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RESEARCH ARTICLE

Diversified Income Sources and Wealth of Shareholders of Insurance Firms in Nigeria

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ABSTRACT

The study examined diversified income sources and wealth of shareholders of insurance firms in Nigeria. The specific objectives of the study are to ascertain the effect of gross premium income, investment income and interest income on net assets of insurance firms in Nigeria. The sample consist of five (5) insurance firms listed on Nigeria Exchange Group during 2011-2020 periods. The time series data extracted from the selected firms were analyzed using Descriptive Statistics and multiple regression analysis. Findings from the study suggest that gross premium income and investment income positively, but non-significantly affect net assets of the insurance firms while interest income positively and significantly affects net assets of the firms during the period. The implication of these findings is that in modern business world, income source diversification is a sine qua non for achieving insurance firms' main objective of shareholders' wealth maximization. In view of this, the study recommends that firm managers should increase gross premium income through aggressive sales promotion of their products and services and also by developing new insurance products and services and by repositioning existing insurance products in order to attract fresh clients. Secondly, the managers should invest some gross premium incomes in viable investments like real estate and stocks of other firms quoted on the Nigeria Exchange Group to diversify income source of the insurance firms. Finally, the managers should diversify income sources of their firms by investing excess premium incomes in financial instruments such as government bonds, commercial papers and treasury bills which can yield interest income to augment premium incomes.

Keywords: *Diversified Income Sources; Wealth of Shareholders; Insurance Firms in Nigeria*

Introduction

The income sources of a firms are very critical to the firm because it contributes to the overall profit of the organization. Firm profit is essentially a reflection of the success of the firm goals of wealth maximization for the shareholders. In the light of this, profit planning is a very important financial planning process for firms (Harahap, 2012). The major income source of insurance firms is the premium from sale of insurance policies. Thus, to achieve the profit target, an insurance firm must be able to acquire new customers or increase its sale of insurance policies or at least maintain premium income and underwriting results. However, acquiring new customers are becoming increasingly difficult, costly, as winning over customers from rival firms requires great effort and significant spending on marketing. **T**he stiff competition in the insurance market has prompted the insurance firms to explore diversifying their income sources and also explore other business opportunities beyond their traditional core business to ensure growth and sustainability of the firms **(**Wahyuddin & Mauliyana, 2021).

DeYoung and Rice (2004) defined income sources diversification as the revenue generated from a firm's other business activities other than the income generated from the firm's core product income. Companies have started leveraging non-conventional income-generating channels to the point of institutionalizing it as a strategic business unit. For instance, in the banking sector, recent records show that half of the revenue of banks in the United States is derived from non-conventional operations, and this represents not only a diversification of banks into non-conventional operations but also a change in the way banks make income. Michelle (2021) stated that one of the best tools to protect against business volatility is income source diversification. Diversification is a way to establish multiple lines of income from multiple independent sources. It is an effective strategy because different industries and income sources will be affected by market conditions differently, resulting in a complementary balancing effect. Diversified income source enable the business to gain experience in different business areas and this translates to cumulative rise in income, resulting in a faster path toward wealth and financial security.

In the Nigeria insurance industry, the high business risk, brought about by the current economic and security situation is one of the main reasons for the need for income source diversification in the industry. Iwunze (2022) stated that the insurance industry in Nigeria paid over N11billion claims to insured individuals and organizations that suffered losses from the end SARS civil unrest in 2020. The firms settled claims on 718 cases of vandalisation, 93 cases of looting; 113 cases of theft; and 136 cases of loss of cash. Also 99 claims were settled on malicious damage, 8 on business interruptions, 455 on burglary attacks and 912 on fire and burnt sites. The industry claims paid by the firms in 2021 financial year amounted to about N224 billion while Gross Premium Written stood at about N508 billion. These developments heightened the need for insurance firms in the country **to** diversify and improve their other income source, such as investment and interest income. This will enable the firms absorb economic shocks while achieving shareholders' wealth maximization which is the primary goal of the insurance firms.

