



Firm Specific Factors and Performance of Insurance Firms in Nigeria

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Abstract

This study investigates the relationship between firm specific factors and the performance of insurance firms in Nigeria over the period 2009-2017 for twelve sampled insurance firms quoted on the Nigeria stock exchange using the panel least square technique. The empirical results revealed a direct and statistically significant relationship between insurance performance and firm's age. Besides, firm size and growth rate are specific firm factors that have significant inverse relationship with insurance firm's performance which is an indication of diseconomies of scale suffered by insurance firms due to uncontrolled increase in size. The study recommends that exogenous factors that relate to performance of insurance companies in Nigeria should be considered as most of the firm specific factors examined in this study did not have significant positive impact on performance of insurance firms during the period considered.

Keywords: Specific Factors, Performance, Insurance, ROA

JEL Classification: C33, G22, L25

Paper Classification: Research Paper

Introduction

The insurance is a key sector of any economy and is an integral part of the financial system responsible for managing both individual and institutional risks. Insurance companies serve as the cornerstone of risk management in any country; they guarantee financial safety, serve as a vital constituent in the chain of financial intermediation, and create an avenue for long term funds for infrastructural projects (Augustine & Nwanneka, 2011). In the same vein, an important role is being played by insurance business by helping in bearing risk, helping in creating employment, and acting as source of tax revenue to the government, creating an avenue for investors and financial investment services like bonds and stocks (Hamadu & Mojekwu, 2010). Hence, it is necessary to make sure that insurance companies in Nigeria perform remarkably and productively.

Every firm is concerned with its performance and good performance does not only increase its market value but aid in the growth of the industry in the long run, thereby leading to general

prosperity of the economy (Ahmed, Ahmed & Usman, 2011). Equity holders (shareholders) who have invested in a company, be it an insurance firm or any other type of firm demand good returns in terms of performance. There are several performance measures but the most widely used appear to be profitability.

In recent times, there have been growing number of studies that seek to ascertain firm specific factors as it relates to the performance of insurance companies. Researchers in different fields of business and strategic management have given important attention to financial performance (Almajali, Alamro & Al-soub, 2012). Due to the implications of financial performance on the health of an organization and its survival, it has been the main concern of business practitioners in various organizations. Management efficiency and effectiveness in utilizing the resources of a company is reflected in high performance and helps to contribute to the economy (Naser & Mokhtar, 2004). For decades in the field of corporate finance, organizational performance has drawn the attention of scholars but as it relates to the insurance industry, little attention has been given (Ahmed *et al.*, 2011).

Performance is very vital for firms as it aids their survival in the insurance industry. Over the years, there have been variations in profit as reported in financial statements of insurance companies in Nigeria. These led to the suggestion that certain firm specific factors must have been responsible for influencing the performance of insurance firms over time. In Nigeria, to the best of our knowledge, only few empirical studies have investigated firm specific factors like size, leverage, ownership structure, liquidity, premium growth, loss ratio, capital size, age in relation to insurance companies' performance.

Previous studies in Nigeria (Olaosebikan, 2012; Ahmed, 2015; and Kazeem, 2015) examined capital size, leverage, age, premium growth and liquidity in relation to the profitability of listed insurance firms in Nigeria. These studies conclude with mixed findings on the relationship between these firm specific factors and performance of insurance firms in Nigeria. Hence, the study attempts to investigate empirically this controversy as it relates to size and leverage in relation to insurance firm's performance in Nigeria.

The study introduces tangibility. This is a new variable in the investigation of determinants of performance in Nigerian insurance companies. Studies done outside Nigeria like Ahmed *et al.* (2011); Ayele (2012); Boadi *et al.* (2013); Mehari and Aemiro (2013); Sambasivam and Ayele (2013); Derbali (2014); Cekrezi (2015); Dey *et al.* (2015); Berteji and Hammami (2016) employed tangibility in their respective studies. This study also introduces growth rate. Studies conducted outside Nigeria like Ayele (2012); Sambasivam and Ayele (2013); Sumaira and Amjad (2013); Melese (2014) employed growth rate in their respective studies. The findings of studies conducted outside Nigeria may not be applicable to insurance companies in Nigeria. This is due to the fact that the environment in which the insurance companies operate differs in terms of regulation and operation. Hence, the need to examine the impact of tangibility and growth rate in addition to other specific factors on insurance company's performance in Nigeria.

