UNDERWRITING PRACTICES AND FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN NIGERIA

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ABSTRACT

This study examines the extent to which underwriting practices influence the financial performance of insurance companies in Nigeria. This study was conducted using expo-facto research design and cross-sectional analysis. The study tested the extent to which set of independent variables (Underwriting profit, Underwriting expenses, Net premium, Net claim) affects the dependent variable (Profit Before Tax). A sample of ten insurance companies were selected from the pool of registered firms. Secondary data were extracted from the audited annual report of the selected insurance companies, the data covering a period from 2013 to 2022. The statistical tool that was employed in analysing the data is E-VIEWS statistical software 10.0. Analysis was based on descriptive statistics while hypotheses were tested using simple and multiple panel regression analysis. Based on the results obtained from the study, it was revealed that the extent to which underwriting profit influences profitability is 2.29%, thus, it does not significantly affect profitability. The extent to which underwriting expenses and net claim affects profitability are 47.45% and 61.50% respectively, making them significantly affect profitability. Net premium on the other hand significantly contributes to profitability by 66.93%. From the multiple regression analysis result, underwriting practices influences financial performance by 66.33% and the variable that stood out as a major and strong influence is net premium, therefore, insurance companies must ensure they get their rating right as that is a non- negotiable factor for profit. The study recommends that insurance companies should focus on having healthy underwriting practices while diversifying revenue streams. Finally, the study suggests that further studies should make use of qualitative methods and consider the effects of consumer behaviour and preference on underwriting practices and financial performance.

Keywords: underwriting-practices, financial-performance, net-premium, underwriting-profit, net-claim, underwriting-expenses.

1.0 Introduction

Insurance is a financial tool that is responsible for the management of individual and corporate risks conventionally within the economy. To ensure profitability and sustainability, these risks should be well managed by the insurance companies. Insurance companies' ability to continue to cover risk in the economy hinges on their capacity to create profit or value for their shareholders (Akotey, Sackey, Amoah, & Manso, 2013). Sean (2021) opined that the essential insurance model involves pooling risk from individual payers and redistributing it across a larger portfolio. Most insurance companies generate revenue in two ways; charging premiums in exchange for insurance coverage, then reinvesting those premiums into other interest-generating assets.

Underwriting is a fundamental process in the insurance industry that serves several important purposes such as risk assessment, pricing accuracy, selection of risks, and fraud prevention. Underwriting forms the foundation of insurance operations and contributes to the stability, profitability, and sustainability of the insurance industry. Insurance underwriters play a critical role in the insurance industry in helping insurance companies remain profitable (Choi & Eling, 2011).

This study explored underwriting practices as a determinant of financial performance of insurance companies in Nigeria, providing valuable insights to insurance companies' underwriting practices and examined to what extent financial performance been influenced by it. By analysing underwriting practices and financial indicators like profitability, the study will identify specific areas of weakness and inefficiency that contribute to the problem. With this knowledge, policymakers, regulators, and industry stakeholders can develop targeted interventions and reforms aimed at improving underwriting standards, enhancing risk management practices, and ultimately, strengthening financial resilience across the insurance sector.

The aim of this study is to examine underwriting practices and its influence on the financial performance of insurance companies within the Nigerian market. The specific objectives of the study are to: examine the extent to which underwriting profit impacts the profitability of insurance companies in Nigeria; evaluate the extent to which underwriting expenses affects the profitability of insurance companies in Nigeria; assess the extent to which net premium contributes to the profitability of insurance companies in Nigeria; and investigate the extent to which net claim affects the profitability of insurance companies in Nigeria.

2.0 Literature Review

Financial performance is a metric used to assess how well a company is using its resources to generate profit and create value for its stakeholders. It is a critical aspect of assessing the health and sustainability which is used by investors, creditors, and analysts to evaluate a company's ability to meet its financial obligations and its potential for future growth. Financial performance metrics include profitability, liquidity, efficiency, solvency, growth potential, and market value (Brigham & Houston, 2012). Performance indicators including the net premium generated, profitability generated from underwriting operations, yearly turnover, return on investment, and return on equity are closely tied to an insurance firm's underwriting services (Oluwaleye, Ajemunigbohun, & Abiodun, 2023).