Collins Dictionary (2022) describes gross premium as the total premium of an insurance contract before brokerage or discounts have been deducted. Stapleton (2022) defined investment income as profit that comes from interest payments, dividends, capital gains collected as a result of the sale of a security or other assets, and other profits made through an investment vehicle. Tuovila (2021) described interest income as the amount paid by an entity for using another entity's fund for a period of time. Chen (2022) defined net asset as the difference between the assets and the liabilities is known as the net assets or the net worth or the capital of the company.

Statement of the Problem

Unexpected circumstances can befall a business and industry at any time, no matter how good the product, service or customer relationship. This is why businesses should constantly be looking at the industry and market, considering how they can improve and who else they can target. For instance, the current economic and security situation in Nigeria presents a challenging business atmosphere for corporate organization operating in Nigeria. Though the nation is the largest market in the Sub-Saharan Africa, insecurity and poor economic indices in recent years have led to civil unrest and unexpected business challenges which affect many economic sectors, particularly the insurance sub-sector of the financial services industry. The youth's restiveness in Nigeria manifested recently during the nations-wide end SARS protest during which many businesses were affected. In particular, banks installations were largely destroyed leading to insurance claims to rehabilitate the infrastructure that were affected by the end SARS protest.

In addition, new customers acquisition by insurance firms is increasingly becoming difficult, costly, as winning over customers from rival firms requires great effort and significant spending on marketing in the face of the current economic condition and security situation of the country. The high number and amount of claims that insurance firms had to contend with as the aftermath of the end SARS protest coupled with the difficult in new customer acquisition heightened the need for insurance firm managers in Nigeria to explore income source diversification and improve other income source, such as investment and interest income. This will enable the firms withstand economic shocks during period of unexpected crises like the end SARS protest. The current study was prompted by this development to examine the relationship between diversified income source and shareholders' wealth of insurance firms in Nigeria.

Objectives of the Study

The main objective of the study is to investigate diversified income sources and wealth of shareholders of insurance firms in Nigeria. The specific objectives of the study are to:

i. Ascertain the effect of gross premium income and net assets of insurance firms in Nigeria.
ii. Analyze the effect of investment income and net assets of insurance firms in Nigeria.
iii. Appraise the effect of interest income and net assets of insurance firms in Nigeria.

Research Questions

The above specific objectives are guided by the following research questions:

i. What is the effect of gross premium income and net assets of insurance firms in Nigeria?
ii. How does investment income affect net assets of insurance firms in Nigeria?
iii. To what extent does interest income affect net return of insurance firms in Nigeria?

Statement of Hypotheses

The following null hypotheses were formulated to address the research question:

i. Gross premium income does not significantly affect net assets of insurance firms in Nigeria.
ii. Investment income does not significantly affect net assets of insurance firms in Nigeria.
iii. Interest income does not significantly affect net assets of insurance firms in Nigeria.

Review of Related Literature

Conceptual Review

Diversified Income Source

DeYoung and Rice (2004) defined income sources diversification as the revenue generated from a firm's other business activities other than the income generated from the firm's core product income. Segal (2021) stated that diversification is a risk management strategy that mixes a wide variety of investments within a portfolio. It is a strategy that mixes a wide variety of investments within a portfolio. The idea is that the positive performance of one area will outweigh the negatives in another. Diversification limits portfolio risk but can also mitigate performance, at least in the short term. Diversification strives to smooth out unsystematic risk events in a portfolio, so the positive performance of some investments neutralizes the negative performance of others.

Sean (2021) stated that most insurance companies generate revenue in two ways: Charging premiums in exchange for insurance coverage, then reinvesting those premiums into other interest-generating assets. Like all private businesses, insurance companies try to market effectively and minimize administrative costs. Gomes and Livdan (2004) noted that firms that diversify will be more profitable than firms that do not diversify. Diversified firms can use shared facilities in the form of technology and resources, and can reduce transaction costs on the scale of firm activities. Shyu and Chen (2009) stated that diversification is used as a line of attack to diminish risks while maximizing returns in the firm. Other than reducing risks, corporate diversification enables a firm to seek out growth opportunities in the pursuit of enhancing the going concern.