Review of Related Literature

Concept of Performance and Measurement

Performance can be defined as the outcome arrived at after embarking on an activity. The measure applied in evaluation of performance in the corporate world depends on the kind of organization that is to be evaluated and the purpose for carrying out evaluation. This serves as a yardstick for selecting the appropriate measure for evaluating performance. Different models

for examining financial performance have been offered by scholars in the field of strategic management. The multidimensional view of performance suggests that the employment of various models or relationship patterns between organizational performance and its determinants will bring about different relationships between dependent and independent variables in the estimated models (Ostroff & Schmidt, 1993).

Financial performance and non-financial performance are the two kinds of performance (Hansen & Mowen, 2005). A distinction is normally made between financial or economic performance and innovative performance. Often stated in terms of sales growth, turnover or stock prices is financial or economic performance (Havnes & Senneseth, 2001). Conventionally, innovative performance is defined in terms of patents, expenditures innovative sales percentage, or self-reported innovation results (Hagedoorn & Cloudt, 2003). The ratios employed for measuring performance of a company can be classified into: Liquidity ratios and Profitability ratio. Profitability ratio is commonly used as measure of performance. There are several profitability ratios; Returns on assets (ROA), Return on equity (ROE), net profit margin and gross profit margin. In this study Return on assets (ROA) was employed as surrogate for performance. Most of the empirical studies on performance as it relates to insurance firms employed return on assets (ROA) as the measure of performance; Ahmed *et al.* (2011); Ayele (2012); Boadi *et al.* (2013); Burca and Batrinca (2014); Kazeem (2015); Mwangi and Murigu (2015); Berteji and Hammami (2016); Alomari and Azzam (2017); Berhe and Kaur (2017); Mazviona, Dube and Sakahuhwa (2017).

Return on assets (ROA) indicates the profitability of a company as it relates to the total assets of the company. It gives a clue as it relates to whether management of the company has been efficient in using assets of the company in generating earnings. Return on assets (ROA) is the most appropriate measure of the performance of a company and when there is an increase in ROA ratio it portrays positive financial performance of relative business and vice versa (Epps & Cereola, 2008).

Firm Specific Factors and Performance

Size and Performance: An important factor employed in determining firm performance is the size of a firm and this is attributable to economies of scale as found in the traditional neo classical view of the firm. A firm size influences its financial performance in several ways. Firms with large size have the advantage of economies of scale thereby leading to efficiency in comparison to firms with small size. Small firms are likely to face difficulty as it relates to competing with large firms in highly competitive markets due to the fact that smaller firms are likely to have lesser power. The empirical findings as it relates to size and performance of insurance companies have been mixed. Sumaira and Amjad (2013); Burca and Batrinca (2014); Derbali (2014); Kaya (2015); Berteji and Hammami (2016); Daare (2016); Berhe and Kaur (2017) concluded from their respective empirical findings that size is an important determinant of insurance company's performance. Kazeem (2015); Mazviona *et al.* (2017) found significant but negative relationship between size and insurance company's performance. Mwangi and Murigu (2015) found negative relationship between size and performance. Bawa and Chattha (2014) found positive relationship as it relates to size and profitability. Olaosebikanm (2012) found an insignificant relationship between size and profitability. Malik (2011); Almajali *et al.* (2012); Charumathi (2012); Dey *et al.* (2015); Alomari and Azzam (2017) found that size has a significant positive relationship with firm performance.

Leverage and Performance: Leverage reveals the extent at which borrowed funds are being utilized by a firm. A risk of bankruptcy exists when a company that is highly levered finds

