



## Asset Size and Profitability of Life Insurance Companies in Nigeria: A Panel Data Approach

Sunday Adekunle Aduloju<sup>1</sup>, Oluwaleke Ebenezer Akindipe<sup>2</sup>

**Abstract:** The magnitude of a company is a key element in evaluating organizational ascendancy while economies of scale is an advantage for most large corporations. This study examined how the size of life insurance companies asset base affect profitability in Nigeria between 2011 and 2021. Data on asset of life insurance companies, and insurance digest of the Nigerian Insurers Association (NIA) were used to determine profit after tax and asset size for the relevant period. The data's stationarity test revealed that the data are stationary at the significance levels of 1%, 5%, and 10%. Data are statistically significant because the calculated probability (F-statistic) value from the ordinary least squares regression is smaller than the 0.05 significant value. The profit after tax is accounted for by 73.8811 percent of the total assets of life insurance firms, according to the computed linear co-efficient of determination ( $R^2=0.738811$ ). The study's findings reports that asset size has effect on the financial success of insurance businesses in Nigeria.

**Keywords:** Asset size; profit after tax; life insurance; total asset; profitability; Return on asset

**JEL Classification:** G22

### 1. Introduction

The size of a company is one of key factors in evaluating organizational success. The biggest advantage a large corporation can have is the capacity to realize economies of scale. Larger enterprises can benefit from asset size and gain a sustainable competitive advantage over smaller ones by keeping a significant market share and producing at reduced costs (Peng, 2019). There are various benefits and drawbacks

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<sup>1</sup> Department of Actuarial Science & Insurance, University of Lagos, Nigeria, Address: University of Lagos, University Road Lagos Mainland Akoka, Yaba, Lagos, Nigeria, Corresponding author: ksaduloju@gmail.com.

<sup>2</sup> Department of Actuarial Science & Insurance, University of Lagos, Nigeria, Address: University of Lagos, University Road Lagos Mainland Akoka, Yaba, Lagos, Nigeria, E-mail: lekelymome8@gmail.com.

of business size and how it affects profitability of the business in both industrialized and developing nations (Todaro, 2020). Profitability is a common metric used to assess the effectiveness of financial organizations globally. Both the micro and macro levels of the economy allow for an evaluation of the significance of company's profitability (Bobakova, 2019). Sharma and Mani (2021) discovered that the effectiveness with which insurance companies perform the role of financial intermediation has influence on the economy at large. It is well known that insurance businesses offer distinctive financial services that contribute to the expansion and improvement of every economy. They primarily engage in activities that have a big impact on risk transfer, boosting private investment, generating jobs, and funding various development works (Hofman, 2019). The global non-life insurance sector's profitability is now showing a weak trend (Swiss Re Institute, 2018).

Financial stability in an economy is greatly facilitated by financial institutions including the insurance industry. The interaction between different financial system participants such as financial markets, banks, and other financial intermediaries experienced growth recently. Interestingly, these businesses considerably contribute to the financial markets in addition to insuring and protecting the financial risk of homes and businesses (European Central Bank, 2017). As a result, they play an essential role in preserving the financial stability of individuals, businesses, and vast majority of stock market investors. As a result, making a profit has turned into a requirement for insurance businesses. The financial sector's stability at the micro- and macro-levels has benefited from the sectors' profitability. Various techniques and methodologies can be used to measure a company's success; however, one of the most popular techniques makes use of financial studies that employ profitability ratios as the primary indicators of a company's overall effectiveness and performance (Kaguri, 2020).

With the only purpose of boosting shareholders' wealth, insurance businesses are under tremendous pressure to raise performance, profitability, customer satisfaction, shareholder's returns, and client base. Both accounting theory and practice place a strong emphasis on determining the company's profitability. For their short- and long-term decision-making, the company's stakeholders need information on profitability (Kaguri, 2020).

