International Journal of Entrepreneurship, Management and Social Sciences (IJEMSS)
Volume 2, Issue 1; ISSN: 3026-9881
email: ijemss@futminna.edu.ng

Influence of Reinsurance on Financial Stability of Insurance Companies in Nigeria

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Abstract

This study examined the influence of reinsurance on the financial stability of insurance companies in Nigeria from 2012 to 2023. Using a panel data regression approach, financial data from 30 insurance companies were analysed to determine the effects of reinsurance on key performance indicators such as Return on Assets (ROA) and Net Profit Margin (NPM). The results indicate that while reinsurance enhances risk management and solvency, excessive reliance negatively affects profitability due to high ceded premiums. The ratio of ceded reinsurance (RCR) significantly reduces ROA ($\beta = -0.1204$, $p < 0.001$) and NPM ($\beta = -0.0872$, $p = 0.083$). Underwriting risk scores negatively affect ROA ($\beta = -0.0918$, $p < 0.001$), underscoring the need for sound underwriting practices. Macroeconomic factors such as inflation positively influence ROA ($\beta = 0.0043$, $p = 0.018$), while exchange rate volatility negatively impacts profitability ($\beta = -0.00004$, $p = 0.048$). The study concludes that while reinsurance is essential for risk mitigation and financial stability, over-reliance can erode profitability. It recommends optimizing reinsurance strategies by balancing risk transfer costs with financial performance and strengthening local reinsurance capacity to minimize foreign exchange risks.

Keywords: Reinsurance, Financial Stability, Profitability, Risk Management, Nigerian Insurance Sector

INTRODUCTION

The Nigerian insurance industry plays a crucial role in economic stability by providing financial protection against risks. However, insurers face challenges such as high claims volatility, regulatory capital requirements, and economic uncertainties, which threaten their solvency and profitability. To manage these risks, insurers engage in reinsurance, a mechanism that transfers a portion of their liabilities to reinsurers in exchange for a premium. Reinsurance enhances an insurer's ability to underwrite large policies, stabilize earnings, and comply with solvency regulations (Lin *et al.,* 2024).

While reinsurance is widely recognized for improving financial stability, its effect on profitability remains unclear. On one hand, reinsurance reduces insolvency risk and strengthens insurers' ability to absorb shocks (Aduloju & Ajemunigbohun, 2017). On the other hand, excessive reinsurance reliance can erode profitability due to high ceded premiums, reduced retained earnings, and foreign exchange risks (Bressan, 2018; Biru, 2020). The optimal level of reinsurance utilization that balances risk mitigation with financial performance remains a critical concern for insurers and regulators alike.

Despite its significance, empirical research on reinsurance in Nigeria is limited. Existing studies focus primarily on non-life insurance, with little attention given to the life and health insurance sectors (Dansu & Obalola, 2018). Additionally, previous research relies on cross-sectional data, overlooking the long-term financial implications of reinsurance (Muazaroh, 2023**).** Furthermore, macroeconomic factors such as inflation, exchange rate fluctuations, and GDP growth—which can influence reinsurance effectiveness—have not been adequately integrated into prior studies.

To bridge these gaps, this study conducts a longitudinal analysis (2012–2023) to examine the impact of reinsurance utilization on the financial stability of Nigerian insurers, focusing on Return on Assets (ROA) and Net Profit Margin (NPM). The findings will offer valuable insights for insurers, regulators, and policymakers in optimizing reinsurance strategies.

Research Objectives

The study aims to:

1. Evaluate the impact of reinsurance on the Return on Assets (ROA) of insurance companies in Nigeria.
2. Evaluate the impact of reinsurance on the Net Profit Margin (NPM) of insurance companies in Nigeria between 2012 and 2023.

Research Questions

To achieve these objectives, the study seeks to answer the following questions:

1. What is the impact of reinsurance utilization on the Return on Assets (ROA) of insurance companies in Nigeria?
2. How does reinsurance utilization influence the Net Profit Margin (NPM) of Nigerian insurers?

Research Hypotheses

The study tests the following hypotheses:

Null Hypotheses (H_0):

H_{01}: Reinsurance has no significant impact on the Return on Assets (ROA) of insurance companies in Nigeria.

H_{02}: Reinsurance has no significant impact on the Net Profit Margin (NPM) of insurance companies in Nigeria.

Alternative Hypotheses (H_1):

H_{11}: Reinsurance has a significant impact on the Return on Assets (ROA) of insurance companies in Nigeria.

H_{12}: Reinsurance has a significant impact on the Net Profit Margin (NPM) of insurance companies in Nigeria.