it difficult to make debt payments; difficulty in finding new lenders in future may also arise. The impact of financial leverage on the performance of a firm can be positive this is due to the fact that leverage can be used as a tool for disciplining the management of a company. When the use of leverage by a company is high, it helps to reduce conflict between shareholders and management of the company (William, 1987). Leverage can function as a disciplinary tool that guides management of a company from wasting company resources (Grossman & Hart, 1982). The findings of the effect of financial leverage on performance as it relates to insurance company's performance have been mixed. Malik (2011); Ayele (2012); Charumathi (2012); Sambasivam and Ayele (2013); Dey *et al.* (2015); Kazeem, (2015); Hailegebreal (2016); Alomari and Azzam (2017) found that leverage has a significant but negative effect on profitability. Olaosebikanm (2012); Derbali (2014); Berteji and Hammami (2016); Berhe and Kaur (2017) found that leverage is not a significant determinant of performance. Boadi *et al.* (2013); Mwangi and Murigu (2015); Mazviona *et al.* (2017) found that leverage affects performance positively. Cekrezi (2015) found a negative relationship between leverage and performance. Ahmed *et al.* (2011); Lee and Lee (2012); Sumaira and Amjad (2013); Burca and Batrinca (2014); Mehari and Aemiro (2013) concluded that leverage is an important determinant of performance. Almajali *et al.* (2012) found a positive and significant effect between leverage and performance.

Tangibility and Performance: Tangibility entails fixed assets; it is also termed as plants and machinery in financial statements of companies. The impact of tangibility on profitability is positive and it portrays that assets that are tangible are easily monitored and also aid in providing collateral and helps in mitigating conflicts between lenders and owners of the company (Himmelberg, Hubbard, & Palia, 1999). The impact of tangibility on profitability can be negative due to the fact that companies with much tangible assets tend to be less profitable. More investment opportunities in the long run, research and development and innovation are associated with companies with high level of intangible assets (more liquidity) (Deloof 2003; Nucci, Pozzolo & Schivardi, 2005). The findings as it relates to tangibility and insurance company's performance have been mixed. Ahmed *et al.* (2011); Derbali (2014); Berteji and Hammami (2016) found that the relationship between tangibility and performance is not significant. Cekrezi (2015) found a positive relationship between tangibility and performance. Dey *et al.* (2015) found a positive but insignificant relationship between tangibility and firm performance. Boadi *et al.* (2013) found a negative relationship between tangibility and profitability. Mehari and Aemiro (2013) found a positive relationship between tangibility and performance and concluded that tangibility is one of the important determinants of performance. Sambasivam and Ayele (2013) found that tangibility of assets has significant relationship with profitability.

Growth rate and Performance: Growth of a company has been considered in several studies in examining performance. It involves examining growth in terms of growth in total assets of insurance companies. Empirical findings as it relates to growth and insurance company performance has been mixed. Lire and Tegegn (2016) found a positive and significant relationship between growth and performance. Ayele (2012); Sambasivam and Ayele (2013) Melese (2014) found firm growth as a significant determinant of performance in their respective studies. Ahmed *et al.* (2011); Sumaira and Amjad (2013) found insignificant relationship between growth rate performance.

Premium Growth and Performance: It measures the rate of market penetration by insurance companies as it relates to gross written premiums. Empirical findings as it relate to premium growth and insurance company performance has been mixed. Kaguri (2012); Burca and Batrinca (2014); Derbali (2014); Kaya (2015); Berteji and Hammami (2016) found significant relationship

between premium growth and performance in their respective studies. Charumathi (2012) found a significant but negative relationship between premium growth and profitability. Mehari and Aemiro (2013); Kazeem (2015) found insignificant relationship between premium growth and performance.

Age and Performance: The age of a company as it relates to insurance company performance has been considered in several studies. The empirical findings as it relates to age and insurance company's performance have been mixed. Kaguri (2012); Sumaira and Amjad (2013); Derbali (2014); Kaya (2015); Berteji and Hammami (2016) in their respective studies found that age has a significant relationship with performance. Ahmed et al. (2011); Ayele (2012); Mehari and Aemiro (2013); Sambasivam and Ayele (2013); Kazeem (2015) found that age of an insurance company is not a significant determinant of performance in their respective studies. Malik (2011); Mwangi and Murigu (2015) found no relationship between age and performance in their respective studies.

Empirical Review

Empirical studies on performance as it relates to insurance companies in the extant literatures conclude with mixed findings on the nature of relationships that exist between firm specific factors and financial performance of insurance firms.

A study was conducted by Ahmed et al. (2011) on determinants of performance of insurance sector in Pakistan using ordinary least squares (OLS) regression and a sample that consisted of life insurance companies from 2001 to 2007 with ROA as the proxy for performance. The firm specific factors employed include; age, Size, leverage, risk, growth, liquidity and tangibility. Their findings; size, risk and leverage had significant relationship with performance while liquidity, growth, tangibility and age had insignificant relationship with performance.