Gross Premium Income

Kegan (2022) defined insurance premium as the term used in the insurance industry to refer to the cost or price of an insurance policy. An insurance premium is the amount of money an individual or business pays for an insurance policy. Insurance premiums are paid for policies that cover healthcare, auto, home, and life insurance. Collins Dictionary (2022) describes gross premium as the total premium of an insurance contract before brokerage or discounts have been deducted. In reinsurance, the primary insurance company usually pays the reinsurer its proportion of the gross premium it receives on a risk. The gross premium is the total premium paid by the policy owner (the insured), and generally consists of the net premium plus the expense of operation minus interest. It is the total premium of an insurance contract before brokerage or discounts have been deducted.

Ariani and Zulhawati (2017) opined that an increase in insurance premium income indicates an increase in customer confidence in insurance services and a growing understanding of the importance of long-term protection related to the investments that do not only provide protection, but also have the potential to produce good results in the long-run. An increase in premium income can also be interpreted to mean that the insurance company has a good level of liquidity so that it is able to meet its short-term obligations. Financial health of insurance firms is a benchmark for increasing premium income, because with clear regulations, it triggers customers' trust and interest in the security of the insurance firm.

Investment Income

Scott (2022) described investment income as the profit that is earned from investments such as real estate, dividends from bonds, capital gains realized with the sale of stock or other assets, and any additional profit made through an investment vehicle. Interest earned on bank accounts, dividends received from stock owned by mutual fund holdings, and the profits on the sale of gold coins are all considered investment income. Income from long-term investments undergoes different and often preferential tax treatment, which varies by country and locality. Insurance firms often have income from investments. On the income statements of publicly traded firms, an item called investment income or losses is commonly listed. This is where the firms report the portion of its net income obtained through investments made with surplus cash instead of being earned in its usual line of business.

Interest Income

Thakur (2020) Interest income is the amount of interest that has been earned during a specific time period. It is earned from investments that pay interest, such as in a savings account or certificate of deposit. It is not the same as a dividend, which is paid to the holders of a company's common stock or preferred stock, and which represents a distribution of the issuing company's retained earnings. Tuovila (2021) stated that net interest income is a financial performance measure that reflects the difference between the revenue generated from a bank's interest-bearing assets and the expenses associated with paying on its interest-bearing liabilities. Interest receivable is usually considered a current asset. Current assets are any assets that will provide an economic value for or within one year. Interest receivable is an amount of interest that is due, but has not yet been received. Interest income is usually taxable income and is presented in the income statement for the simple reason that it is an income account. Usually, the two categories in the income statement, namely, income from operations and other income are listed separately. In such an instance, the presentation of interest income will largely depend on the nature of the business' primary operations.

Net Assets

Business Dictionary (2016) defined net assets as the total assets of the firm minus its total liabilities. This amounts to shareholders' equity and is also known as net asset value. Therefore, net assets value of a firm is equal to the equity of the firm or the shareholder's fund. In statement of financial position, assets are reported at historical costs. In some cases, the difference between historical cost and current market values are very high. On the contrary column, all the liabilities are reflected by the daily market value. Farkoosh, Farkoosh and Naseri (2012) asserts that the origin of this discrepancy between the historic cost and current market value related to Generally Accepted Accounting Standards (GAAP) which requires that the assets, liabilities and net worth values of a company are computed on historical costs. This implies that the calculated net asset value amount will not reflect the true value of the shareholder's equity or net assets value. Thus, in order to calculate the exact value of net assets, it will be necessary to ascertain the current market value of assets of the firm. This will only be necessary during merger or acquisition or upon liquidation of the firm.