LITERATURE REVIEW

Conceptual Review

Concept of Reinsurance

Reinsurance serves as a vital risk management strategy for insurance companies, allowing them to transfer a portion of their liabilities to reinsurers in exchange for a premium. This mechanism enhances insurers' financial stability by reducing risk exposure, ensuring solvency, and enabling them to underwrite larger policies than their capital base would ordinarily allow (Lin *et al.,* 2024). The use of reinsurance also facilitates compliance with regulatory capital requirements, ensuring that insurers can

meet their long-term financial obligations (Cummins & Weiss, 2014**).** However, while reinsurance mitigates volatility in claims and financial distress, excessive reliance on it can lead to lower profitability due to high ceded premium costs and reduced retained earnings (Weiss & Chung, 2004).

The effectiveness of reinsurance largely depends on the structure of the reinsurance arrangement. Proportional reinsurance involves the insurer and reinsurer sharing premiums and claims in a fixed proportion. In contrast, non-proportional reinsurance covers losses only when they exceed a pre-agreed threshold (Shah & Ahmed, 2024). Proportional reinsurance, such as quota share and surplus share agreements, provides more predictable financial relief by distributing risk evenly. However, it often results in higher ceded premiums, which can reduce profitability. Non-proportional reinsurance, such as excess-of-loss and stop-loss agreements, is beneficial for protecting insurers from catastrophic losses while allowing them to retain more premium income. The choice between these types of reinsurance depends on an insurer's risk appetite, regulatory constraints, and capital structure (Park *et al.,* 2021).

Financial Stability and Profitability in the Insurance Industry

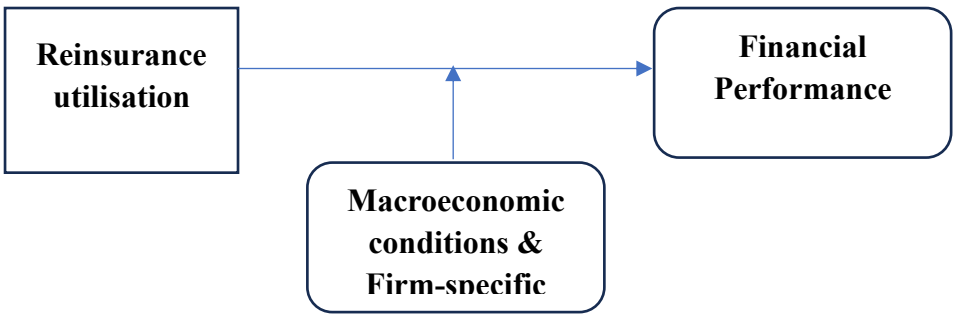
Financial stability in the insurance sector refers to an insurer's ability to meet its financial obligations, maintain solvency, and generate sustainable profits. A financially stable insurer can absorb large claims, maintain consistent cash flow, and comply with regulatory requirements (Cummins *et al.,* 2017). Stability is typically measured using key financial indicators, including Return on Assets (ROA), Net Profit Margin (NPM) and Solvency Ratio. ROA is a measure of profitability that reflects how efficiently an insurer utilizes its assets to generate earnings while NPM Indicates the percentage of revenue that remains as profit after expenses, including reinsurance costs. The solvency ratio assesses an insurer's ability to meet its long-term liabilities and is critical for regulatory compliance (Adams et al., 2008).

Reinsurance and Macroeconomic Factors

The effectiveness of reinsurance is influenced by macroeconomic conditions such as inflation, exchange rate fluctuations, and GDP growth. Inflation increases claims costs, which can erode profitability, while exchange rate volatility impacts the cost of reinsurance, particularly for insurers relying on foreign reinsurers (Andoh & Yamoah, 2021). In emerging markets like Nigeria, insurers frequently purchase reinsurance from international firms due to limited local reinsurance capacity, exposing them to currency risks (Osifodunrin& Lopes, 2022). Additionally, GDP growth affects the demand for insurance products, with higher economic expansion typically leading to increased insurance penetration (Arena, 2008). These macroeconomic factors must be considered when evaluating the impact of reinsurance on insurers' financial performance.

Conceptual Framework for the Study

The conceptual framework of this study illustrates the relationship between reinsurance utilization and financial performance, taking into account moderating factors such as macroeconomic conditions. The framework is based on the premise that reinsurance utilization, while essential for risk mitigation, can have both positive and negative implications for insurers' financial performance.



Independent Variable: Reinsurance Utilization

Reinsurance utilization is measured using the Ratio of Ceded Reinsurance (RCR), which represents the proportion of total gross written premiums ceded to reinsurers. A higher RCR indicates greater reliance on reinsurance, which can enhance stability but may reduce profitability due to ceded premium costs. Conversely, a lower RCR suggests that the insurer retains more risk internally, which may increase earnings but also exposes the company to higher claim volatility (Biru, 2020b).

Dependent Variables: Financial Performance Indicators

Financial performance is assessed using two key metrics including Return on Assets (ROA) and Net Profit Margin (NPM). ROA measures an insurer's profitability relative to its total assets. A lower ROA suggests inefficiency in asset utilization, which may be influenced by high reinsurance costs (Bressan, 2018). NPM, on the other hand, evaluates profitability by measuring how much profit remains after all expenses, including reinsurance, have been deducted from revenue. Insurers with a high NPM are generally more profitable and financially stable (Cummins *et al.,* 2017).

Moderating Variables: Macroeconomic and Firm-Specific Factors

To control for external and internal influences on financial performance, the study incorporates macroeconomic and firm-specific factors. The macroeconomic factors include inflation rate, exchange rate volatility and GDP growth rate. High inflation increases claim costs, reducing profitability (Arena, 2008). Exchange rate volatility affects reinsurance costs for firms relying on offshore reinsurers (Andoh & Yamoah, 2021). GDP Growth can increase insurance demand and improve premium income (Tugsjargal, 2024).

The firm-specific factors used include underwriting risk score, company size (total assets) and leverage (debt-to-equity ratio). Higher underwriting risk increases the likelihood of claim payouts, affecting profitability (Aduloju&Ajemunigbohun, 2017). Larger firms may have better risk diversification, reducing dependency on reinsurance (Park et al., 2021) while highly leveraged firms may experience liquidity challenges when managing reinsurance costs (Powell & Sommer, 2005).

Theoretical Framework

This study is based on the Risk Management Theory. This theory posits that firms engage in risk transfer mechanisms, such as reinsurance, to mitigate uncertainties and ensure financial stability (Balaji et al., 2024). Insurance companies face unpredictable claims fluctuations, and reinsurance helps in smoothing losses over time, thus reducing insolvency risk. In the Nigerian context, economic volatility, regulatory requirements,

and catastrophic risks necessitate effective risk management strategies. By applying Risk Management Theory, this study evaluates whether reinsurance utilization enhances the financial stability of Nigerian insurers over the long term.

Empirical Review

Aduloju and Ajemunigbohun (2017) examined the impact of reinsurance on the performance of Nigerian insurance companies, focusing on gross premium income, underwriting profit, and financial stability. Using a combination of primary data from 246 respondents and secondary data from 10 insurance companies' 2014–2015 financial statements, the study employed correlation analysis. The results indicated a strong positive correlation between reinsurance capacity and gross premium income ($r = 0.817$, $p < 0.01$), suggesting that reinsurance enhances insurers' ability to write more policies and reduce insolvency risk. However, the study was limited by its short time frame (two years), which may not capture long-term effects.

Andoh and Yamoah (2021) investigated the impact of reinsurance on the profitability of 20 non-life insurance companies in Ghana from 2008 to 2018. Using panel regression analysis, they found that reinsurance alone had no significant effect on profitability (coefficient: -0.0201, $p = 0.672$). However, when reinsurance was combined with solvency ratio, it significantly reduced profitability (coefficient: -0.1879, $p = 0.016$). The study suggested that insurers must balance solvency management with reinsurance strategies to avoid adverse profitability effects. A limitation was that the study did not differentiate between proportional and non-proportional reinsurance effects.

Biru (2020a) analyzed the effect of reinsurance dependency on profitability in Ethiopian property and casualty insurers. Using panel data regression on 72 firm-year observations from 2011–2016, the study found a negative relationship between reinsurance dependency and profitability (measured by ROA). High ceded premiums were identified as the main reason for reduced profits, supporting the view that over-reliance on reinsurance weakens financial performance. However, the study focused only on property and casualty insurers, neglecting other insurance sectors.

Park *et al.* (2021) examined the impact of internal and external reinsurance on the profitability and pricing strategies of U.S. property and casualty insurers. Using a two-stage least squares (2SLS) regression model across 11,894 firm-year observations (2001–2009), they found that external reinsurance negatively affects profitability due to high costs, while internal reinsurance improves profitability by leveraging internal capital market efficiencies. This study is significant in highlighting that not all reinsurance arrangements have the same financial effects, but it was limited to property and casualty insurance, excluding life insurance firms.

Powell and Sommer (2005) analyzed the costs and benefits of internal versus external reinsurance in the U.S. insurance market. The study used two-stage least squares (2SLS) regression models and found that internal reinsurance is more cost-effective due to reduced information asymmetry. They reported that firms with high leverage relied more on external reinsurance, which was found to be more expensive and less efficient. While insightful, the study did not incorporate macroeconomic variables such as inflation and exchange rates, which influence reinsurance effectiveness.

Kajwang (2022) examined the role of reinsurance in economic stability, emphasizing its importance in maintaining solvency and business continuity. The study found that without reinsurance, high-risk industries would struggle to operate, as insurers would be

unable to absorb large losses. The study highlighted that reinsurance contributes to economic resilience by spreading risks across different markets and reinsurers, but it did not provide quantitative analysis to measure its economic impact.

Kramarić *et al.* (2019) explored the determinants of financial stability for insurers in Croatia, Hungary, and Poland from 2013 to 2017 using panel regression models. The findings indicated that firm size positively affects financial stability (coefficient: 0.3649, $p < 0.05$) in Croatia, while reinsurance enhances financial stability in Hungary and Poland (Hungary: 0.0073, $p < 0.10$; Poland: 0.0261, $p < 0.10$). The study underscores the regional variations in reinsurance effectiveness, though it does not explore profitability implications.

Tugsjargal (2024) investigated the profitability effects of reinsurance on general insurers in Mongolia (2016–2022). Using panel regression analysis, the study found that reinsurance negatively affects profitability (coefficient: -0.0747, $p = 0.067$) due to high ceded premium costs. The study highlights that investment income (coefficient: 0.241, $p = 0.0007$) can offset reinsurance expenses, suggesting that diversified revenue streams improve financial stability. However, the study was limited by its small sample size (10 insurers).

Polyakova and Polyakov (2021) analyzed the impact of reinsurance on the financial performance of Russian insurers (2014–2018). Using panel regression models, they found that reinsurance negatively affects short-term profitability (coefficient: -0.028, $p < 0.05$) due to outgoing cash flows from ceded premiums. However, the study acknowledged that in the long term, reinsurance enhances financial stability by mitigating risk exposure. The research did not, however, control for different types of reinsurance agreements, which could influence outcomes.

Santri (2023) investigated reinsurance arrangements and legal responsibilities in the insurance sector using a normative legal approach. The study highlighted the importance of reinsurance contracts in ensuring financial protection for insurers and policyholders. A key finding was that legal frameworks and contract clarity significantly affect the success of reinsurance agreements. However, the study lacked quantitative financial data, making it difficult to assess the economic impact of reinsurance policies.

McLaughlin (2006) analyzed how reinsurance enhances financial resilience to catastrophic events. Focusing on post-2005 U.S. hurricanes, the study found that global reinsurance markets effectively mitigate financial shocks, preventing insolvencies. However, the study emphasized that rising reinsurance costs due to climate risks could reduce affordability for primary insurers.

Cummins and Weiss (2014) examined the role of reinsurance in managing catastrophe risks using a panel dataset of 32 countries (1990–2012) and GLS regression. The study found that reinsurance enhances solvency ($p < 0.01$) but increases insurers' risk-taking incentives. It concluded that reinsurance is most effective when combined with strong risk management policies. A limitation was its focus on catastrophe risk without analyzing general profitability metrics.

Adams *et al*. (2005) investigated reinsurance demand determinants among UK life and non-life insurers (1985–2000) using fixed-effects regression. Results showed that highly leveraged insurers purchase more reinsurance ($p < 0.05$) to mitigate insolvency risks. The study also found that firms with higher underwriting risks rely more on reinsurance for

earnings stability. A limitation was not accounting for macroeconomic influences on reinsurance decisions.

Cole and McCullough (2006) analyzed the profitability impact of reinsurance use in the U.S. property and casualty sector (1995–2003) using two-stage least squares (2SLS) regression. Findings indicated that greater reinsurance reliance leads to lower profitability due to high ceded premiums (coefficient: -0.042, $p < 0.05$). The study emphasized the importance of optimizing reinsurance usage but was limited by its focus on short-term profitability effects.

Kader *et al.* (2010) examined reinsurance and financial performance in French insurers (1998–2007) using dynamic panel regression models. Results indicated that reinsurance improves solvency but negatively affects profitability ($p < 0.01$) due to cash outflows from ceded premiums. The study suggested balancing reinsurance use with internal risk management. A limitation was not differentiating between proportional and non-proportional reinsurance effects.

Summary and Research Gap

The foregoing studies reveal a complex relationship between risk mitigation, profitability, and financial stability. Several studies suggest that reinsurance enhances solvency and premium growth, allowing insurers to underwrite more policies and reduce insolvency risks. However, other studies highlight that excessive reliance on reinsurance erodes profitability due to high ceded premium costs, limiting retained earnings and reducing return on assets. The impact of reinsurance on profitability was also observed to vary depending on firm size, reinsurance type (proportional vs. non-proportional), and leverage levels, with larger firms and those using internal reinsurance structures better positioned to optimize costs. Some research points to regional and market-specific differences, where reinsurance strengthens financial stability in some economies but has insignificant or negative effects in others, particularly in emerging markets with weaker local reinsurance capacity. Additionally, macroeconomic factors such as inflation, exchange rate fluctuations, and GDP growth play a critical role in shaping reinsurance effectiveness, yet many studies fail to incorporate these variables. Furthermore, while studies recognize reinsurance's role in absorbing catastrophic losses and ensuring economic resilience, most focus on short-term effects, neglecting long-term profitability implications. There is also limited research on the legal and regulatory frameworks governing reinsurance arrangements, as well as how insurers' risk management strategies influence financial outcomes. These gaps highlight the need for a comprehensive, long-term analysis of reinsurance effectiveness, particularly in emerging markets where regulatory dynamics, macroeconomic instability, and sectoral variations shape reinsurance's impact on financial performance.