Several studies were conducted to examine the factors affecting profitability of insurance companies in Ethiopia using panel data by Ayele (2012); Mehari & Aemiro (2013); Sambasivam and Ayele (2013); Hailegebreal (2016); Lire and Tegegn (2016) and Berhe and Kaur (2017). Despite using different sample size and covering different time period ranging from 2003 to 2017, the studies concluded that firm specific factors such as size, age, tangibility, leverage, volume of capital, liquidity and growth all had significant positive relationship with profitability while liquidity and leverage had negative but significant relationship with profitability. Age and tangibility had insignificant relationship with profitability. Bawa and Chattha (2013) examined the financial performance of Indian life insurers using multiple linear regression model with a sample that consisted of 18 life insurance companies from 2007 to 2011. The firm specific factors employed include; equity capital, liquidity, leverage, size and solvency. The findings; liquidity and size had positive relationship with profitability while equity capital had negative relationship with profitability. This finding corroborated with the findings of Dey et al (2015) and Daare (2016) who also studied the impact of firm specific factors on the performance of life and non-life insurance firms respectively in India. Boadi *et al.* (2013) conducted a study on the determinants of profitability of insurance firms in Ghana using panel data with a sample that consisted of 16 insurance firms from 2005 to 2010. Using Return on assets (ROA) as proxy for profitability and leverage, tangibility, size, liquidity, risk and growth as firm specific factors. The study concludes that liquidity and leverage had positive relationship with profitability while tangibility had negative relationship with profitability. Sumaira and Amjad (2013) carried out a study to reveal the determinants of profitability in insurance sector of Pakistan using panel data and a sample that consisted of 31 insurance firms from 2006 to 2011 with leverage, growth opportunities, size, liquidity, age and earning volatility as firm specific factors. Findings from the

study show that leverage, size, earnings volatility and age had significant effect on profitability while growth opportunities and liquidity had insignificant effect on profitability. Ahmed (2015) examined the effect of capital size on profitability of listed insurance firms in Nigeria using panel regression model. The findings revealed that capital size and gross premium both had positive but insignificant effect on profitability. Similarly, Kazeem (2015) investigated the impact of firm specific characteristics on the performance of listed insurance firms in Nigeria using panel data of 12 listed insurance firms from 2006 to 2013. The study found that size, loss ratio, liquidity, and leverage had significant impact on performance. Firm size, loss ratio and leverage were negatively related to performance while age and premium growth had insignificant impact on performance. Çekrezi (2015) examined the factors that affect the financial performance of Albanian Insurance Companies using cross sectional time series data and the sample consisted of 5 insurance companies. The time period considered was from 2008 to 2013. The firm specific factors employed include; size, risk, leverage, tangibility, and flexibility. ROA stood as the proxy for performance. From the findings; leverage and risk had negative impact on performance while tangibility had positive impact on performance. This is similar to the findings of Kaya (2015) who examined firm-specific factors as it relates to profitability of non-life insurance companies operating in Turkey from 2006 to 2013. Mwangi and Murigu (2015) carried out a study on the determinants of financial performance in general insurance companies in Kenya using multiple linear regression between 2009 and 2012. Return on assets (ROA) was the proxy for performance and age, equity capital, liquidity, ownership structure, underwriting risk, size, management competence index, leverage and retention ratio as firm specific factors. Their findings revealed that leverage, management competence index and ownership had positive relationship with performance while size and ownership structure had negative relationship with performance. In the same vein, Berteji and Hammami (2016) examined the determinants of life insurance companies' performance in Tunisia using panel data consisting of 8 life insurance companies, their findings also show that size, age and premium growth had significant relationship with insurance companies performance while tangibility, liquidity, leverage, and risk had insignificant relationship with performance. Alomari and Azzam (2017) examined the effects of micro and macroeconomic factors on the performance of listed Jordanian insurance companies using panel data and a sample consisting of 24 listed insurance firms from 2008 to 2014. The study concluded that leverage, liquidity and underwriting risk all had negative but significant effect on performance while size had significant positive effect on performance. Mazviona, Dube and Sakahuhwa (2017) examined factors affecting the performance of insurance companies in Zimbabwe using factor analysis and multiple regression models with a sample of 20 short-term insurance companies from 2010 to 2014. Their findings revealed that expense ratio, claims ratio and the size significantly affect insurance companies' performance negatively while leverage and liquidity affect performance positively.