The profit insurance companies make are often used to gauge their performance because it is correlated with elements including the capital structure, loss ratio, company's size, investment ratio, increase in written insurance premiums, management effectiveness and asset quality. The political and institutional settings have a significant impact on how well insurance businesses succeed. For insurers to survive and become profitable, business development has become a crucial strategy. In order to compete for more business and generate more premium income, insurers use cash flow underwriting (Chen, 2019). When the general investment environment

is stable, this company plan is viable. Insurance businesses may find themselves chocked from both investment and underwriting profit when the investing climate becomes increasingly unstable (Chen, 2019). Although numerous theories attempted to explain why some firms are more profitable than others, and many studies have looked into various factors that may have an impact on firm performance, the problem of firm business success continues to be an endlessly fascinating topic that captures the interest of many practitioners and researchers. This study examined how the size of an insurance company's asset base affects profitability in Nigeria.

## **2. Statement of Problem**

One of the most crucial goals of financial management is profitability, which increases owners' wealth Nguyen (2019). The diversity in earnings in most insurance businesses implies that firm-specific factors, including firm size as one contingent element that falls into the category, affect companies' profitability. According to Woodward (2019). The most reliable gauge of "bigness" is the size of the management staff. Key variables used to assess a company's size include gross revenue, asset value, the number of employees, and sales turnover. Despite certain insurance companies' size, predicted profits are not always realized due to market volatility-related increases in unforeseen claims costs. Some insurance businesses appear to have difficulty turning a profit while expanding their clientele or raising their own salaries. The profitability they anticipated is still a mirage based on the annual reports of the majority of the insurance companies that were recently released, despite the fact that larger insurance companies, when compared to smaller ones, have more access to resources and, as a result, are more flexible to changes in a dynamic market. The study consequently aims to analyze the connection between the selected Nigerian insurance companies' asset size and profitability.

## **3. Theoretical Review**

### **3.1. Innovations Theory of Profits**

This notion of profits holds that successful inventions created by businesspeople result in financial gains. Joseph Schumpeter asserted that an entrepreneur's principal responsibility is to introduce innovations into the economy, and that financial rewards are his reward for carrying out this responsibility. In order to generate profit, the majority of insurance companies in Nigeria innovate in both the services they offer and the organizational structures. When a corporation is able to sell more units at a higher price than previously or when the cost of the product drops below the market price, effective innovations result in profits. It is important to note that as more people copy and use an innovation, the profits it generates tend to diminish.

When other people start to use and become aware of an innovation, it no longer qualifies as unique or new. Because the new innovation is limited to him alone when an entrepreneur presents it, he is initially in a monopolistic position and gains significant profits. Profits will vanish after other people embrace it over time in an effort to obtain a piece of the action. The degree of the legislative restraints on their innovation and expansion in terms of product and service variations, which drives the majority of them to asset expansion, limits the unique ideas that insurance firms in Nigeria may come up with.

### **3.2. Institutional Theory**

According to institutional theory, organizations try to act in a way that won't set them out and make people pick them out for criticism (Meyer & Rowan, 2021). The organization will eventually behave more like legitimate firms in the long run and adopt their strategies (Powell & Dimaggio, 1991). Due to legislative restrictions on them, the majority of Nigerian insurance companies offer identical products and services, therefore this idea can be applied to them. According to institutional theories, firms are under pressure to adhere to these common ideas of proper forms and behaviors while they fight for resources, customers, and profits since breaking them may make it more difficult for them to obtain social support and resources (Dimaggio & Powell, 2019). Some scholars believe that the bigger is better than smaller and that businesses should grow is ingrained in the institutional framework of organizations. Most business school typically emphasizes larger companies and celebrates growth, which puts pressure on businesses to expand and flourish as a result of professional managers. Within each industry, larger businesses are typically seen as the most successful ones. In an effort to be like other big businesses, organizations may take on more debt to finance the purchase of additional assets or to fund marketing initiatives. Companies with limited resources may go out of business because they may not be able to pay their debts back.

### **3.3. Empirical Review**

Jonsson (2017) 250 Icelandic companies' size and profitability were compared over the course of 5 years, with a focus on banks, consulting firms for civil engineers, and fish and fish processing companies. The largest companies in each industry to extremely tiny ones are classified according to their turnover and total assets. Return on capital invested (ROC), Return on assets (ROA), are the metrics used to determine profitability i.e. return on equity (ROE). In order to investigate the connection between profitability and size, regression analysis was performed. The investigation revealed that regardless matter how size or profitability are measured, size has no statistically significant impact on profitability.

Amaton & Burson (2017) used data that encompassed a wide range of firm sizes and profitability in Nigeria, the report showed a linear and cubic relationship. The linear relationship demonstrated a negative association between firm size and profitability, evidence of a cubic relationship exist between return on assets and firm size.

Velnampy & Nimalathashan (2019) conducted a study which is to determine the impact of Bank of Ceylon and Commercial Bank of Cyprus Ltd's profitability over the course of ten years, from 2012 to 2020. The variables related to firm size and profitability were measured using secondary data. A number of profitability measures were considered, including Operating Profit (OP), Return on Equity (ROE), Return on Investment (ROI), Return on Average Assets (RAA), Net Profit (NP), and Return on Average Shareholders (RAS). Even though there was no existence of correlation between business size and profitability at the Bank of Ceylon, the correlation study for Commercial Bank revealed a favourable relationship between firm size and profitability. Malik (2019) studied the factors influencing profitability in Pakistani insurance firms. He focused on the impact of firm-specific factors on profitability, such as size, age, capital volume, loss ratio, and leverage ratio. In order to determine the connection between profitability and the factors, the multiple regression model was applied. The study's sample consisted of 35 publicly traded life and non-life insurance companies during the years 2005 to 2009. The study's sample consisted of 35 publicly traded life and non-life insurance companies during the years 2005 to 2009. He discovered that no correlation exist between profitability and the age of the company, but a strong positive correlation between profitability and the company's size.

Ching & Gerab (2020) investigated the variables with biggest impact on the profitability of the Brazilian cyclical consumer goods sector. Sixteen enterprises with current assets that exceeded 50% of total assets were chosen for the study for the years 2005 to 2009. In the investigation, a regression model was employed. The authors of the study came to the conclusion that business size can be a significant predictor of firm success and that higher size has a positive impact on financial performance.

Akbas & Karaduman (2012) examined how manufacturing companies quoted on the Istanbul Stock Exchange responded to size on their profitability. A panel data set spanning the years 2005–2011 was used to analyze the effect. Total assets and total sales were employed as stand-ins for business size, and return on assets was used to gauge profitability. The study's findings indicated that company size had a favorable effect on the profitability of Turkish manufacturing enterprises, both in terms of total assets and total sales. The suggested that comparisons be made with businesses from other nations with comparable economic situations to Turkey.

Kaguri (2020) conducted a study on the connection between life insurance company financial performance and corporate characteristics in Nigeria. For the years 2008 to

2012, data from 17 life insurance firms in Nigeria were used. Size, diversity, leverage, liquidity, age, premium growth, and claim experience were employed as the independent variables, while ROA was used as the dependent variable. According to the study's findings, there is a link between an insurance company's profitability and the magnitude of its premiums.

Mehrjardi (2020) examined the connection between bank profitability and size in Nigeria. The study analyzed data from 43 Nigerian regulated banks from 2008 to 2010. Customer base, branch count, market share and deposit liabilities were the independent factors, whereas ROA was the dependent variable. The study revealed a significant positive correlation between a bank's profitability and its clientele, market share, deposit liabilities and a number of branches.

Akinyomi & Olagunju (2013) studied how size affected the manufacturing sector's profitability in Nigeria. The panel data set for the years 2005 to 2012 was provided by the audited annual reports of the chosen manufacturing businesses listed on the Stock Exchange. The return on assets (ROA) was employed as a proxy for profitability, while the logs of total assets and turnover were used as measures of the size of the organization. The association between manufacturing firm size and profitability was investigated using a regression model. The study's findings showed that company size has significant impact on the profitability of manufacturing enterprises in Nigeria, regarding both total assets and total sales.

#### 4. Research Methods

The research design employed for the study is ex-post facto research design. This design allows assessment of two or more groups, people, events, or objects (Oyeniya, Abiodun, Obamiro, Moses & Osibanjo, 2018; Rowthwer, 2019). This study intends to quantify the nexus between assets of life insurance companies (ALI) and profit after tax (PAT) for the years 2011 to 2021, using data from the insurance digest of Nigeria Insurers Association. An ordinary Least Square Regression technique was used to quantify the data collected.