RESEARCH METHODOLOGY

This study adopted a quantitative research design to comprehensively examine the influence of reinsurance on the financial stability of insurance companies in Nigeria between 2012 and 2023. The population for the quantitative component comprises all registered insurance companies operating in Nigeria between 2012 and 2023. According to the National Insurance Commission (NAICOM, 2019), there are 58 licensed insurance

companies in Nigeria as of 2023, encompassing both life and non-life insurers. A purposive sampling method is employed to select insurance companies that meet specific criteria essential for the study including availability of data. Both life and non-life insurance companies are included to address the research gap concerning life insurance sectors. A preliminary search revealed that 30 insurance companies met the criteria and therefore including in the study. Data were obtained from secondary sources including annual financial reports, regulatory fillings, and industry database. The data were analysed using descriptive statistics and panel data regression analysis.

Regression Equation:

$$FS_{it} = \beta_o + \beta_1 RE_{it} + \beta_2 Control\ variables_{it} + \mu_1 - \in_{it}$$

Where:

FS_{it} = Financial Stability indicator (e.g. ROA or NPM) for company i at time t

RE_{it} = Reinsurance utilization ratio for company i at time t

μ_1 = Unobserved company-specific effects.

$\in_{it}$ = Error term.

Control Variables: Variables such as company size (log of total assets), underwriting risk (loss ratio), leverage (debt-to-equity ratio), and macroeconomic factors (GDP growth rate, inflation rate) are included to isolate the effect of reinsurance.

Diagnostic Tests: Tests for multicollinearity (Variance Inflation Factor), heteroskedasticity (Breusch-Pagan test), and autocorrelation (Durbin-Watson statistic) are conducted to ensure the robustness of the regression models.

Results and Discussion

Descriptive Analysis

a. Trend of Gross Premium Income Over Years

The trend of gross premium income highlights variability in revenue generation among Nigerian insurers from 2012 to 2023. Peaks, such as in 2015 and 2023, suggest favorable economic conditions or successful market penetration during those years, while troughs, like in 2013 and 2019, may reflect economic downturns or heightened claims payouts. Gross premium income, a critical revenue indicator, often fluctuates with macroeconomic conditions like inflation and GDP growth, as well as insurance market dynamics. These trends resonate with literature emphasizing the susceptibility of emerging market insurers to external shocks and highlight the importance of sustainable premium growth for financial stability (Outreville, 1990; Feyen *et al.,* 2011).

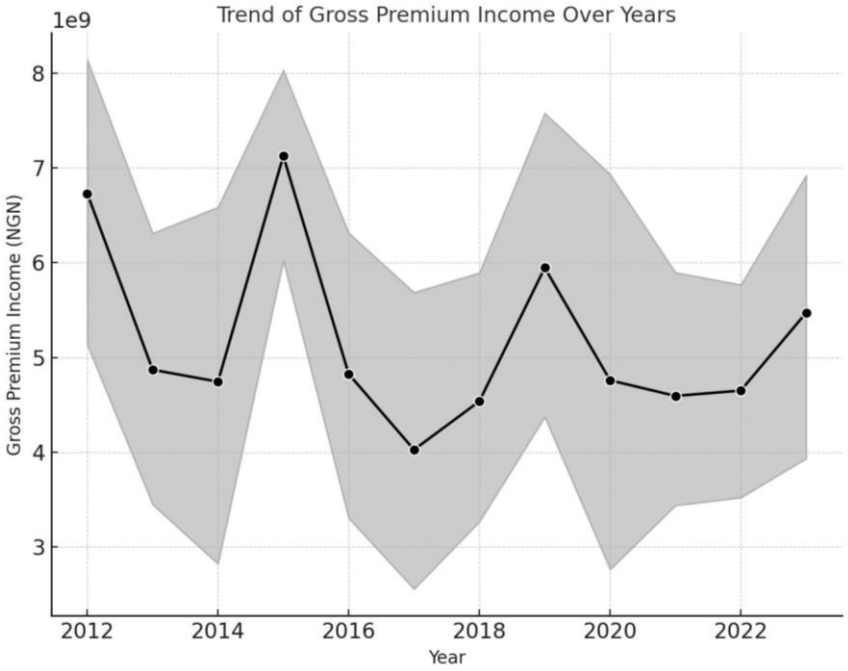


Figure 1: Trends of Gross Premium Income

b. Trend of Return on Assets (ROA) Over Years

The ROA trend reveals fluctuating profitability for Nigerian insurers, with occasional negative returns (e.g., 2012) reflecting challenging periods, while more recent years (e.g., 2023) show recovery and improved asset utilization. Such volatility underscores the sensitivity of insurer profitability to operational efficiency and external factors, including inflation, exchange rate volatility, and reinsurance costs. Literature on emerging markets emphasizes that consistent ROA performance often relies on robust risk management and asset allocation strategies (Arena, 2008; Grace & Timme, 1992). The observed instability reflects the challenges Nigerian insurers face in navigating economic volatility while maintaining profitability.

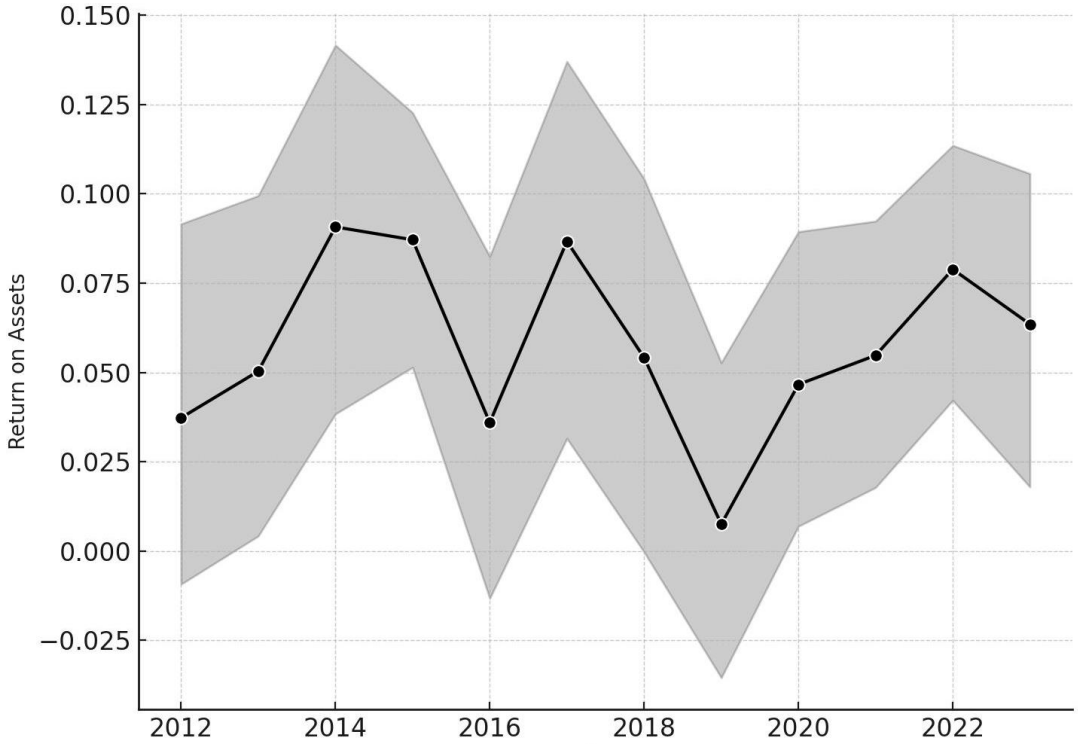


Figure 2: Trends in Return on Assets

c. Trend of Ratio of Ceded Reinsurance (RCR) Over Years

The RCR trend indicates fluctuating reliance on reinsurance, with peaks in 2013 and 2015 suggesting heightened risk aversion during uncertain periods, and subsequent declines reflecting shifts towards higher risk retention. Reinsurance reliance can mitigate catastrophic losses but erode profitability due to ceded premiums, aligning with global findings on the cost-benefit balance of reinsurance practices (Adams *et al.,* 2005; Weiss & Chung, 2004). The declining trend post-2016 suggests evolving strategies among Nigerian insurers to optimize risk retention and reduce reinsurance costs, demonstrating a proactive approach to balancing solvency and profitability.

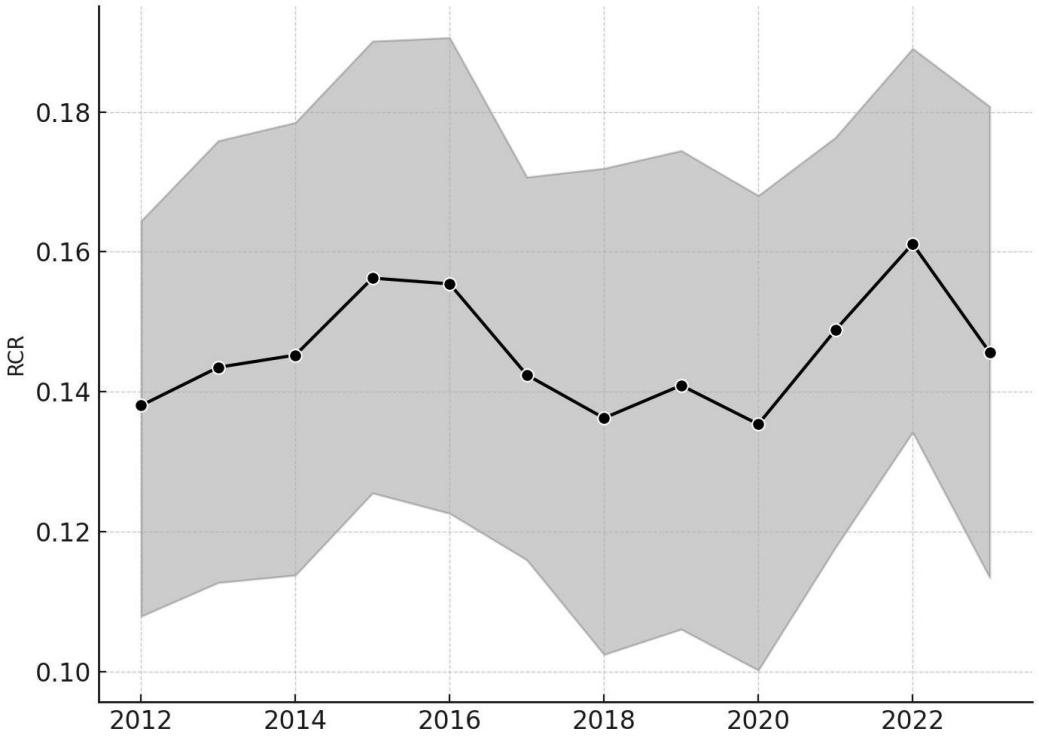


Figure 3: Trend of Ratio of Ceded Reinsurance (RCR)

Impact of Reinsurance on Return on Assets (ROA)

The regression results (Table1) offer significant insights into how reinsurance practices, risk management, and macroeconomic factors shape the financial stability of Nigerian insurers, as measured by ROA. With an $R2$ of 0.478, the model explains a substantial portion of ROA variability, confirming the relevance of these predictors. The overall significance of the model (F =29.67, p< 0.001) underscores its robustness and the strength of the relationships under investigation.

a. Reinsurance Metrics

The Ratio of Ceded Reinsurance (RCR) negatively impacts ROA (β = −0.1204, p<0.001), indicating that excessive reliance on reinsurance reduces profitability. This result is consistent with Weiss and Chung's (2004) findings, which highlight the trade-offs insurers face in balancing risk transfer and earnings retention. Similarly, the negative impact of Reinsurance Price (%) (β = − 0.0753, p = 0.030) reflects the financial strain of costly reinsurance agreements, aligning with Adams *et al*.'s (2005) argument that high costs can erode profitability, especially in competitive or volatile markets. These findings highlight the need for Nigerian insurers to optimize reinsurance utilization, ensuring it provides sufficient risk protection without compromising profitability.

b. Risk Management

The Underwriting Risk Score exhibits a strong negative effect on ROA (β = −0.0918, p< 0.001), reinforcing the importance of effective underwriting in sustaining profitability. Higher risk scores likely reflect underwriting inefficiencies or adverse selection, which increase claims exposure and reduce asset returns. This observation aligns with the work of Grace and Timme (1992), who emphasize the critical role of underwriting quality in the financial performance of insurers. For Nigerian insurers, these results underscore the need to enhance underwriting practices to mitigate risks and sustain asset efficiency.

c. Macroeconomic Factors

Among the macroeconomic variables, Inflation Rate (%) positively influences ROA (β = 0.0043, p = 0.018), suggesting that insurers adjust pricing to maintain profitability during inflationary periods. This supports the findings of Arena (2008), who observed that insurers in emerging markets often exhibit resilience to inflation due to their pricing flexibility. Conversely, the Exchange Rate (NGN/USD) negatively impacts ROA ($\beta = -0.00004$, p = 0.048), reflecting the financial strain posed by currency depreciation, particularly when foreign-denominated reinsurance contracts are involved. GDP Growth Rate (%) has a marginally significant positive effect ($\beta = 0.0028$, $p = 0.063$), emphasizing the broader economic conditions that facilitate asset utilization and profitability, consistent with Feyen *et al*.'s (2011) findings on economic growth and insurance market performance.

Generally, the findings emphasize the dual role of reinsurance as both a tool for risk mitigation and a cost burden. While reinsurance supports solvency and loss protection, excessive reliance or high premiums can undermine profitability, echoing global trends (Doherty & Smetters, 2005). Effective underwriting emerges as a critical driver of financial performance, highlighting the importance of risk management in the Nigerian context. Furthermore, macroeconomic stability is pivotal, as inflation, exchange rates, and GDP growth significantly influence insurer profitability.

Table 1: Regression analysis Results on impact of reinsurance on Return on Assets

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Constant	0.0875	0.0123	7.11***	0.000
Ratio of Ceded Reinsurance	-0.1204	0.0287	-4.19***	0.000
Reinsurance Price (%)	-0.0753	0.0342	-2.20**	0.030
Underwriting Risk Score	-0.0918	0.0189	-4.85***	0.000
Inflation Rate (%)	0.0043	0.0018	2.39**	0.018
Exchange Rate (NGN/USD)	-0.00004	0.00002	-2.00**	0.048
GDP Growth Rate (%)	0.0028	0.0015	1.87*	0.063
R-squared	0.478			
Adjusted R-squared	0.462			
F-statistic	29.67***			

***, **, *** =** significance at 10%, 5% and 1% levels respectively

Impact of Reinsurance on Net Profit Margin (NPM)

The regression results in Table 2 reveal critical insights into how reinsurance practices, risk management, and macroeconomic factors influence Net Profit Margin (NPM), a key measure of profitability. With $R2 = 0.369$, the model explains 36.9% of the variation in NPM, and the overall significance ($F = 17.52$, $p< 0.001$) confirms the relevance of the included predictors.

The Ratio of Ceded Reinsurance (RCR) has a marginally significant negative impact on NPM ($\beta = -0.0872$, p = 0.083), indicating that high reliance on reinsurance slightly erodes profitability. This aligns with findings in Table 2, where RCR significantly reduced ROA, and echoes Weiss and Chung's (2004) observation that ceded premiums

reduce retained earnings, especially in competitive markets. Interestingly, Reinsurance Price (%) shows no significant effect on NPM ($\beta = -0.0625$, $p = 0.261$), suggesting that while costly reinsurance strains asset returns (Table 2), its direct impact on net margins may be mitigated by pricing adjustments.

The Underwriting Risk Score negatively affects NPM ($\beta = -0.1023$, $p< 0.001$), reflecting the critical role of effective risk management in profitability. Poor underwriting practices likely increase claims and operational inefficiencies, reducing net margins. This finding aligns with Grace and Timme (1992), who emphasize the need for sound underwriting as a driver of insurer profitability.

Macroeconomic influences are less pronounced in this model. Exchange Rate (NGN/USD) has a marginally positive effect on NPM ($\beta = 0.00007$, $p = 0.081$), potentially reflecting cost advantages from favorable currency movements in reinsurance agreements. Similarly, GDP Growth Rate (%) positively impacts NPM ($\beta = 0.0045$, $p = 0.074$), highlighting how economic expansions foster profitability. However, these effects are weaker than those observed in Table 2 for ROA, suggesting that net margins are less sensitive to external economic conditions.

Summarily, the foregoing results underscore the nuanced role of reinsurance in shaping profitability. While reliance on reinsurance (RCR) marginally reduces NPM, effective risk management emerges as a decisive factor in sustaining profitability. This aligns with Adams *et al.* (2005), who emphasize the need for insurers to optimize reinsurance practices to balance cost and risk transfer. Additionally, macroeconomic stability remains an enabler of profitability, albeit with less direct influence on NPM compared to ROA.

Table 2: Regression analysis Results for impact of reinsurance on Net Profit Margin

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Constant	0.1568	0.0214	7.33***	0.000
Ratio of Ceded Reinsurance	-0.0872	0.0498	-1.75*	0.083
Reinsurance Price (%)	-0.0625	0.0553	-1.13	0.261
Underwriting Risk Score	-0.1023	0.0302	-3.39***	0.001
Inflation Rate (%)	0.0029	0.0031	0.94	0.349
Exchange Rate (NGN/USD)	0.00007	0.00004	1.75*	0.081
GDP Growth Rate (%)	0.0045	0.0025	1.80*	0.074
R-squared	0.369			
Adjusted R-squared	0.348			
F-statistic	17.52***			

*, **, *** = significance at 10%, 5% and 1% levels respectively

CONCLUSION

This study concludes that reinsurance is a critical tool for risk mitigation and financial stability in Nigeria's insurance sector but poses challenges when excessively relied upon. High reinsurance dependency, reflected in elevated ceded premiums, negatively impacts profitability metrics such as Return on Assets (ROA) and Net Profit Margin (NPM), underscoring the need for balanced utilization. Effective underwriting emerges as a pivotal factor, with poor practices increasing claims exposure and eroding financial performance. Macroeconomic conditions also influence outcomes, with inflation

supporting profitability through pricing adjustments, while exchange rate volatility presents risks, particularly in foreign reinsurance contracts. These findings highlight the dual role of reinsurance as both a stabilizing mechanism and a cost driver, emphasizing the importance of optimizing reinsurance strategies, strengthening underwriting frameworks, and adapting to macroeconomic dynamics to achieve financial sustainability.

RECOMMENDATIONS

Based on the study findings, three critical recommendations are proposed to address the challenges and opportunities identified in the impact of reinsurance on financial performance:

1. Optimize Reinsurance Utilization: Reduce over-reliance on reinsurance by retaining manageable risks to balance solvency protection with profitability.
2. Improve Underwriting Practices: Enhance risk assessment and internal controls to minimize claims exposure and improve overall financial performance.
3. Mitigate Exchange Rate Risks: Adopt currency hedging strategies to counteract the financial strain posed by exchange rate volatility in foreign reinsurance agreements.

LIMITATIONS OF THE STUDY

The study faced the following limitations:

1. Data Availability: Gaps in financial data across companies limited comprehensive longitudinal analysis.
2. Sectoral Focus: The study primarily addressed general insurance, leaving life and health insurance sectors underexplored.
3. Geographical Scope: Results are specific to Nigeria and may not generalize to other emerging markets with distinct regulatory and economic landscapes.
4. Causality Issues: Establishing direct causality between reinsurance practices and financial outcomes was challenging due to potential unobserved variables.

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