From the diverse set of empirical studies reviewed above across different geographical boundaries, the importance of the relationship between firm specific factors and performance become evident for Nigerian insurance industry in the present research.

Model Specification, Data and Method

This study investigates the impact of firm specific factors on performance of Insurance Companies in Nigeria. This study adopts an ex-post factor research design because the study used ex-post (manifested) data (which cannot be manipulated) to explain the trade-off or causal relationship between firm specific factors on performance. The population of the study consists of all the Twenty-Seven Insurance firms quoted on the Nigerian Stock Exchange (NSE) as in 2009. The criterion for sample size selection is that the insurance company must have continuous data

from 2009 to 2017 and should be listed as on December 2009. Only 12 insurance companies met the criteria for inclusion in the sample size and hence constitute the sample size for this study. This study made use of secondary data from the Nigerian Stock exchange, Central Bank of Nigeria (CBN) statistical bulletin, annual reports and accounts of sampled insurance firms.

The analytical model for this study was specified based on the model established in the extant literatures that link firm specific factors to performance. Most of the empirical studies on performance as it relates to insurance firms employed return on assets (ROA) as the measure of performance. (Berteji and Hammami, 2016; Daare, 2011); Hailegebreal, 2016; Lire and Tegegn, 2016; Alomari and Azzam, 2017; Berhe and Kaur, 2017; Mazviona, Dube and Sakahuhwa, (2017). The functional form of the modified model is specified below:

$$ROA=f (SIZE, LEV, TANG, GRATE, PG, AGE..... i$$

The econometric form of the model of the study is stated below:

$$ROA_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 LEV_{it} + \alpha_3 TANG_{it} + \alpha_4 GRATE_{it} + \alpha_5 PG_{it} + \alpha_6 AGE_{it} + u_t \text{ ---- ii}$$

where: α_0 to α_6 , are estimated parameters.

u_t is the stochastic error term

i represents the Insurance Firm which is from 1 to 12, while t represents time period which is 2009-2017

The a priori expectations are as follows:

$$\alpha_1 > 0, \alpha_2 < 0, \alpha_3 < 0, \alpha_4 > 0, \alpha_5 > 0, \alpha_6 > 0$$

Where;

ROA = Return on total assets;

SIZE= Size of companies;

LEV = Leverage;

TAN = Tangibility of assets;

GRATE = Growth

PG = Premium Growth;

AGE = Age of companies

Data Analysis Method

The data for this study are panel (cross sectional) in nature because the variables specified in the above model covered all the twelve sampled insurance firms for a period of nine years (2009 -2017), hence, Panel Least Square technique was used as econometric analysis for this study. However, the scientific justification to determine the specific Panel Least square regression techniques to be adopted is the Hausman test for random effects. According to Gujarati and Porter (2009), the null hypothesis underlying the Hausman test is that the Fixed Effect Model (FEM) and Random Effect Model (REM) estimators do not differ substantially. If the null hypothesis is rejected (when the chi-square statistics of the cross sectional random test is significant), the conclusion is that the REM is not appropriate, in this case the FEM is preferred to REM.

Table I: Descriptive Statistics

| | ROA | SIZE | LEV | TANG | PG | GRATE | AGE |
|--------------|----------|----------|----------|----------|-----------|-----------|----------|
| Mean | 0.025956 | 16.78955 | 1.484626 | 0.107905 | 0.198156 | 0.134143 | 30.06481 |
| Median | 0.037582 | 16.18466 | 0.761427 | 0.096166 | 0.123848 | 0.086830 | 26.00000 |
| Maximum | 0.207550 | 22.66405 | 53.27831 | 0.404571 | 1.245327 | 3.745369 | 48.00000 |
| Minimum | -0.41586 | 15.19156 | 0.183680 | 0.003359 | -0.371511 | -0.195510 | 15.00000 |
| Std. Dev. | 0.084744 | 1.822308 | 5.117152 | 0.072499 | 0.297789 | 0.385476 | 10.28316 |
| Observations | 108 | 108 | 108 | 108 | 108 | 108 | 108 |

Source: E-view 8.0 Output, 2018

Table I is the descriptive statistics for the dependent variable ROA and the independent variables; size, leverage, tangibility, premium growth, growth rate and age. The mean of ROA is 0.025956 while the maximum and minimum is 0.207550 and -0.4158620 respectively. The standard deviation is 0.084744 indicating considerable clustering around the mean. The mean of size is 16.78955 while the maximum and minimum is 22.66405 and 15.19156 respectively. The standard deviation value of 1.822308 indicates a large variation among the samples of listed insurance firms in Nigeria. Leverage had minimum value of 0.183680 and a maximum value of 53.27831. The mean value of leverage was 0.761427. The standard deviation of leverage was 5.117152 which is a large variation from the mean. Tangibility had a mean of 0.107905 with the minimum and maximum ranging from 0.003359 to 0.404571. The standard deviation for tangibility was 0.072477 which indicates that the tangibility of the firms in the sample deviates from the mean up to 0.072499. Premium growth had an average value of 0.198156 with a minimum of -0.371511 and a maximum of 1.245327. The standard deviation of premium growth was 0.297789. Growth rate had an average of 0.134143. The maximum and minimum values range from 3.745369 to -0.195510 respectively. The standard deviation was 0.385476. The average age of the insurance companies was 30.06481 (30years). The maximum age of the insurance companies was 48.00000 (48years) while the minimum age of the insurance companies was 15.00000 (15years). The standard deviation of age was 10.28316 (10years).

Table II: Correlation Coefficient

| | ROA | SIZE | LEV | TANG | GRATE | PG | AGE |
|-------|-----------|-----------|-----------|-----------|----------|-----------|----------|
| ROA | 1.000000 | | | | | | |
| SIZE | -0.046555 | 1.000000 | | | | | |
| LEV | -0.206305 | 0.027323 | 1.000000 | | | | |
| TANG | 0.133943 | 0.277555 | -0.103074 | 1.000000 | | | |
| GRATE | -0.387003 | 0.006965 | 0.083309 | -0.122746 | 1.000000 | | |
| PG | -0.045564 | 0.060994 | 0.052178 | -0.100795 | 0.153755 | 1.000000 | |
| AGE | 0.044593 | -0.197800 | 0.100631 | -0.138242 | 0.061244 | -0.036384 | 1.000000 |

Source: E-view 8.0 Output, 2018

Table II shows the correlation coefficient between the dependent variable and the independent variables. ROA is the dependent variable while size, leverage, tangibility, growth rate, premium growth and age are the independent variables. ROA is negatively correlated with all the variables except age and tangibility. For size and growth rate, it indicates that insurance firms are experiencing inefficiencies due to increase in size. This also implies that as firms become

larger, they might experience inefficiencies leading to poor financial performance. The negative correlation between ROA and leverage implies that insurance firms do not usually employ much debt and so leverage does not account for much of their performance. The negative correlation of ROA with premium growth is unexpected because premiums are the main tool employed by insurance firms. The negative correlation could be as a result of many insurance firms not writing enough premiums in the insurance industry. According to Burca and Batrinca (2014), an excessive growth of underwriting generates a higher underwriting risk. ROA has positive correlation with tangibility (0.133943) and age (0.044593). From the above correlation results, none of the variables representing firm specific factors is strongly correlated and this suggests the absence of multicollinearity. Hence, the variables are appropriate for conducting regression analysis.

Table III: The Hausman Test

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 56.714848 | 6 | 0.0000 |

Source: E-view 8.0 Output, 2018

From Table III, the p-value $0.0000 < 0.05$ hence the null hypothesis that the random effect model is more appropriate is rejected and the alternate hypothesis that the fixed effect model is more appropriate is accepted.

The Panel Regression analysis

Table IV: Fixed Effect Model

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|-------------|------------|-------------|--------|
| C | 1.292157 | 0.408555 | 3.162745 | 0.0021 |
| SIZE | -0.086084 | 0.027909 | -3.084467 | 0.0027 |
| LEV | 0.000812 | 0.001371 | 0.592486 | 0.5550 |
| TANG | -0.160445 | 0.159493 | -1.005966 | 0.3171 |
| GRATE | -0.040801 | 0.017747 | -2.298969 | 0.0238 |
| PG | 0.035063 | 0.022652 | 1.547897 | 0.1252 |
| AGE | 0.006444 | 0.003378 | 1.907937 | 0.0596 |
| R-squared=0.517502, F-statistic=5.678196(0.000000) | | | | |
| Durbin-Watson stat=2.462382 | | | | |

Source: E-view 8.0 Output, 2018

The coefficient of determination as indicated in Table IV stood at 0.517. This suggests that only about 52% of variations in performance (ROA) are explained by all the independent variables in the model. This suggests that there are some other factors which are responsible for variations in profit of insurance companies in Nigeria. The F-statistic 5.678196 had p-value (0.000000) which indicates that a significant linear relationship exists between the dependent and independent variables. The Durbin-Watson value of 2.46 suggests that the presence of autocorrelation is unlikely. An evaluation of the slope coefficients of the explanatory variables indicates that size is negatively related to ROA and this contradicts the apriori expectation of a positive relationship between size and performance. This may be as a result of diseconomies of scale suffered by insurance firms due to uncontrolled increased size. As firms become larger; they might experience inefficiencies leading to poor financial performance. Large insurance firms are likely to have poor

performance in contrast to smaller insurance firms who will have better performance. Mazviona *et al.* (2017); Kazeem (2015); Mwangi and Murigu (2015) also found a negative relationship between size and insurance company's performance. This finding of a significant relationship between size and insurance company's performance is in line with the findings of Mazviona *et al.* (2017); Berhe and Kaur (2017); Berteji and Hammami (2016); Daare (2016); Kazeem (2015); and contradicts the finding of Olaosebikanm (2012) of an insignificant relationship between size and insurance companies performance.

Leverage was positively related to ROA and this contradicts the apriori expectation of negative relationship between leverage and performance. This corroborates the findings of Mazviona *et al.* (2017); Mwangi and Murigu (2015); Boadi *et al.* (2013); Almajali *et al.* (2012) who also found a positive relationship between leverage and performance of insurance companies. Leverage had an insignificant relationship with ROA which implies that insurance companies in Nigeria were not significantly affected by increasing or decreasing the level of leverage after the last recapitalization exercise that ended in 2007. In the same vein, Berhe and Kaur (2017); Berteji and Hammami (2016); Derbali (2014); Olaosebikanm (2012) also found an insignificant relationship between leverage and performance of insurance companies.

Tangibility was negatively related to ROA and contradicts the apriori expectation of a positive relationship between tangibility and performance. The impact of tangibility on profitability can be negative due to the fact that companies with much tangible assets tend to be less profitable. More investment opportunities in the long run, research and development and innovation are associated with companies with high level of intangible assets (more liquidity) (Deloof 2003; Nucci, Pozzolo & Schivardi, 2005). Boadi *et al.* (2013) found a negative relationship between tangibility and performance of insurance companies.

Growth rate was negatively related to ROA and contradicts the apriori expectation of a positive relationship between growth rate and performance. Insurance firms with high growth rate are likely to have poor performance in contrast with insurance firms with low growth rate who will experience better performance. Premium growth had a positive relationship with ROA and this is in line with the apriori expectation of a positive relationship between premium growth and performance. Lire and Tegegn (2016) found a positive relationship between premium growth and insurance companies' performance. Besides, this insignificant relationship between premium growth and ROA implies that insurance companies in Nigeria were not significantly affected as a result of increasing or decreasing the level of gross written premiums after the last recapitalization exercise that ended in 2007. This finding of an insignificant relationship between premium growth and performance is in line with the findings of Kazeem (2015); Mehari and Aemiro (2013).

Age is positively related to ROA and this is consistent with the apriori expectation of a positive relationship between age and performance. On the basis of significance, age had significant relationship with ROA which is consistent with the findings of Kazeem (2015); Mehari and Aemiro (2013); Sambasivam and Ayele (2013); Ayele (2012) and Ahmed *et al.* (2011) and not consistent with the findings of Berteji and Hammami (2016); Kaya (2015); Derbali (2014); Sumaira and Amjad (2013); Kaguri (2012).

Findings

The focus of the study was on firm specific factors and insurance companies' performance. