, hence, a primary concern of all financial institutions including insurance firms (Odongo, 2021). According to Didin et al. (2018) financial performance refers to the ability of a company to manage and control its own resources and can be extracted from the financial statements; cash flow, balance sheet, profit-loss and capital change. They asserted that return on assets (ROA) which refers to the number of kobo earned on each naira worth of assets is the most appropriate measure of the performance of a company. This justifies why ROA was adopted as the measure of financial performance in this study.

## **2.2 Empirical Review**

### **Claims Reserves and Financial Performance**

Banmore et al. (2023) analysed the effect of claims reserves on the performance of selected insurance firms in Lagos through marketing factors. The study collected primary data from 776 of management, senior and junior (frontline) staff of the selected

Insurance companies using questionnaires. The study employed a quantitative approach with a survey method and stratified random sampling technique was used to collect data from the Respondents who were selected from 20 registered insurance companies which cuts across composite, general and life Insurance businesses in Lagos State. The collected data were analysed using hierarchical regression analysis (HRA) to test hypotheses and evaluate the regression model specified. The findings indicated that marketing factors significantly moderated the effect of claims reserves on firm performance of selected Insurance Companies.

Falade and Oyedokun (2022) sought to assess the relationship between claims reserves and financial performance of listed insurance companies in Nigeria. The study used six selected Nigerian Insurance companies as case study using ex-post facto research design.

The data were collected from the companies' annual reports for the periods between 2011-2019, made available in the Nigerian Insurers Association Digest. The findings based on the analysis, showed that Net Claim, Net Premium, Expenses Ratio, and Risk-Based Capital have a significant effect on the financial performance of Insurance Companies in Nigeria. The study, therefore, concluded that the insurance companies should at all costs put in place strategies to ensure proper management of Net Claim, Net Premium, and Risk-Based Capital and entrust these in the hand of experts to yield the required results.

Oladunni and Okonkwo (2022) examined the impact of claims reserves on financial performance of insurance companies in Nigeria. The research design employed was an ex-post facto research design. A census of all the 58 insurance and reinsurance companies listed on the Nigerian Insurers' Association (NIA) and National Insurance Commission (NAICOM) as at 2018 was taken. Data for the study were collected from the annual publications of the Nigerian insurance digest and National Insurance Commission for 10 years from 2009-2018. Data were analyzed using panel data regression analysis. Hypotheses of the study were tested at 5% significant level. Regression results revealed that risk retention (Risk Retention Ratio) had statistically significant

impact on claims management (reinsurer-insurer claims ratio) of insurance companies in Nigeria.

### **Operational Risk Management and Financial Performance**

Almasarweh et al. (2022) investigated the effect of operational risk management methods employed by Jordanian insurance firms on their financial performance. The study used an empirical study design using twenty insurance companies registered in Jordan as the sample of the study. The research utilized both published reports and financial documents maintained by Insurance Regulatory Authority (IRA) for seven years. Using SPSS, the quantitative data was evaluated.

The mean, standard deviation (SD), and variance analysis evaluated the data. The results showed that operational risk management positively and significantly affects financial performance and that the adoption of operational risk management strategies correlates positively with financial performance.

In a similar study, Kiptoo et al. (2021) examined the relationship between risk management and the financial performance of insurance firms in Kenya over the period 2013–2020. The study collected data from 51 Insurance firms licensed to operate in Kenya. Regression analysis was used and the results showed that risk management significantly affects the financial performance of insurance firms. In particular, the results indicated that operational risk management positively and significantly affects financial performance. The findings showed that proper management of firms' operations results in reduced operating costs, which in turn result in an increase in net premiums and positively impact the performance of a firm.

Al-Yatama et al. (2020) examined the effect of operational risk on the financial performance of insurance companies listed at Kuwait stock exchange (KSE) over the period 2009-2017. The study data was collected by secondary means and analyzed using STATA 13 to test the relationship between the independent variable (operational risk) and the dependent variable (financial performance). Results obtained from the study revealed that the financial performance of Kuwaiti insurance companies are

affected by operational risk. The study concluded that effective operational risk management policy enhances financial performance of listed insurance companies in Kuwait.

Fadun and Oye (2020) analysed the impact of operational risk management on the financial performance of commercial banks in Nigeria. The study used secondary data for 10-years (2008 -2017) which was extracted from audited financial statements of selected commercial banks in Nigeria. The data was analysed using the Linear Multiple Regression Model. The results showed that there is a positive relationship between operational risk management and the financial performance of banks. The findings revealed that sound operational risk management impacts positively on the financial performance of banks. The study recommended that banks' management should deploy adequate resources towards understanding operational risk to ensure sound operational risk management and improved financial performance of banks. The study is based on a limited scope; therefore, a larger sample size may make for an interesting research in the future.

### 2.3 Theoretical Framework

This study was anchored on the modern financial intermediation theory developed by Merton and Bodie (1995). The theory highlights the primary functions of insurance firms to include resource accumulation, resource allocation, managing various risks and facilitation of exchange. The Nigeria's insurance industry will enhance its financial performance and contribute significantly to economic growth by realizing these functions. In other words, by having an adequate claims reserves that ensures prompt settlement of claims and having a robust operational risk management framework, insurance firms in Nigeria will not only retain their existing customers but attract more new customers. This will in turn result

to resource accumulation (surplus) which can be re-allocated to deficit areas of the economy that can put the resources into productive use.

### 3. Methodology

The study employed ex-post facto research design. The population of this study comprised the 24 listed insurance companies on the Nigerian Exchange from year 2015 to 2024. Based on the small size of the population, the study did not use any statistical sampling technique, instead 15 listed insurance companies that have been actively trading on the floor of the Nigerian Exchange throughout the period under study that is, 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2024 and also have complete data set for the same periods were selected based on filtering method. The study used multiple panel regression to analyse the data because the data collected was over a period of time (10 years) for 15 listed insurance companies, a total of 150 observations.

Therefore, in order to study the effect of regulatory instruments on the financial performance of insurance firms in Nigeria, the following model was adopted:

$$ROA_{it} = \beta_0 + \beta_1 CLR_{it} + \beta_2 ORM_{it} + \varepsilon_{it}$$

Where:

i = Number of firms in the industry, that is fifteen (15) insurance companies

t= Period covered, that is ten (10) years

ROA (Measure of Financial Performance) = Return on Assets (Dependent Variable)

$\beta_0$  = Constant parameter

CLR = Claims Reserves

ORM = Operational Risk Management

$\beta_1, \beta_2$ , are regression coefficients of the independent variables

$\varepsilon$  = Probable error term

**Table 1: Variables of the Study and their Measurements**

| Variables | Measurement                                                                                                           | Source                                                             |
|-----------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| ROA       | $\frac{\text{Net Profit After Tax}}{\text{Total Assets}}$                                                             | Pointer and Khoi (2019); Rosikah et al. (2018)                     |
| CLR       | $\frac{\text{Net Claims Incurred}_t - \text{Net Claims Incurred}_{t-1}}{\text{Net Claims Incurred}_{t-1}} \times 100$ | Yusuf and Ajemunigbohun (2015); Afolabi (2018); Agbo et al. (2022) |
| ORM       | Basic Indicator Approach: ORM is measured as a percentage of gross income over that of the preceding three years.     | BASEL II, (2004); Anetoh et al. (2021); Meshack and Mwaura (2016)  |

Source: Researcher's Computation 2025

#### 4. Results and Discussion

**Table 2: Descriptive Statistics**

|              | ROA       | CLR      | ORM      |
|--------------|-----------|----------|----------|
| Mean         | 45.266973 | 13.55456 | 7.092363 |
| Maximum      | 25.163419 | 17.75625 | 21.23960 |
| Minimum      | -9.740914 | 0.000000 | 0.000000 |
| Std. Dev     | 11.587889 | 7.497335 | 9.217660 |
| Observations | 150       | 150      | 150      |

Source: Researcher's Computation using E-views 15, 2025

The average return on asset (ROA) of the listed insurance companies in Nigeria, according to Table 2, is 45.3 with the minimum and maximum return on assets (ROA) being are -9.7 and 25.2, respectively, while the ROA deviation is 11.6 percent. This suggests that the maximum return on assets for the insurance sector is 25.2 while the most net loss it has seen during the period under review is -9.7. Additionally, as shown in table 2, the industry maintained an average of 13.6 claims reserves within the 10-year period while maintaining a high standard deviation of 7.5. The minimum claim reserve was 0 while the maximum claims reserve stood at about 17.8. More so, operational risk management portfolio maintained an

average of 7.1 with a standard deviation of 9.2. The minimum and maximum operational risk management are 0 and 21.2 respectively. The summary statistics is important in providing a basic understanding of the data on which the research findings rest.

#### Correlation Result

The Correlation Matrix table highlights the relationship between the various pairs of variables contained in the Regression Model. It explains how the independent variables relate with the dependent variable and how the independent variables relate among themselves.

**Table 3: Correlation Matrix of variables**

| Variables | ROA      | CLR      | ORM      |
|-----------|----------|----------|----------|
| ROA       | 1.000000 |          |          |
| CLR       | 0.639121 | 1.000000 |          |
| ORM       | 0.596512 | 0.480342 | 1.000000 |

Source: Researcher's Computation using E-views 15, 2025

The correlation matrix as depicted in table 3 revealed a strong and positive association between claims reserves and financial performance (ROA) of the sampled insurance firms with a correlation coefficient of 0.64 (64%), while that of operational risk management is also strong and positive with a correlation coefficient of 0.60 (60%).

#### Hausman Test

The Hausman test was used to determine if fixed effect model (FEM) or random effect model (REM) was appropriate to test the hypotheses of the study. The Hausman test has a null hypothesis “REM is not appropriate than FEM”. If P-value is greater than 0.05 then reject the null hypothesis and proceed to REM but if P-value is less than 0.05 then accept the null hypothesis and proceed to FEM

**Table 4: Hausman Test**

| Correlated Random Effects - Hausman Test |                   |              |          |
|------------------------------------------|-------------------|--------------|----------|
| Test cross-section random effects        |                   |              |          |
| Test Summary                             | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob.    |
| Cross-section random                     | 1.054327          | 2            | 0.095347 |

**Source: Researcher's Computation using E-views 15, 2025**

According to table 4, the Hausman test reveals a P-value of 0.095347 which is greater than 0.05. Therefore, the null hypothesis “REM is not appropriate than FEM”

was rejected and the alternative hypothesis “REM is more appropriate than FEM” was accepted.

**Table 5: Random Effects (RE) Regression Results**

| Variables                | Coefficients | Std. Errors | T        | P> T     |
|--------------------------|--------------|-------------|----------|----------|
| CLR                      | 0.449132     | 0.307481    | 0.681217 | 0.000000 |
| ORM                      | 0.547623     | 0.432455    | 0.452471 | 0.535246 |
| C                        | 3.213814     | 0.852451    | 8.672452 | 0.743321 |
| R – Squared              | 0.532163     | 0.765142    |          |          |
| Adjusted R-squared       | 0.356268     | 5.723642    |          |          |
| F-statistic              | 41.682435    | 0.000412    |          | 0.000000 |
| Hettest Chi <sup>2</sup> | 0.683665     | 0.023534    |          | 0.462345 |
| Mean VIF                 | 4.241326     | 0.005312    |          |          |

**Source: Researcher's Computation using E-views 15, 2025**

The random effect (RE) regression results presented in table 5 revealed that the coefficient of determination ( $R^2$ ) is 0.532163 which implies that 53% of the variations in the financial performance (measured by ROA) of insurance firms in Nigeria is as a result of the explanatory variables (claims reserves and operational risk management), while 47% of the variations is caused by other factors outside the purview of the study. Notably, the F-value probability of 0.000000 clearly indicates that the model is fit and significant at

1% level of significance and the variables are accurately selected. The Hettest Chi<sup>2</sup> value of 0.683665 and the corresponding p-value of 0.462345 obtained from the Breusch and Pagan test for heteroscedasticity confirmed that there is no problem of heteroscedasticity. The mean Variance Inflation Factor (VIF) value of 4.241326 which is less than 10 as shown in table 4 implied the absence of multicollinearity.

The results of random effects regression in table 5, revealed that claims reserves has a significant and positive effect on the return on assets of insurance firms in Nigeria as indicated by the coefficient value of 0.449132, which is statistically significant at 1% level of significance (P-value of 0.000000). This implied that ROA increases as the claims reserves increases. This outcome is consistent with the findings of Banmore et al. (2023) but in sharp contrast with the findings of Brooks et al. (2020).

The result also showed that operational risk management has a significant and positive effect on the financial performance (ROA) of insurance firms in Nigeria as revealed by the coefficient value of 0.547623 which is statistically significant at 5% level of significance (P-value of 0.535246). This also means that ROA increases as operational risk management increases. This result agrees with the findings of Kiptoo et al. (2021) but contradicts the findings of Cruz (2021).

## 5. Conclusion and Recommendations

The study examined the effect of regulatory instruments on the financial performance of insurance firms in Nigeria. The study used claims reserve (CLR) and operational risk management (ORM) as proxies for regulatory instruments (independent variable) and return on assets (ROA) as proxy for financial performance (dependent variable). From the findings of the study, it was concluded that claims reserves and operational risk management both have significant positive effect on the financial performance of insurance firms in Nigeria. Based on the conclusions of this study, the following recommendations were made:

- i. The NAICOM should formulate and implement a policy that mandates insurance firms to set aside a sum not less than ten

percent of the premium paid on each insurance policy as claims reserves. The study submits that setting aside a minimum of ten percent of the premium paid on each insurance policy will assist insurance companies in Nigeria to maintain claim reserves that can cover claim losses at all times, since it is almost unlikely for all the events for which insurance policies have been taken to occur at the same time. This policy if implemented will prevent the insurance companies from becoming bankrupt and also guarantee the protection of the interests of policyholders by ensuring that claims are promptly paid. This will in turn, build the confidence of policyholders and address the growing apathy for insurance in Nigeria which is largely responsible for the dwindling premium income generated by insurance firms in Nigeria.

- ii. The NAICOM should mandate all insurance firms to fully integrate operational risk management (ORM) into enterprise risk management (ERM). The NAICOM posited that an effective and holistic operational risk management (ORM) is more important than ever as insurance business is becoming more complex. Hence, Enterprise Risk Management (ERM) is highly relevant in the Nigerian insurance industry. However, the NAICOM observed that most insurance companies have not complied with the regulatory requirement of integrating ORM into ERM which it has issued in 2015 (NAICOM, 2023). It is in this regards that this study recommends that any insurance firm in Nigeria that fails to report its ERM activities in its annual accounts should be sanctioned by way of fine in the first instance and where this act of non-compliance persists, the NAICOM should revoke the license of such company.

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