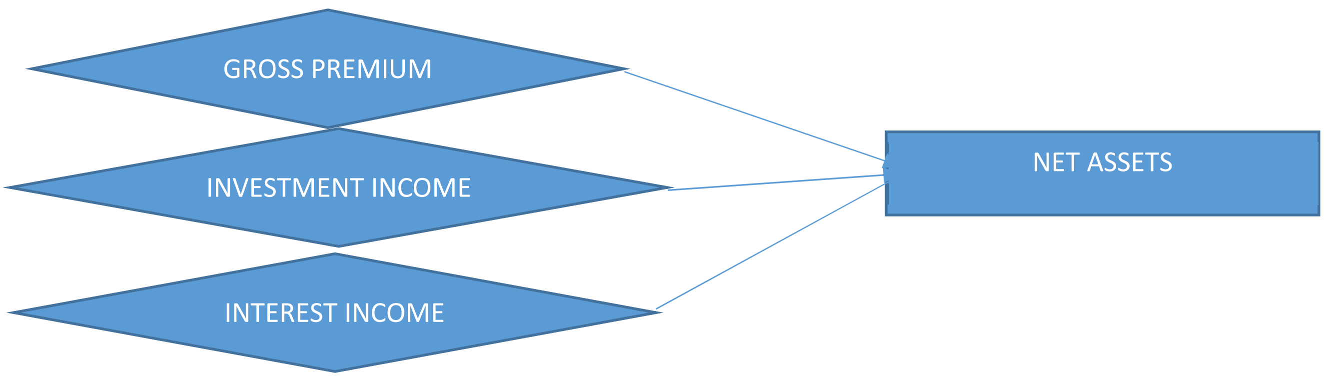

Fig 1: Conceptual Framework

Theoretical Framework

The study is supported by Agency Theory developed by Jensen and Meckling in 1976. Because firm diversification helps in resolving agency conflict, the study is anchored on the Agency Theory. Firm diversification helps to resolve agency conflict by ensuring that free cash flows of the firm is meaningfully invested in productive assets that will yield long term returns for stakeholders. By so doing, the firm managers are relieved of free cash flow for personal and selfish benefits.

Agency Theory

Jensen and Meckling propounded the Agency Theory in 1976. Agency theory explains the agency relationships that exist between the managers (agents) of the firm and principals (shareholders). The proponents of this theory argue that most managers like to be associated with large firms. As a result, they will work round the clock in increasing the firm size to fulfill their selfish interests at the expense of the shareholders.

Eisenhardt (1989) stated that the agency theory is concerned with resolving two main problems in an agency relationship, which consist of an agent and the principal of the agent. In business literature, the agent is argued to be the manager(s) of the firm and the principal is most likely to be the shareholder(s) or other affiliated that have a financial interest in the firm. The first agency problem occurs when (i) the desire or the objectives of the principal and agent result in conflicts and (ii) it is hard or very costly for the principal to monitor the behavior of the agent. The second problem is the attitude towards risk by the principal and the agent. The principal and the agent may each prefer different actions towards risk because the opposite risk preferences can lead to conflicts between them.

Empirical Review

Gross Premium and Shareholders' Wealth

Wahyuddin and Mauliyana (2021) examine that the effect of premium revenue, underwriting results, investment results and risk based capital on income of insurance firms listed on Indonesia Stock Exchange. The results of multiple regression analysis indicate that premium income, underwriting results, investment returns, and Rised Based Capital have a positive and significant effect on profits in insurance firms registered in Indonesia in 2017-2019.

Ben-Dhiab (2021) conducted a study to ascertain the factors influencing the profitability of insurance companies in Saudi Arabia during the period from 2009 to 2017. Result of correlation analysis suggest that positive relationship exists between the profitability of insurance companies, the growth rate of written premiums, the tangible ratio and the fixed assets ratio.

Olalere (2021) examined the effect of revenue diversification on the firm value and stability of banks: A comparative study of Nigerian and Malaysian banks from 2009 to 2017. The results show that revenue diversification, noninterest income/gross revenue ratio, fee and commission income/revenue ratio, and non-interest income/total assets ratio significantly affect the firm value and stability of Nigerian banks.

Investment Income and Shareholders' Wealth

Alshadadi and Deshmukh (2021) studied the determinants of profitability in Saudi insurance companies during the period from 2010 to 2016. Results show that profitability of insurance firms is significantly associated with the firm size, debt ratio, and the rate of actual loss. The results further indicate that volume of written premiums is the most influential variable on the profitability of insurance companies, followed by the indebtedness rate and then the actual loss.

Klopfenstein (2020) investigated the relationship between life insurance companies' premium revenue and income from their investments. Result of analysis reveals a negative correlation between the percentage of total revenue derived from premium revenue and the percentage of total revenue derived from net investment income and there is a positive correlation between the percentage of total revenue derived from premium revenue and the percentage of total revenue derived from equity investment income. These results suggest that life insurance companies can use the income from their investments to supplement income generated from premiums paid by their consumers.

Hamal (2020) examined the effects of various firm-specific factors: firm size, liquidity ratio, short-term debt, long-term investment and firm age on financial performance of life insurance firms in Nepal from 2009 to 2019. Findings also indicate that higher the age of the firm, the more difficult it will be to accumulate profit. The most influencing factors for the financial performance in Nepalese life insurance firms were firm size and long-term investment. Whereas, the explanatory power of liquidity seemed feeble.

Ariani and Zulhawati (2017) investigated the factors affecting the increase of insurance income among insurance companies in Indonesia from 2013-2017. Partially, this research indicates that risk-based capital negatively but not significantly affects the increase of premium income; return on investment negatively and significantly affects the increase of premium income; claim ratio positively and significantly affects the increase of premium income; and premium-growth ratio positively but not significantly affects the increase of premium income.

\Irungu (2016) studied the effect the effect of interest rates changes on financial performance of insurance life insurance firms in Kenya. Result also reveals a significant relationship between investment income and financial performance. Findings further reveals a significant relationship between Stock returns and financial performance. Result finally reveals a significant relationship between Stock returns and financial performance.

Investment Income and Shareholders' Wealth

Peninah and Bramwel (2021) examined corporate diversification and financial performance of listed firms in Kenya: Does Firm Size Matter. The sample consists of thirty-five (35) listed firms at NSE from 2003 to 2017. Results of panel data regression analysis indicate that there was a significant positive relationship between corporate diversification and financial performance. Furthermore, firm size had a negative and significant moderating effect in the relationship between corporate diversification and financial performance.

Mehmood; Hunjra and Chani (2019) examined the impact of corporate diversification and financial structure on the financial performance of firms listed in Pakistan, India, Sri Lanka, and Bangladesh. Secondary data were obtained from a sample of 520 manufacturing firms from four countries. Result further indicate that dividend policy and capital structure had a significant impact on the firm's financial performance.

Berg (2016) studied the impact of diversification and the financial crisis on firm performance of India Indian publicly listed firms during the period from 2006 to 2012. Crisis is measured as a dummy variable that has the value of one for the years 2008-2009 and zero in other year. This study found that diversified firms have on average a higher firm performance than non-diversified firms.

Ehiogu and Nnamocha (2018) adopted ex-post facto research design to investigate the effect of interest rate on profit of insurance companies in Nigeria insurance industry. Secondary data was obtained from the Central Bank of Nigeria Statistical Bulletin of 2014, as well as World Bank data website covering the period from 1985 to 2014. The finding implies that interest rate can reduce the returns of its investment. The study concluded that the insurance business profit margin is not significantly but positively influenced by interest rate.

Idil (2016) examined the determining factors in financial performance of publicly traded insurance companies at Istanbul Stock Exchange from 2008 to 2015. As a result of this analysis, a positive relationship was found between the performance of insurance companies and their numbers of agents, technical profit/earned premiums ratio and financial assets investment profit, while a negative correlation was identified between performance of insurance companies and loss ratio.

Methodology

Research Design

This study adopted *ex-post facto* researcher design. *Ex-post factor* research provides solution to research problem using historical financial data. The data were collected from the annual financial statement of insurance firms listed on Nigeria Stock Exchange during 2011-2022 periods.

Area of Study

The study was conducted in Nigeria and on insurance sub-sector of financial services firms listed on Nigeria Stock Exchange during the period from 2011-2022 periods.

Sources of Data

The source of data for the study is secondary data. The data were extracted from the annual reports and financial statement of the insurance firms listed on Nigeria Stock Exchange during the period of the study.

Population of the Study

The fifteen (15) insurance firms listed on Nigeria Stock Exchange during the period from 2011 to 2022 constituted the population of the study.

Determination of Sample Size

A sample of five (5) insurance firms listed on Nigeria Stock Exchange during the period was selected for the study. Only the insurance firms with at least three sources of income were considered in the sample. The five (5) insurance firms selected for the study are: Cornerstone Insurance Plc, Coronation insurance Plc, Guinea Insurance Plc, Linkage Assurance Plc and LASCO Insurance Plc.

Model Specification

The following model was developed in line with the variables of the study:

$$NETA = \beta_0+\beta_1(GRPI) + \beta_2(INVI) + \beta_3(INTI) + \varepsilon$$

Where:

NETA = Net Assets
GRPI = Gross Premium Income
INVI = Investment Income
INTI = Interest Income
β = Beta
ε = error term

Table 1: Description of Variables

Variable Name	Label	Variable Description	Source
Net Assets	NETA	The net asset value represents the net value of a firm which is calculated as the total value of the firm's assets minus the total value of its liabilities during a period.	Annual Report
Gross Premium Income	GRPI	A gross premium is the total premium of an insurance contract before brokerage or discounts have been deducted. Gross premiums are typically adjusted upwards to account for commissions, selling expenses like discounts, and other insurer expenses.	Annual Report
Investment Income	INVI	Investment income, money earned by financial assets, real estate or financial accounts, comes in three basic forms: interest, dividends, and capital gains.	Annual Report
Interest Income	INTI	The earnings generated by investments such as savings accounts and certificates of deposits are referred to as interest income. For financial companies like insurance firms, the re venue generated by the assets minus the expenses incurred in fixing the funds is referred to as net interest income.	Annual Report

Source: Authors Compilation, 2023.

Method of Data Analysis

Multiple regression is the main statistical tool of analysis while descriptive statistics and unit root test are the diagnostic tools of analysis. F-statistics was used to measure the predicting power of the model while Jaque-Bera statistics was used to test the data distribution of the study. Durbin-Watson Statistics was used to test for the presence of autocorrelation in the model of the study. The explanatory variables and measures of diversified income sources are: gross premium income, investment income and interest income are the explanatory variable and measures of diversified income sources while net asset is the dependent variable and proxy for shareholders' wealth.

Data Analysis and Discussion of Results

The data collected from the annual reports and financial statements of the selected insurance firms were analyzed using multiple regression, descriptive statistics and unit root test. The results of analysis are presented in tables 2 to 4 of the study.

Table 2: Descriptive Statistics

	NETA	GPRI	INVI	INTI
Mean	15237631	6404737.	650713.8	447460.2
Median	9360895.	4954125.	293193.0	260456.0
Maximum	2.51E+08	21677723	3317652.	1819112.
Minimum	2117947.	388518.0	1381.000	20430.00
Std. Dev.	31722458	5222408.	756048.8	421518.3
Skewness	7.006082	0.970865	1.289389	1.274464
Kurtosis	52.64785	3.119097	4.450581	4.173909
Jarque-Bera	6653.124	9.461240	21.88571	19.68775
Probability	0.000000	0.008821	0.000018	0.000053
Sum	9.14E+08	3.84E+08	39042829	26847611
Sum Sq. Dev.	5.94E+16	1.61E+15	3.37E+13	1.05E+13
Observations	60	60	60	60

Source: E-View Output

The descriptive statistics in Table 2 shows the mean (average) of each of the variables, their maximum values, minimum values, standard deviation and Jarque-Bera (JB) Statistics. The result provided some useful insights into the statistical nature of the variables used to conduct the study. The table shows that net assets, gross premium income, investment income, and interest income recorded an average value of 15237631, 6404737, 650713.8 and 447460.2 respectively. On the other hand, the results show that the standard deviations of the variables are:31722458, 5222458, 756048.38, 421518.3 respectively. These results suggest that net assets and investment income recorded standard deviations which are higher than their respective mean. This was also observed in the wide margins between their respective maximum and minimum values. On the contrary, the gross premium and interest income recorded standard deviations that are lower than their respective mean. This means that the two variables are less volatile during the period when compared with the net assets and investment income.

