

IMPROVING THE FINANCIAL PERFORMANCE OF LIFE INSURANCE INDUSTRY IN NIGERIA THROUGH EFFECTIVE ASSET-LIABILITY MANAGEMENT

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Abstract

The financial performance of the life insurance sector has either remained stagnant or has declined over time as a result of poor management of their liabilities and assets. The purpose of this research is to improve the financial performance of the Nigerian life insurance industry via efficient asset-liability management. To attain the objectives of study, this study concentrated on ten life insurance companies that have been in operation from 2009 to 2020. The panel data regression model was used to test the study's hypotheses. According to the findings of this study, the poor financial performance of the life insurance industry can be attributed to poor asset and liability management. This study recommended that management of Insurance Firms hire professional accountants for appropriate asset and liability management; premium received (assets) by Life Insurance companies be invested into more productive investments which can assure maximum profit; assets that are less performing or outdated should be turned into cash and invested adequately and liabilities (particularly claims payable) should be prioritized in terms of management.

Keywords: Financial Performance, Life Insurance, Industry, Asset and Liability Management

1. INTRODUCTION

Internationally, the spotlight has been shone on implementing effective framework that can assist in improving the financial performance of the Life Insurance Industry, since the financial performance of this sector (Life Insurance firms) has either remained static or has been discouraging (Owusu & Alhassan, 2020). As of 2022, the net premium captured by insurance firms in Nigeria is nearly 1.9 billion US dollars (Ukpong & Folarin, 2022), in comparison to 3.8 billion US dollars accumulated in South Africa. The Life Insurance Industry in the United Kingdom accounting for nearly 20% of the country's total GDP. In South Africa, the Life Insurance Industry accounts for 17% of total GDP, while in Kenya, the Life Insurance Industry accounts for 3.4 percent of total GDP (Trenca, Zapodeanu, & Cociuba, 2022). Despite the fact that the number of Life Insurance companies has increased from one in 1918 (Royal Exchange Assurance Organization) to 56 today (National Life Insurance Commission ("NAICOM's") (Sayeed & Ziaul Hoque, 2020), the Nigerian Insurance Sector appears to contribute only 0.7 percent of Nigeria's overall GDP. It is correct to say that the performance of the Nigerian Life Insurance Industry is inadequate (Adebayo, 2021).

Most of the time, researchers focus on how to improve the profitability of Life Insurance companies by increasing the number of people who use their services. But they don't know that even if the number of people who use their services soars, if the assets and liabilities of the organizations are mismanaged, the performance of the Life Insurance Industry will stay the same. Asset Liability Management (ALM) is seen as a continuous management process that illustrates, integrates, and monitors financial plans so that a firm can efficiently handle its assets and liabilities (Oyeyemi, 2017).

The Life Insurance Industry helps people reach their financial goals with a certain level of risk and constraints if they use the right assets and liabilities management approach. Asset and liability management is very important to the financial strategy of a Life Insurance company because of the ever-increasing complexity of Life Insurance activities and regulations, as well as the use of more complex models. The objective of assets and liability management is to make sure that assets and liabilities work together so that a given financial purpose can be met with a certain level of risk and under a specific set of constraints, says James (2017). Thus, the assets and liability management department in a Life Insurance department is in charge of producing studies that give advice on marketing strategy and asset allocation.

According to Hammed (2019), there are two main goals for managing assets and liabilities. One of the goals is to protect the company from liquidity and interest rate risks, which means that the Life Insurance company's capability to fulfill its obligations has been increased. The second goal is to make the company more profitable.

As a result, asset and liability management can be regarded as a management tool for maximizing investment returns while mitigating risk. According to Ademola (2020), a Life Insurance firm must have appropriate knowledge and information of what constitutes its asset and liability risks in order to make sure financial strength and the ability to grant its contract obligations to its clients. To accomplish this, the assets and liability management department in a Life Insurance Industry must maintain effective asset and liability management in order to realize its financial goal with an appropriate threshold of risk under appropriate circumstances, generate sufficient information that can help to reach actionable asset allocation recommendations, and determine the capital requirement for market risks in the relevant assets and liability managerial functions (Badmus, 2016).