Thus, the model is represented in the functional equation below:

$$PAT = F(ALI) \quad (1)$$

Where

PAT is the Profit after tax which is the dependent variable

ALI is the Asset of life insurance which is the independent variable

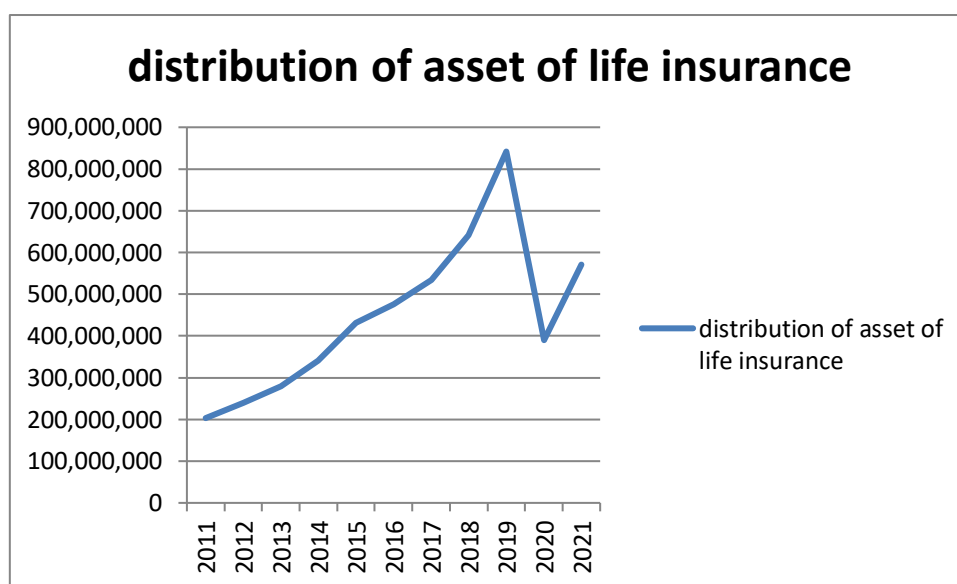
In a linear functional equation, it is presented as follows:

$$PAT = \beta_0 + \beta_1 ALI + \mu$$

(2)

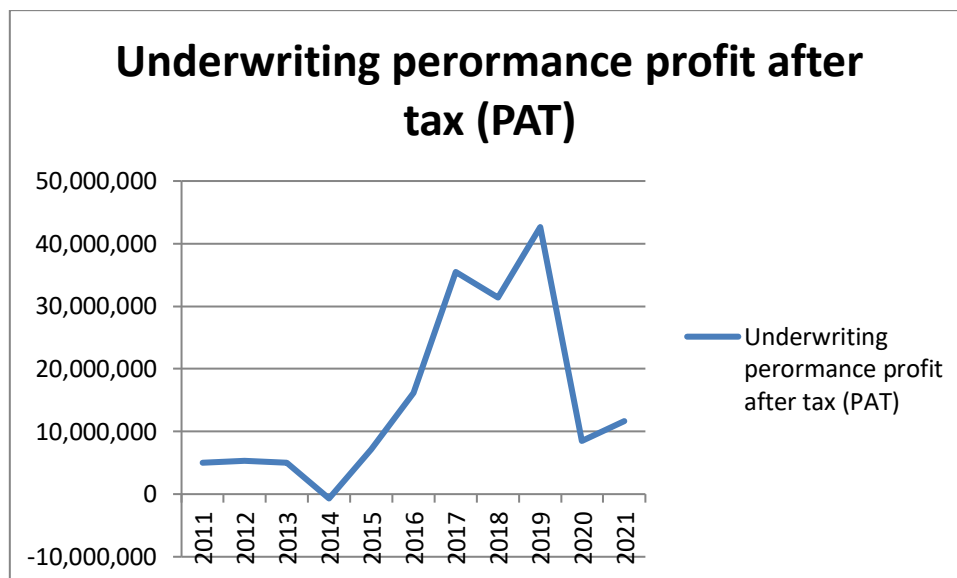
Where  $\beta_0$  = constant term,  $\beta_1$  = regression coefficient of ALI and  $\mu_t$  = error term.

## 5. Results and Discussions



**Figure 4.1. Secondary Information of Distribution of Assets of Life Insurance from 2011-2021**

The graph above displays the trend analysis of the distribution of life insurance assets from 2011 to 2021. The rising trend has been strong, and a sharp downward movement in 2020 due to the COVID 19 pandemic, followed by an upward sharp movement in 2021.



**Figure 4.2. Secondary Information of Profit After Tax(PAT) from 2011-2021**

The graph above displays the trend analysis of the underwriting performance from 2011 to 2021. In 2011 and 2012 there was a steady movement, in 2013 there was a downward movement, and in 2014 there was a fast downward movement. Due to the COVID 19 pandemic, there was a very sharp downward movement in 2020 following an upward movement from 2018 to 2019. In 2015, there was a sharp upward movement that lasted up until 2017 with a downward movement. A rising trend in 2021 was also observed.



Dependent Variable: PAT  
 Method: Least Squares  
 Date: 06/14/22 Time: 08:29  
 Sample: 2011 2021  
 Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14232021	6302600.	-2.258119	0.0503
ALI	0.065548	0.012991	5.045578	0.0007
R-squared	0.738811	Mean dependent var		15253799
Adjusted R-squared	0.709790	S.D. dependent var		14532264
S.E. of regression	7828691.	Akaike info criterion		34.74745
Sum squared resid	5.52E+14	Schwarz criterion		34.81980
Log likelihood	-189.1110	Hannan-Quinn criter.		34.70185
F-statistic	25.45785	Durbin-Watson stat		1.120360
Prob(F-statistic)	0.000695			

## 6. Interpretation

The long run linear regression equation is given by  $PAT = -14232021 + 0.065548ALI$  which shows that the absence of asset of life insurance will bring about 14232021 times decrease in profit after tax. And a unit increase in asset of life insurance will bring about 0.065548 times increase in profit after tax. The computed coefficient of determination ( $R^2 = 0.738811$ ) shows that 73.8811% of the total variation is accounted for by asset of life insurance (ALI), while the remaining 26.1189% is due to the influence of other factors not included in the multiple regression function equation. The Durbin Watson (DW) value is 1.120360 at 5% level of significance being evidence of no auto correlation. The P value of constant coefficient is not statistically significant at 0.0503; the P value of asset of life insurance (ALI) coefficient is statistically significant at 0.0007.

## 7. Summary, Conclusions and Recommendations

The results of the study's regression analysis of life insurance firms examined showed a significant positive link between market share and profitability for life insurance companies operating in Nigeria. The study also showed high adjusted R square, which implies a greater variance in the profitability of life insurance businesses due to changes in assets, leverage, and market share. The results demonstrated that leverage had a negligible adverse impact on general insurance businesses' profitability. The study also showed that since the value of adjusted R

square was high, there was a larger variance in the profitability of long-term insurance businesses due to changes in assets, leverage, and market share. Profitability is negatively but negligibly impacted by the overall asset size of long-term insurance businesses (ROA). It is possible that the bureaucratic processes have a negative impact on the long-term insurance businesses' profits when they grow to be quite large.

## **8. Conclusion**

According to market share data for the life insurance businesses in Nigeria, the study discovered a high correlation between profitability and size. The high adjusted R square showed a wider variety in the profitability of life insurance firms in Nigeria. This suggests that market share was the primary factor affecting profitability. The adjusted R square range is 73 percent, indicating that the independent variables had a significant impact on the financial success of Nigerian insurance businesses. According to the study's findings, there is a correlation between profitability and market share-based measures of insurance company size. According to the study, both general and long term insurance companies in Nigeria had a negligible positive association between profitability and size as determined by total assets. This demonstrates that Nigerian insurance companies are ineffective at transforming investments into net income. The ROA reveals how well management uses its assets to produce profits. Insurance company owners must prioritize effective and lean management.

## **9. Recommendations for Policy**

According to the findings and recommendations, there is an evidence of correlation between the profitability of insurance firms and company's size. Increased investment by insurers in product development, research, and innovation will result in larger market shares. Since assets do not significantly affect the profitability of insurance businesses in Nigeria, insurers should spend less money purchasing new assets unless it is crucial and germane to the profit generation of the company. The return on asset (ROA) of all insurance businesses in Nigeria is extremely low, indicating that the assets are not employed effectively to create money for the insurance companies. The ideal degree of asset holding for insurers would increase profitability. Insurance companies ought to think about funding high-yield investment opportunities.

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