Table 3: Unit Root Test

Null Hypothesis: Unit root (common unit root process)
Series: D(NETA)
Date: 06/04/23 Time: 15:52
Sample: 2011 2022
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Total (balanced) observations: 45
Cross-sections included: 5

Method	Statistic	Prob.**
Levin, Lin & Chu t*	-2.35849	0.0092

** Probabilities are computed assuming asympotic normality

Intermediate results on D(NETA)

Cross section	2nd Stage Coefficient	Variance of Reg	HAC of Dep.	Lag	Max Lag	Band-width	Obs
1	-1.26908	5.E+12	1.E+12	1	1	8.0	9
2	-2.28996	3.E+12	2.E+12	1	1	8.0	9
3	-1.02156	2.E+11	9.E+10	1	1	5.0	9
4	9.53334	4.E+15	8.E+15	1	1	5.0	9
5	-3.03146	6.E+11	2.E+11	1	1	9.0	9

	Coefficient	t-Stat	SE Reg	mu*	sig*		Obs
Pooled	-1.64141	-6.347	1.110	-0.554	0.919		45

	NETA	GPRI	INVI	INTI
NETA	1.000000	-0.002062	0.237425	0.319987
GPRI	-0.002062	1.000000	0.168523	0.547115
INVI	0.237425	0.168523	1.000000	0.497102
INTI	0.319987	0.547115	0.497102	1.000000

Source: E-View Output

The common Unit Root Statistics for the variables are presented in Table 3. The Unit Root test is a diagnostic test conducted as a precondition for applying regression analysis. The test is conduct to ensure that the data used for the study is stationary. Stationarity is important because many useful analytical tools and statistical tests and models rely on it. The result of this test as indicated in table 4 suggests that the stationarity of the series was 1(0) order of integration for net assets, gross premium income, investment income and interest income. These variables achieved significant probability value after first difference, indicating that the variables are 1(0) order of integration.

Table 4: Multiple Regression Analysis

Dependent Variable: NETA
Method: Panel Least Squares
Date: 06/04/23 Time: 15:50
Sample: 2011 2022
Periods included: 12
Cross-sections included: 5
Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GPRI	1.472138	0.902787	1.630658	0.1086
INVI	2.969704	6.015835	0.493648	0.6235
INTI	31.41247	12.70627	2.472203	0.0165
C	8678029.	6713518.	1.292620	0.2015

R-squared	0.750866	Mean dependent var	15237631
Adjusted R-squared	0.705377	S.D. dependent var	31722458
S.E. of regression	30004531	Akaike info criterion	37.33594
Sum squared resid	5.04E+16	Schwarz criterion	37.47556
Log likelihood	-1116.078	Hannan-Quinn criter.	37.39055
F-statistic	3.316524	Durbin-Watson stat	2.205565
Prob(F-statistic)	0.026286		

Source: E-View Output

Table 4, presents the multiple regression model used to conduct the study. Results that the regression line has a positive intercept as presented by the constant (C) =8678029 which is statistically not significant at 0.05. The regression result also indicates that Adjusted Coefficient of Determination (R^2) of the model is 0.705377. This implies that 71% of the variation in the Net Assets of the insurance firms is explained by the independent variables, comprising of, Gross Premium Income (GPRI), Investment Income (INVI) and interest income (INTI) while the remaining 29% is explained by other variables not captured in the model of the studies. The findings also show that the coefficient of the F-Statistics is 3.316524 while the P-value is 0.026286, which is less than 0.05 (0.026286<0.05). This suggest that the model is strong in predictive Net Assets of the firms during the period. Durbin-Watson Statistics was used to test for the presence of autocorrelation in the model of the study. The range of Durbin-Watson Statistics is from 2 to 4. Any result within this range or near the lower limit shows no autocorrelation in the model of the study. Results from the table reveal that the Durbin-Watson Coefficient is 2.205565, this suggest that that there is no autocorrelation in the model of the study.

Gross Premium Income and Wealth of Shareholders

Results from table 4 reveals that the coefficient of Gross Premium Income (GPRI) is 1.472138, which is positive, while the P-value is 0.1086, which is greater than 0.05 (0.1086 > 0.05). Thus, we opine that Gross Premium Income positively, but non-significantly affects Nets Assets of insurance firms in Nigeria during the period. The result consistent with: Berg (2006) who analyzed the impact of diversification and the financial crisis on firm performance of India publicly listed firms. The result shows that diversified firms have on average a higher firm performance than non-diversified firms. Ariani and Zulhawati (2017) who investigated the factors affecting the increase of insurance income among insurance companies in Indonesia. Findings show that risk-based capital, result in investment, ratio of claim and premium-growth simultaneous have a significant effect on the increase of premium income.