According to Gorden (2019), asset and liability management involves the practice of managing a business to guarantee that decisions regarding assets and liabilities are organized in order to have effective operation of the organization's finances and enhance its financial performance. As a result, asset and liability management includes a method of measuring and managing risks in order to achieve higher returns and profitability (Trenca & Cociuba, 2020). A thorough idea of asset and liability management would offer an organization with a clear picture of the risk/return trade-off it is pursuing (Orreborn, 2019).

The profitability of an insurance corporation is not only critical for the firm's operations, but it also makes a major contribution to the economy's growth. This indicates that if insurers can handle their assets and liabilities efficiently, they may be able to improve overall profitability (Ahmeed, 2018). Profitability in life insurance can be hindered by both internal and external factors. Internal factors include the company's ALM culture, whereas external factors represent the economic and legal environment that affects the operation of Life Insurance companies. GDP, inflation, and interest rates are common macroeconomic variables that impact profitability (Nurudeen, 2017).

Asset and liability management encompasses a broad range of subjects. It is associated with interest rate risk management in the life insurance sector, with associated risks like interest rate risk, liquidity risk, credit risk, market risk, and currency risk, among others. This is primarily due to the fact that such risks are linked to the Life Insurance company's assets and liabilities

(Timothy, 2015). Asset and liability management not only helps to protect against risk; it also offers protection for the organization, offering the opportunity that increase net worth. As the demand for finance in the Life Insurance sector has increased, insurers have reevaluated the characteristics of their assets and liabilities. Intense competition, combined with rising interest rate volatility, has prompted insurers to strike a balance between asset and liability spreads, profitability, and long-term viability (Ola & Adex, 2018). A mismatch between asset and liability may have an impact on the market value of the Life Insurance company's share as well as its overall profitability (Raheem, 2019).

Poor asset and liability management in the life insurance industry will not only lead to poor financial performance, but it may also lead to an inability to pay claims when they are due, resulting in the rapid deterioration of the Insurance firms. The top management team of a Life Insurance company's failure to pay appropriate attention to assets and liabilities can be utilised, resulting in fraudulent activity and the loss of assets and viable investments.

Numerous Life Insurance firms do not see the need to establish a department entirely responsible for asset and liability management, because in order to effectively manage assets and liabilities, Life Insurance providers should establish a department dedicated to asset and liability management. The department is accountable for selecting the most suitable and profitable investment to channel the Life Insurance firm's assets (premium received) to, as well as ensuring that liabilities (such as claims) do not outweigh the assets at any point.

Due to the high cost of hiring experts to assist in managing the assets and liabilities of a life insurance company, they tend to hire one of their employees to oversee asset and liability management. However, most of the time, such employees lack the necessary expertise to successfully handle the assets and liabilities of a life insurance firm, and as a result, the financial performance of the life insurance firm suffers.

The primary objective of this study is to ascertain the effect of assets and liabilities on the profitability of Life Insurance companies in Nigeria. The specific objectives are to:

1. Determine the effect of asset management on the profitability of Life Insurance companies.
2. Examine the effect of liability management on the profitability of Life Insurance companies.