For the study, profitability, specifically profit before tax (PBT), is the financial metric employed. It is a critical financial metric that reflects a company's profitability before the deduction of tax expenses. Understanding PBT is crucial for assessing a company's financial health, as it provides insight into the operational efficiency and profitability of the business, independent of its tax obligations. PBT allows for more accurate comparisons of profitability across different companies or industries (Brealey, Myers & Allen, 2011). For management, PBT serves as a gauge of operational performance. It helps in identifying areas where costs might be reduced or where operational efficiency can be improved. Additionally, PBT is often used in performance-based compensation structures, where management bonuses or profit-sharing agreements are tied to pre-tax earnings (Horngren, Datar & Rajan, 2015).

In Nigeria, where insurance penetration remains relatively low compared to global standards, the ability of insurers to generate underwriting profits directly impacts their financial performance and sustainability (Ogundare & Ololade, 2019). Similar penetrations rate is recorded in studies carried out in Ghana (Akotey *et al*, 2013) and in Kenya (Kamau, 2023).

Several studies such as Awojobi, Akinlo & Olabisi (2016); Olorunfemi & Oloye (2020); Onyinyechi, Inyang, & Bassey (2023); Oluwaleye *et al.* (2023); and Soye, Omoruyi & Nwokoye (2023) have all investigated the relationship between underwriting and profitabiity in the insurance industry in Nigeria. The studies, though observed differing types if insurance companies with differing factors such as scope and variables all conlcuded that underwriting profit significantly influences the profitability of insurance companies in Nigeria.

Similarly, several studies carried out in sub-saharan Africa such as Mwangi & Iraya (2014); Angima & Mwangi (2017); Kamau (2023) corroborates the assertion.

Underwriting expenses play a significant role in shaping the financial performance of insurance companies in Nigeria. Studies such as Adeyemo & Oseni (2019); Agboola, Abiodun & Onipe (2020); and Oyewole (2020) observed that underwriting expenses have a negative effect on profitability however some opined that underwriting expenses should be reduced to enhance profitability; others opined that though controlling expenses is crucial for profitabilitystriking a balance between cost optimization and service quality.

Likewise, Ojeka & Nzewi (2017); Adegbie & Fakile (2018) and Agboola *et al.* (2020) attribute net premium income as a significant determinant of profitability. Their findings emphasise the importance of effective premium pricing strategies and underwriting practices in enhancing the financial performance of insurance firms. In contrast, Olabisi and Ogunnaike (2019) argued that while net premium income is essential for revenue generation, it does not guarantee profitability in the Nigerian insurance industry. This notion is further supported by the study of Okafor & Amadi (2021) where it is suggested that while net premium growth is important, it is not the sole driver of profitability. Other factors such as high claims ratio, operational infficiencies and investement losses (Osuagwu & Udeaja, 2019);expense management, investment performance and risk management practices (Okafor & Amadi, 2021); and market dynamics (Adeleke & Adekunle, 2022) have a moderating effect on the relationship between net premiums and profitabiity of insurance companies.

Lastly, empirical studies on the relationship between net claims and profitability in the Nigerian insurance sector provide valuable insights into the factors driving insurer performance. For example, Odusanmi & Fasanya (2018) found that insurance companies with effective claims management processes experienced lower claim ratios and higher profitability levels. This is further supported in the study of Adegboye & Olaleye (2019) where they identified net claims as a significant predictor of insurer profitability.

From the literatures reviewed, it was seen that previous researchers of related studies have made use of different indices for both dependent and independent variables in order to come up with their findings. However, it was observed that most of the previous studies made use of ROA and ROE as their profitability metric, very little researchers made use of profit before tax (PBT). They are all profitability metrics, nonetheless, the research carried out by Omoruyi and Nwokoye (2023) revealed that the pattern of effects of underwriting capacity variables differ in terms of the measurement used for performance indicator. Also, previous studies made use of different variables to assess underwriting practices however, little or no similar research has made use of underwriting profit, underwriting expenses, net premium and net claim as a whole to assess underwriting practices. Hence, this study seeks to conduct further research using these four independent variables and profit before tax (PBT) to examine this line of study. This is crucial to enhance the rigor of findings, and provide actionable insights for insurers, policymakers, and other stakeholders in the insurance industry.