Investment Income and Wealth of Shareholders

Findings from the table also show that the coefficient of Investment Income (INVI) is 2.969704, which is positive, while the P-value is 0.6235, which is greater than 0.05 (0.6235 > 0.05). Therefore, we state that Investment Income positively, but non-significantly affects Nets Assets of insurance firms in Nigeria during the period. This result is also consistent with Agency Theory developed by Jensen and Meckling in 1976. The theory argues that agency relationships that exist between the managers (agents) of the firm and principals (shareholders). The proponents of this theory suggest that most managers like to be associated with large firms. As a result of this, they work round the clock to increase firm size to fulfill their selfish interests at the expense of the shareholders. Therefore, a corporate diversification strategy assists in limiting agency conflicts by reducing the managerial self-interest and exposure to risk. The result is also consistent with: Hamal (2020) who analyzed the effects of various firm-specific factors on financial performance of life insurance firms in Nepal. Findings indicate that the most influencing factors for the financial performance in Nepalese life insurance firms were firm size and long-term investment. Klopfenstein (2020) who examined the relationship between life insurance companies' premium revenue and income from their investments in USA. The results suggest that life insurance companies can use the income from their investments to supplement income generated from premiums paid by their consumers.

Interest Income and Wealth of Shareholders

Results from test of hypothesis three, however, suggest the coefficient of Interest Income (INTI) is 31.41247, which is positive, while the P-value is 0.0165, which is less than 0.05 (0.0165 <0.05). Therefore, we state that Interest Income positively and significantly affects Nets Assets of insurance firms in Nigeria during the period. This result is also consistent with Agency Theory developed by Jensen and Meckling in 1976. The theory argues that agency relationships that exist between the managers (agents) of the firm and principals (shareholders). The proponents of this theory suggest that most managers like to be associated with large firms. As a result of this, they work round the clock to increase firm size to fulfill their selfish interests at the expense of the shareholders. Therefore, a corporate diversification strategy assists in limiting agency conflicts by reducing the managerial self-interest and exposure to risk. This fining is also in consonance with: Ehiogu and Nnamocha (2018) who explored the effect of interest rate on profit of insurance companies in Nigeria insurance industry. Results show that interest has positive and insignificant effect on total profit of the Nigerian insurance industry. Mehmood; Hunjra and Chani (2019) who examined the impact of corporate diversification and financial structure on the financial performance of firms listed in Pakistan, India, Sri Lanka, and Bangladesh. Results show that product diversification and geographic diversification significantly affected financial performance. Dividend & capital structure had a significant impact on the firm performance.

Conclusion

The study examined diversified income sources and wealth of shareholders of insurance firms in Nigeria during 2011 to 2022 periods. Five insurance firms listed on the Nigeria Exchange Group during the period were selected for the study. Time series data were extracted from the annual reports and financial statements of the selected insurance firms. Descriptive Statistics and multiple regression analysis were used to analyze the data. Based on the results from the data analysis, we conclude that the predictive power of the regression model is strong. We also conclude that gross premium income and investment income positively, but non-significantly affect net assets of the insurance firms while interest income positively and significantly affects net assets of the firms during the period.

Recommendation

i. The firm managers should increase gross premium income through aggressive sales promotion of the products and services of the insurance firms. The firms can also increase gross premium income by developing new insurance products and services and by repositioning existing ones in order to attract fresh clients and thus increase their firms' clientele base and sales.

ii. The firm managers should equally invest some gross premium incomes in meaningfully especially in real estate and stocks of other firms quote on the Nigeria Exchange Group to diversify income source of the insurance firms. This will go a long way to increase the net assets and shareholder wealth of the insurance firms.

iii. The firm managers should diversify income sources of their firms by investing excess premium incomes in financial instruments such as government bonds, commercial papers and treasury bills which can yield interest income to augment premium incomes.

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