2. REVIEW OF LITERATURE

Financial Performance

Profitability can be seen as the ability of a company to generate revenue in an efficient way using its assets (Shrestha, 2015). Rodriguez (2018) argue that increased profitability, increased market share, increased industry competitiveness, and increased customer loyalty and loyalty all improve business performance. Due to the intangible nature of the results and the lack of transparency in resource allocation decisions, it is often difficult to identify the underlying factors of a financial company's financial performance. Researchers such as Trenca and Cociuba (2020) argue that profitability is the lifeline of a "profit-oriented" organization and can be used as a tool to measure the success of an organization's achievement of goals. Hammed (2019) argues that Life Insurance has its own accounting system, which makes it difficult to measure the profitability of Life Insurance compared to other financial institutions. The insurer may not know how much profit or loss the insurer has made during a particular year, as only 40% of the claims incurred have been paid by the end of the year. This means that 60% of the losses incurred were carried over to the next underwriting year. According to Badmus (2016), the difficulty of measuring an insurer's profitability lies in factors such as actual mortality, return on investment, the size of dividends or shareholder bonuses, and taxation. These rely on reasonable premiums to cover damage costs, administrative costs, and reasonable profits. Such fair levels of premiums can only be achieved with a high level of accuracy in the insurer's forecasts (Ola & Adex, 2018). Profitability can be measured in terms of return on investment (ROIC), return on equity (ROE), and return on total assets (ROA) (Sayeed & Ziaul Hoque, 2020). Wasike (2021) found that when determining the profitability of a Polish non-Life Insurance company, the profitability of technical activities, the profitability of assets, the profitability of stocks, the profitability of sales, and the profitability of participating capital.

The concept of asset liability management (ALM)

The challenges faced by insurers around the world in their business are constantly increasing. This is a result of the emergence of risk-based regulations that increase the complexity of Life Insurance products and increase the requirements for computational accuracy and consistency across the enterprise. Coupled with rising levels of risk as insurers face persistently low returns (Rosen & Zenios, 2008; Kannan, 2009). This has led insurers to seek better returns from a broader and more diversified asset class (Timothy,

2015). Since each of the proposed models fits into an asset-centric or liability-centric ALM approach, the various ALM approaches contribute fairly to the challenges facing insurers (Ademola, 2020). It has also been shown that this difference can lead to inconsistencies across the organization, leading to regulatory scrutiny, as well as inaccuracies on either side of the balance sheet.

James (2017) defines assets as resources that are expected to generate future profits. This means the right to receive money. Liabilities, on the other hand, are debts or debts that arise in the process of operating a business and represent payment obligations. In this regard, ALM should be considered as a broad term for a model used to predict the long-term performance of a company, sum up its portfolio of assets and liabilities, and calculate expected cash inflows and outflows. ALM can be run at banks, Life Insurance companies, or other financial institutions such as government pension funds and companies with large and diverse assets and liabilities. According to Wasike (2021), ALM refers to the management of asset allocation related to a company's liabilities. This means managing the risks that result from a mismatch between a company's assets and its liabilities. The Society of Actuaries develops, implements, monitors, and monitors ALM's asset and liability-related strategies to achieve an organization's financial goals, taking into account the organization's risk tolerance and other constraints. And is defined as an ongoing process of revision. ALM's history relies on fluctuations in interest rates in developed countries and can lead to losses in financial services (Ahmeed, 2018). Prior to the 1970s, interest rate fluctuations in developed countries were small and losses due to asset-liability mismatches were small. Liability from deposits, Life Insurance, or annuities is invested in assets such as loans, bonds, or real estate. All assets and liabilities are held at book value, successfully disguising the financial risks arising from the disclosure of assets and liabilities (Sayeed & Ziaul Hoque, 2020). The 1970s had a period of volatile interest rates that lasted until the early 1980s. Volatility has had a volatile impact on financial institutions. U.S. regulations sought to limit the interest rates banks could pay to depositors, but this only resulted in the migration of the U.S. deposit market abroad (Ukpong & Folarin, 2022).

Since accrual accounting is used by most companies, the associated risks seemed less obvious. These companies gradually began to lose money over the next five to ten years. One such company is the Equitable Life Insurance company (Adebayo, 2021). The lessons learned during this time have led to the development of a more robust ALM. Life

Insurance company managers have a balance to maintain a combination of deposits through investments in premiums, liabilities and others to ensure consistency with core Life Insurance functions and ensure long-term growth and risk management.

This has led to the development of new financial methods such as gap analysis, period analysis and scenario analysis in both banks and insurers (Nurudeen, 2017). However, the ALM practice is evolving. Banks are increasingly using market value accounting in their business areas in their day-to-day transactions. ALM is used to manage assets and liabilities that need to be accounted for on an accrual basis (Adebayo, 2021), which includes all traditional Life Insurance activities, bank lending and underwriting. included. The growth of the derivatives market has enabled various hedging strategies such as securitization, allowing companies to address the risks of wealth and responsibility (Shrestha, 2015). The range of ALM has also been expanded. The ALM sector is beginning to cover a variety of risks, including foreign exchange risk. Non-financial companies are not excluded. Many companies employ several ALM methods to manage interest rate risk, liquidity risk, and foreign exchange risk. Some of these companies also manage product risk (Rodriguez, 2018). The ALM process now acts as a link between risk management and strategic planning. This is not only to provide a solution for mitigating and hedging the risks arising from the intersection of assets and liabilities, but also to provide a long-term perspective for conducting both Life Insurance and banking operations (Ademola, 2020).

ALM Division Responsibilities for Insurers

Adenikan (2020) affirms that insurers have the necessary knowledge of the right combination of assets and liabilities to support their financial strength. Wasike (2021) argue that financial risk management involves making systematic decisions about acceptable and unacceptable risks, both internally and externally. Therefore, the ALM department has developed a study to maintain financial targets at acceptable levels of risk under predefined constraints (Owusu & Alhassan, 2020) and to make recommendations on marketing strategies and asset allocation (Badmus, 2016)., To calculate the capital requirements for market risk under the Solvency III Framework Regulations (Hammed, 2019).

2.1 Theoretical Review

2.1.1 Statistical Accounting Theory

This is an empirical model based on accounting relationships. By attributed book profits to company assets and liabilities, the difference in company profits is attributed to the difference in balance sheet structure. It was first applied to the transportation industry by (Meyer & Kraft, 1961). Hester (1964) further applied it to samples from commercial banks in India and the United States. Banks have been used to estimate marginal revenues and costs for positions in a banking portfolio, compare revenues across loan categories, and investigate profitability differences between different banking classes (Hester & Zoellner, 1966). The basic hypothesis of the model is that the return on total assets is positive and fluctuates between assets, while the rate of return on liabilities is negative and fluctuates between liabilities. Adenikan (2020) argue that if this theoretical statement is correct and the bank's balance sheet is not just a scalar multiple, fluctuations in the bank portfolio explain fluctuations in bank earnings. Ordinary least squares regression is typically used to estimate model parameters in a cross-section sample of data. Asset parameters are expected with a positive sign and liability parameters are expected with a negative sign. The net profit realized by a bank is a linear function of the portfolio's elements. To this end, a bank's profit (net profit) can be expressed as the weighted sum of the various assets and liabilities of the bank.

2.1.2. Theory of Mismatching

This is a generalized Janssen model, also known as a multidimensional model. As presented by Gorden (2019) in this model a portfolio of asset pools A1, A2, of its various influences. Assets are modelled as a group of interest rate sensitive securities that reflect the historical returns of the asset portfolio. Since insurers primarily invest in fixed income, they are modelled on the returns the portfolio has achieved over the past few years, assuming that the investment portfolio contains N zero-coupon bonds. From the generalized model, the Janssen model evolves into perfect matching. This model examines the relationship between asset and liability processes and establishes matching principles. According to the model, if asset A (t) is lower than liability B (t) for a period of time $t \geq 0$, then asset A and liability B do not exactly match. It defines the first mismatch time for the period (0, T). In reality, perfect matching of Life Insurance liabilities can be very difficult. This is because low-risk investment strategies associated with the highest degree

of matching usually have lower expected returns. This leads to the final matching which would ensure the assets cover the liabilities at the end of the period.

2.1.3 Asset-Liability Management Theory

This theory has been widely adopted by Owusu and Alhassan (2020). It represents ALM's core ability to manage runtime gaps and inconsistencies. The structural gap as an aspect of the maturity gap underscores the importance of balancing maturity and cash flow on both sides of the balance sheet. The focus is on bridging the gap, issuing timely policies to focus on the right product type and duration, and actively engaging the Asset and Debit Commission in the process. Periods are also used to measure interest rate sensitivity. According to Ukpong and Folarin (2022), Macaulay duration has traditionally been accepted as a good measure of the length of a portfolio of discounted cash flows over the life of an asset or liability. It is common practice to measure portfolio duration at both different product types and the overall portfolio level. This is usually useful when simulating how the duration of a portfolio will be affected by future events. McCauley Duration measures the weighted average time to maturity of a bond's cash flow, which is the present value of the cash flow (Ahmeed, 2018). Other areas considered in ALM theory are dynamic gap management and static gap management. These reports are intended to simulate future gap positions between expected trading volumes and exercised options. Also, the proposed new volume, prepaid transactions, and accepted deposit rollovers create a large ALM gap.

2.2 Empirical Review

Badmus (2016) studied the profitability determinants of Polish non-life insurers during their integration into the European financial system. Using a panel dataset of 25 non-life insurers from 2002 to 2009, the results of the regression model show that higher total premiums and lower total operating costs have a positive impact on Life Insurance profitability and cost effectiveness. Showed that you gave. A company. GDP growth and market share of foreign companies also have a positive impact on the profitability of non-life insurers during the integration phase. Adebayo (2021) performed a panel data regression using time series and cross-section data from selected depositors in Nigeria to examine the relationship between ALM and financial performance. The results show that the asset variables are positively correlated with return on equity and the liability variables are inversely correlated. Ahmeed (2018) studied the determinants of commercial bank

profitability using panel data analysis, a significant positive relationship between the rate of return on capital and total assets, between the rate of return on capital and total liabilities. Found a significant negative relationship with. In addition, a significant negative relationship was found between return on assets and the growth rate of GDP and inflation of affected companies. In a study of the impact of ALM on the profitability of the National Investment Bank of Ghana, Owusu and Alhassan (2020) found that the value of a bank's assets and liabilities had a significant impact on its profitability. The decline in asset value has led to an increase in the profitability of banks.

Debt also had a significant impact on the company's profitability. Inflation has had a direct impact on profitability, as rising inflation has led to higher profitability. Hammed (2019) observed the significant impact of real GDP growth on return on investment in a study of the profitability determinants of the selected Central and Eastern European Life Insurance markets. Shrestha (2015), in a study of the determinants of insurer profitability, found that there was a significant positive relationship between the amount of capital and insurer profitability. A similar study by Ola and Adex (2018) on the profitability of ALM and listed banks in Ghana uses robust panel regression, where total assets have a positive impact on profitability and total liabilities and assets are bank profitability. Was found to have a significant negative impact on. There was no significant impact on macroeconomic variables on profitability. Shrestha (2015) used pooled OLS regression analysis to study the effects of ALM on Nepal's bank's profitability. As a result, while all liabilities adversely affect profitability, we showed that all assets, including profitable fixed assets, have actively affected. GDP and inflation rate also adversely affect profitability.

Adebayo (2021) investigated the impact of company-specific macroeconomic factors on the profitability of Taiwan's non-Life Insurance Industry. Using a panel dataset of 15 insurers from 1999 to 2009, we used the rate of return on investment as the dependent variable to measure the profitability of the insurer. Analysis using the usual least squares regression, fixed effects model, and random effects model reveals that input costs and return on investment have a significant impact on profitability.

3. METHODS

This section describes the methodology selected for research analysis. Subsections describe study design, data sources, population and sample sizes, variable descriptions, model specifications, and data analysis procedures. This study employed an ex-post facto research

design, and is based on existing data, so the post-study design is adopted. The research approach is purely quantitative and the data consists of both time series and cross section data. The secondary data needed for the study was obtained from the Nigerian Life Insurance Association (NIA) Digest, the Central Bank of Nigeria (CBN) database, and the websites of selected Life Insurance companies for the 12 years from 2009 to 2020. The choice of start date is intended to be tied to a capital increase in the Life Insurance Industry in the year 2009. Researchers believe that this period is essentially sufficient for research.

Population and Sample Size

The population of this study consists of 18 Life Insurance companies in Nigeria (as of 2020). To achieve a balanced panel study, the sample size was selected based on two criteria: the existence of the company and the availability of financial statements during the survey period (2009-2020). Ten life insurers met these criteria and were properly selected as the sample size for the study.

Variable Description

The variables used in the analysis were selected based on relevant theory and literature, consistent with similar studies on the subject, and based on data availability.

Dependent Variable

Profitability is the dependent variable of the study, measured by return on assets (ROA). Return on total assets is calculated as the ratio of profit after tax to total assets. Badmus (2016) found that from an accounting perspective, ROI is a key indicator of operational efficiency and the ability of a company's management to convert the company's assets into net profits, thus reducing the overall performance of the company.

Independent Variables

For the purpose of this study, assets include cash and bank balances, plants and equipment, financial assets, accounts receivable and prepayments, and Life Insurance liabilities includes: claims/accounts payable, investment liabilities and other liabilities.

Method of Data Analysis

Panel Data Regression Model was employed to test the hypotheses of the study using Econometric View (E-View) Version 10 for Windows as the statistical computer software

used to compute the analysis. Where: Coefficient of Determination (R^2) measures the explanatory power of the independent variables on the dependent variable.

Model Specification

$$ROA = \alpha + \beta_1 AM_{it} + \epsilon \quad \dots \quad 1$$

$$ROA = \alpha + \beta_2 LM_{it} + \epsilon \quad \dots \quad 2$$

Where:

ROA = Return on Assets

AM = Asset Management

LM = Liability Management

α = Intercept

β = Coefficient of the explanatory variable (slope)

ϵ = Represents the error term in the model.

Decision Rule

If $p < .05$ (less than 0.05) we reject the null hypotheses, otherwise, we fail to reject the null hypotheses.

4. DATA ANALYSIS

Descriptive Statistics

The descriptive statistics below explain the demographical characteristics of the data in terms of Minimum, Maximum, Mean, Standard Deviation, Variance and the Kurtosis.

Table 1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Asset management	120	.01	2.55	.5063	.38491	.148	7.185	.548
Liability management	120	.08	1.55	.4943	.32711	.107	3.224	.548
Return on Assets	120	-.12	.79	.2264	.21627	.047	-.085	.548
Valid N (listwise)	120							

Source: E – View 10 Output

The descriptive statistics shows that asset management mean is about 0.506, meaning that the total assets represent about 50% of net worth. Liability management to total asset shows a mean of 0.494, meaning that liability portion in the total asset is relatively the same (approximately 50%).

Table 2 ADF Unit Root Test for Stationarity at 5% levels

Null Hypothesis: Variables has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	4.147414	0.0012
Test critical values:		
1% level	5.102417	
5% level	6.254170	
10% level	4.541471	

*MacKinnon (1996) one-sided p-values.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Variables	2.21411	0.332141	6.35241	0.0012
C	6.65214	7.214111	2.12415	0.0001
S.E. of regression	124.1411	Akaike info criterion		2.21214
Sum squared resid	12141411	Schwarz criterion		6.24110
Log likelihood	412.124	Hannan-Quinn criter.		6.32140
Durbin-Watson stat	1.95			

Source: E-view 10 output.

When variables produce a stationary series, co-integration among them in the long run is feasible. Stationarity is obtained by comparing the test statistics with the critical value(s), if the test statistics is greater than the critical value numerically, the variable is stationary and if the reverse, it is non-stationary. The entire ADF statistics is greater than the critical value, hence, stationarity exist among variables. As a result, data are adequate enough for further treatment and analysis since they are found to be stationary.

To establish the existence of long run relationship among variables, a co-integration test was performed using the Johansen's co-integration test. The Durbin – Watson Statistics of 1.95

shows that there is no autocorrelation between the variables, and the p value of 0.0012 implies that the data pass the stationarity test and hence, further analysis can proceed.

Table 3 Johansen Co-Integration Result

Hypothesized No. of CE (s)	Eigen Value	Trace Statistics	0.05 Critical Value	Prob**	Max- Eigen Statistics	0.05 Critical Value	Prob**
None*	1.21410	12.2140	13.32414	0.0012	12.21410	9.25141	0.0012
At most 1	1.24141	0.24140	2.24141	0.097	0.00019	3.25410	0.0001

Max-eigen test indicate co-integrating equation at 5% level

Trace test indicates 1 co-integrating equation (s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

Source Compiled from E-view 10.

The study employed the Augmented Dickey - Fuller test for unit root. For the series found to be integrated, a co-integration test was conducted using Johansen Co-Integration Test. In order to determine if there exists a long run relationship between dependent and independent variables, the series that were co-integrated were most efficiently represented by an Error Correction Method which was used to tie the short run behaviour to its long run value. Johansen Co-integration test confirmed that a long run relationship exists between variables.

Test of Hypotheses

H₀₁: Asset management has no significant effect on the Return on Assets of Life Insurance companies in Nigeria.

Table 4 The Effect of Asset management on Return on Assets

Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 24/03/22 Time: 10:03
 Sample: 2009 2020
 Periods included: 12
 Cross-sections included: 10
 Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.169073	0.056427	2.996329	0.0037
AM	0.073111	0.065195	1.121428	0.2658

R-squared	0.016936	Mean dependent var	0.225847
Adjusted R-squared	0.003469	S.D. dependent var	0.216178
S.E. of regression	0.215802	Akaike info criterion	-0.202602
Sum squared resid	3.399660	Schwarz criterion	-0.140803
Log likelihood	9.597591	Hannan-Quinn criter.	-0.177926
F-statistic	1.257602	Durbin-Watson stat	1.314290
Prob(F-statistic)	0.265781		

Source: E – View 10 Output.

Table 4 shows the effect of asset management on Return on Assets. The coefficient of determination $r^2 = 0.016936$ shows only 16% contribution of asset management to Return on Assets. The adjusted R-square shows the strength of the independent variable in the model to explain its impact on the dependent variables. The adjusted R-square of 0.003 implies that the independent variable (asset management) can only determine increase of less than 1% (0.3%) in Return on Assets. The value of the intercept 0.169 is the predicted value of asset management if the independent variable is equal to zero, and this found to be significant at 5% level of significant ($0.0037 < 0.05$). Asset management has a coefficient value of $\beta_1 = 0.07311$, t-test = 1.1214 and P-value of 0.2658. The value indicated that a positive and insignificant relationship exist between asset management and return on assets. This means that poor asset management can impair the financial performance of Life Insurance companies, hence, Asset management has no significant effect on the Return on Assets of Life Insurance companies in Nigeria. Since p-value is higher than $\alpha 0.05$ (that is, $0.2658 > 0.05$), we fail to reject the null hypothesis. Therefore, Asset management has no significant effect on the Return on Assets of Life Insurance companies in Nigeria.

H₀₂: Liability management has no significant effect on the Return on Assets of Life Insurance companies in Nigeria.

Table 5 The Effect of Liability management on Return on Assets

Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 24/03/22 Time: 10:05
 Sample: 2009 2020
 Periods included: 12
 Cross-sections included: 10
 Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.260877	0.032688	7.980941	0.0000
Return on Assets	-0.124192	0.075967	-1.634808	0.1064
R-squared	0.035318	Mean dependent var	0.225847	
Adjusted R-squared	0.022103	S.D. dependent var	0.216178	
S.E. of regression	0.213775	Akaike info criterion	-0.221478	
Sum squared resid	3.336090	Schwarz criterion	-0.159679	
Log likelihood	10.30544	Hannan-Quinn criter.	-0.196802	
F-statistic	2.672599	Durbin-Watson stat	1.216086	
Prob(F-statistic)	0.106395			

Source: E – View 10 Output.

Table 5 shows the effect of Liability management on Return on Assets. The coefficient of determination $r^2 = 0.0353$ shows that Liability management contributes about 35% to Return on Assets. The adjusted R-square of 0.022 implies that the independent variable (Liability management) can determine increase of about 2% (0.022) in Return on Assets. The value of the intercept of -0.1242 is the predicted value of Liability management if the independent variable is equal to zero, and this found to be significant at 5% level of significant ($0.000 < 0.05$). Liability management has a coefficient value of $\beta_1 = -0.1249$, t-test = -1.6348 and P-value of 0.106. The value indicated that a negative and insignificant relationship exist between Liability management and Return on Assets. Because poor liability management will often result into poor financial performance for the Life Insurance Industry, hence, Liability management has negative and insignificant effect on the return on assets of Life Insurance companies in Nigeria.

Since p-value is higher than $\alpha 0.05$ (that is, $0.106 > 0.05$), we fail to reject the null hypothesis. Therefore, Liability management has no significant effect on the Return on Assets of Life Insurance companies in Nigeria.

Discussion of Findings

In line with previous scholars, this study revealed that poor asset management can impair the financial performance of Life Insurance companies, similarly, poor liability management will result into poor financial performance for the Life Insurance Industry, hence, poor liability management style has negative and insignificant effect on the return on assets of Life Insurance companies in Nigeria.

Findings from this study is supported by Adebayo (2021)who examine the relationship between ALM and financial performance of Life Insurance Industry. The results show that the asset variables are positively correlated with return on equity and the liability variables are inversely correlated.However, Hammed (2019)held different opinion as it relates to banks, he found that the value of a bank's assets and liabilities had a significant impact on its profitability. The decline in asset value has led to an increase in the profitability of banks.

A similar study by Ukpong and Folarin (2022) on the profitability of ALM and listed banks in Ghana uses robust panel regression, where total assets have a positive impact on profitability and total liabilities and assets are bank profitability. Was found to have a significant negative impact on. There was no significant impact on macroeconomic variables on profitability. Shrestha (2015) used pooled OLS regression analysis to study the effects of ALM on Nepal's bank's profitability. As a result, while all liabilities adversely affect profitability, we showed that all assets, including profitable fixed assets, have actively affected. GDP and inflation rate also adversely affect profitability.

5. CONCLUSION

The need to improve the financial performance of Life Insurance Industry has become essential especially in the phase of the different pandemic and epidemic that continually befall both individuals and industries. This study therefore focused on Improving the Financial Performance of Life Insurance Industry in Nigeria through Effective Asset–Liability Management. In line with previous studies, this research work affirmed that poor management of assets and liabilities can results into sudden collapse of Life Insurance Industry. This study revealed that most Life Insurance companies don't manage their asset and liabilities in an effective and profitable manner, and this could be responsible for the poor financial performance of Life Insurance Industry, evidence by their contribution to the economy of the nation at large.

6. RECOMMENDATIONS

Arisen from the findings of this study, this study hereby recommended that:

1. Management of Life Insurance companies should employ professional accountants for proper management of its assets and liabilities.
2. Premium received (assets) by the Life Insurance companies should be invested into more profitable investment (international investment with stable economic matrix), that can guarantee maximum return on investment.
3. Assets that are less performing or obsolesces should be converted into cash and invested appropriately.
4. Liabilities (especially claims payable) should be given more management priority.

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