3.0 Materials and Methods

The population of the study consists of all Insurance Companies in Nigeria registered with the National Insurance Commission (NAICOM). According to NAICOM, below is the breakdown of the numbers of insurance companies in Nigeria, thus comprises this study's population. Composite - 13, Micro - 9, Life - 14, Takaful - 5, General - 15, Reinsurance - 3.

The sample companies used in this study were chosen using convenience sampling. Ten insurance companies were selected from the pool of registered firms with NAICOM based on convenience and accessibility. This method enabled quick and easy access to the companies' data, ensuring a timely completion of the study. The ten companies picked comprised of 6 composite and 4 general insurance companies. The following are the list of selected companies used: Leadway Assurance Company Limited, AIICO Insurance Plc, Consolidated Hallmark Insurance Plc, AXA Mansard Insurance Plc, Cornerstone Insurance Plc, Universal Insurance Plc, Lasaco Assurance Plc, Mutual Benefits Assurance Plc, NEM Insurance Plc and Royal Exchange General Insurance.

The method of data collection for this research primarily involved gathering secondary data from the audited annual reports of selected insurance companies registered with the National Insurance Commission (NAICOM) between the period of 2013 to 2022. This data includes information on underwriting profit, underwriting expenses, net premium, net claim, and profitability (profit after tax).

Since this study aims to examine the extent to which underwriting practices influences financial performance of insurance companies in Nigeria, the econometric model (simple and multiple regression) will be adopted with Profit Before Tax (PBT) as the dependent variable and Underwriting Profit (UP), Underwriting Expenses (UE), Net Premium (NP) and Net Claim (NC) as independent variables.

The model specification for this research is simple and multiple linear regression model, which can be represented as:

PBT = f(UP, UE, NP, NC)

PBT = f(UP, UE, NP, CP, e)

This means PBT (dependent variable) is a function of the independent variables.

The econometric form of the equation is represented as:

$PBT_t = \beta_0 + \beta_1 UP_t + \beta_2 UE_t + \beta_3 NP_t * \text{firm-age} + \beta_4 NC_t + e_t$

Where:

PBT = Profit Before Tax (Dependent variable)

β0 = intercept or constant term
β1, β2, β3, β4 = coefficients or slopes of the independent variables UP, UE, NP, NC = independent variables
e= error term or residual

This model assumes a linear relationship between the dependent variable (PBT) and the independent variables (UP, UE, NP, NC), while taking into consideration the firms' age as a control variable. The coefficients (β1, β2, β3, β4) represent the change in PBT for a one unit change in the respective independent variable, while holding all other independent variables constant. After the data has been collected from the annual report and collated on Microsoft Excel, the file was imported to EViews where the data was analysed. Description statistics, inferential statistics and cross-sectional analysis were adopted to achieve the stated objective.

4.0 Results

Table 4.1 below presents the result of the descriptive analysis made on the variables. For Profit Before Tax (PBT), the mean is 2164.216, indicating a moderate level of profitability. The median PBT is 1025.718, which is lower than the mean, suggesting that some extreme values may be pulling the mean upwards. The maximum value is 13448.97, indicating significant profitability for some firms, while minimum value is -2805.625, indicating significant losses for some firms. The standard deviation is 3171.387, indicating moderate variability in PBT across firms. Skewness is 2.000809, indicating a slightly positively skewed distribution.

Table 4.1. Descriptive Table

	PBT	UP	UE	NP	NC	FMAGE
Mean	2164.216	799.8479	3033.965	13174.69	7279.790	44.80000
Median	1025.718	1787.786	2288.708	6145.341	2497.866	42.00000
Maximum	13448.97	71555.44	13259.56	71121.88	57174.74	104.0000
Minimum	-2805.625	-103598.4	83.57300	502.6500	67.34900	6.000000
Std. Dev.	3171.387	14766.78	2572.516	17175.53	11771.77	25.50619
Skewness	2.000809	-2.909549	1.823216	2.232237	2.464153	0.684376
Kurtosis	6.836763	32.58639	6.538468	7.068388	8.383221	2.824522
Jarque-Bera	128.0570	3788.401	107.5718	152.0138	221.9470	7.934478
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.018926
Sum	216421.6	79984.79	303396.5	1317469.	727979.0	4480.000
Sum Sq. Dev.	9.9608	2.1610	6.5508	2.9210	1.3710	64406.00
Observations	100	100	100	100	100	100

Source: Researcher's computation (Eviews 10) 2024.

Based on the multiple regression result in table 4.2 below, it was discovered that bringing all the independent variables together as well as the control variable, underwriting profit does not significantly impact profit before tax because it has a p-value of 0.5321 which is > 0.05. Underwriting expenses, net claim and firm age does not also significantly affect profit before tax because they all have a p-value of 0.7459, 0.2167 and 0.8055 respectively which are > 0.05. Therefore, net premium has proven to be the only variable that stood out amongst the rest having a p-value of 0.0001 which < 0.05 is thereby making it a major determinant of profit after tax.

Table 4.2. Multiple Regression Result (Normal Effect Model)

Dependent Variable: PBT
Method: Panel Least Squares
Date: 07/09/24 Time: 13:57
Sample: 2013 2022
Periods included: 10
Cross-sections included: 10
Total panel (unbalanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UP	-0.008140	0.012978	-0.627181	0.5321
UE	-0.049493	0.152296	-0.324982	0.7459
NP	0.121179	0.029768	4.070710	0.0001
NC	0.055286	0.044457	1.243607	0.2167
FMAGE	1.928052	7.808218	0.246926	0.8055
C	235.5435	403.1611	0.584242	0.5605

R-squared	0.680302	Mean dependent var	2164.216
Adjusted R-squared	0.663297	S.D. dependent var	3171.387
S.E. of regression	1840.233	Akaike info criterion	17.93130
Sum squared resid	3.1808	Schwarz criterion	18.08761

Log likelihood	-890.5649	Hannan-Quinn criter.	17.99456
F-statistic	40.00548	Durbin-Watson stat	1.050779
Prob(F-statistic)	0.000000		

Source: Researcher's computation (EViews 10) 2024.

5.0 Discussion and Recommendation

This study sought to ascertain the effect of underwriting practices on the financial performance of insurance companies in Nigeria using cross sectional data from 2013 to 2022. To effectively conduct the research, this study came up with objectives to further determine the extent to which underwriting profit, underwriting expenses, net premium and net claim influences profitability.

The first objective of the study was to examine the extent to which underwriting profit impacts the profitability of insurance companies in Nigeria. Based on results, it was discovered that there is no statistically significant effect of underwriting profit on financial performance. This implies that the company's overall profitability is not largely dependent on its ability to generate profits from its insurance operations and other factors may have a more significant impact on its bottom line. The second aim of the study was to evaluate the extent to which underwriting expenses affects the profitability of insurance companies in Nigeria. From the results, the study concludes that underwriting expenses significantly affects the profitability of insurance companies in Nigeria. This means that the higher the underwriting expenses, the lower the profitability of the insurance company, and vice versa. This implies that insurance companies in Nigeria need to manage their underwriting expenses efficiently to maintain profitability.

The third objective of the study was to assess the extent to which net premium contributes to the profitability of insurance companies in Nigeria. It is concluded that net premium significantly contributes to the profitability of insurance companies in Nigeria. This implies that insurance companies in Nigeria can improve profitability by increasing net premium through efficient underwriting, pricing, and claims management.

The fourth objective of this study was to investigate the extent to which net claim affects the profitability of insurance companies in Nigeria. it is found that net claim significantly affects the profitability of insurance companies in Nigeria. This means that the number of claims paid out (net claims) has a significant negative impact on the profitability of insurance companies in Nigeria.

In conclusion, net premium stood out from other independent variables as the major determinant of profit with a p-value of 0.0001, follow by net claim with a p-value of 0.2167. The multiple regression results also gave an adjusted r-squared of 0.663297. This means underwriting practices influences the financial performance of insurance companies in Nigeria by 66.33%.

The results of this study indicate that underwriting practices have a significant effect on the financial performance of insurance companies in Nigeria. Additionally, net premiums and net claims were found to have a significant positive and negative effect, respectively, on financial performance. These findings are consistent with prior research and have important implications for insurance companies operating in Nigeria. By optimizing their underwriting practices, premiums, and claims management, insurance companies can improve their financial performance and contribute to the growth and development of the insurance industry in Nigeria. Based on the findings, it is recommended that underwriting practices, premium management, and claims management be optimized for insurance companies. Concerted efforts towards exploring consumer behaviour and regulatory directives can be used to develop more effective underwriting practices and ultimately improve the financial performance and contribute to the growth of the insurance industry in Nigeria.

Considering the limitation of the study to just ten years data, few suggest further study be contemplated using a longer study period above ten years. A comparative study between life and non-life insurance companies in Nigeria can also be done to assess the effect of underwriting practices on their financial performance.

References

Adegbie, F. F., & Fakile, A. S. (2018). Performance analysis of insurance companies in Nigeria: An empirical review. *Journal of Insurance and Risk Management*, 5(2), 45-58.

Adegboye, F., & Olaleye, O. (2019). Determinants of Profitability in the Nigerian Insurance Industry: A Study of Net Claims Ratios. *Nigerian Journal of Insurance,* 15(1), 78-89.

Adekunle, A., & Adewale, O. (2020). Claims Management Practices and Profitability of Insurance Companies in Nigeria: A Contradictory Perspective. *Journal of Insurance and Financial Management,* 7(2), 89-102.

Adeleke, F., & Adekunle, O. (2022). Market Dynamics and the Relationship between Net Premium and Profitability of Insurance Companies in Nigeria. International Journal of Insurance Economics, 12(3), 112-125.

Adeyemo, O. O., & Oseni, I. O. (2019). Managing Underwriting Expenses for Improved Financial Performance: Evidence from Nigerian Insurance Industry. *Journal of Accounting and Finance,* 19(5), 76-88.

Agboola, M., Abiodun, P., & Onipe, A. (2020). Firm specific attributes and financial performance of listed insurance companies in Nigeria. *Gusau Journal for Accounting and Finance,* 1(2), ISSN: 2756-665X.

Akotey, J. O., Sackey, F. G., Amoah, L., & Manso, R. F. (2013). The Financial Performance of Life Insurance Companies in Ghana. *The Journal of Risk Finance,* 14(3), 286 - 302.

Angima, C. & Mwangi, M. (2017). Effects of Underwriting and Claims Management on Performance of Property & Casualty Insurance Companies in East Africa. *European Scientific Journal*, 13(13), 358-372.

Awojobi, O., Akinlo, T.O., & Olabisi, J.O. (2016). Competition, Concentration, and Their Implications for Underwriting Profit Margin in the Nigerian Insurance Industry. *Economic Analysis and Policy*, 50, 86-95.

Brealey, R. A., Myers, S. C., & Allen, F. (2011). Principles of Corporate Finance (10th ed.). New York, NY: McGraw-Hill/Irwin.

Brigham, E. F., & Houston, J. F. (2012). Fundamentals of Financial Management (13th ed.). Cengage Learning.

Choi, S.H., & Eling, M. (2011). Underwriting Cycles: Evidence from the U.S. Property Liability Insurance Industry. *Journal of Risk and Insurance,* 78(3), 709-735.

Horngren, C. T., Datar, S. M., & Rajan, M. V. (2015). Cost Accounting: A Managerial Emphasis (15th ed.). Upper Saddle River, NJ: Pearson Education.

Kamau, A. M. (2023). Underwriting risk, firm size and financial performance of insurance firms in Kenya. *Eastern Journal of Economics and Finance,* 8(1), 1-14.

Mwangi, M. & Iraya, C. (2014). Determinants of Financial Performance of General Insurance Underwriters in Kenya. *International Journal of Business & Social Science.* 5(13), 209-214.

National Association of Insurance Commissioners. (2021). NAIC model laws, regulations, guidelines and other resources.

Odusami, A. O., & Fasanya, I. O. (2018). Claims Management and Profitability of Insurance Companies in Nigeria. *Journal of Risk and Insurance Management*, 10(2), 45-56.

Ogundare, O.J., & Ololade, O.O. (2019). Underwriting Performance of Insurance Industry in Nigeria: A Review. *Journal of Economics and Business Management,* 1(1), 36-46.

Ojeka, S. A., & Nzewi, H. N. (2017). Determinants of profitability in the Nigerian insurance sector. *African Journal of Economic Review,* 5(1), 28-42.

Okafor, C., & Amadi, K. (2021). Beyond Net Premium Growth: Determinants of Profitability in the Nigerian Insurance Industry. *Journal of Risk Management and Insurance Studies,* 6(1), 34-45.

Okoye, C. J., & Emeni, F. K. (2023). The impact of net premium income on the profitability of insurance companies in Nigeria: A regression analysis. *International Journal of Finance and Accounting Studies,* 11(2), 78-92.

Olabisi, J. O., & Ogunnaike, O. (2019). Net premium and profitability nexus in the Nigerian insurance industry: A comparative analysis. *Journal of Insurance Research and Practice,* 7(3), 112-126.

Olorunfemi, S., & Oloye, O.O. (2020). An Empirical Study of Underwriting Profitability and Financial Performance of Nigerian Insurance Companies. *International Journal of Economics, Commerce and Management*, 8(4), 312-328.

Oluwaleye, T. O., Ajemunigbohun, S. S., & Abiodun, K. E. (2023). Underwriting Operations and Financial Performance: Evidence from Non-Life Insurance Firms in Nigeria. *Business Economic, Communications and Social Sciences,* 5(3), 167 - 176.

Omoruyi, O., & Nwokoye, G. (2023). Underwriting capacity and performance of quoted insurance firms in Sub-Saharan African countries. *Journal of Academic Research in Economics*, (3), 569-595.

Omoruyi-Aigbovo, O., & Orobator, B. (2024). Underwriting Capacity and Financial Performance of Listed Insurance Firms in Nigeria. *University of Benin Faculty of Management Sciences International Conference* (pp. 191 - 207). Benin: University of Benin.

Onifade, O. R., & Oseni, M. S. (2022). Net premium growth and profitability of insurance companies in Nigeria: An empirical analysis*. Journal of Finance and Investment Analysis,* 10(1), 55-68.

Onyinyechi, O. J., Inyang, U. A., & Bassey, A. E. (2023). Underwriting as a determinant of financial performance of an Insurance company: Evidence from an Insurance firm in Nigeria. *Global Scientific and Academic Research Journal of Economics, Business and Management*, 2(4), 31 - 41.

Osuagwu, E., & Udeaja, C. (2019). Revisiting the Relationship between Net Premium Income and Profitability of Insurance Companies in Nigeria. *Journal of Insurance Research and Practice*, 8(2), 67-78.

Oyewole, O. (2020). Underwriting Expenses and Financial Performance of Insurance Companies in Nigeria. *Journal of Economics and Business Management*, 4(1), 21-34.

Sean, R. (2021). How do insurance companies make money? Business model explained. Investopedia.

Soye, A., Yinka, A., & Damola, L. (2018). Underwriting Capacity and Income of Insurance Companies: A Case of Nigeria. *International Journal of Innovative Science and Research Technology,* 3(10), ISSN No:-2456-2165.

Tennyson, S., & Jeng, J. (2011). Adverse selection and the individual health insurance market: Evidence from California, Connecticut, and Florida. The Journal of Risk and Insurance, 78(1), 131-169.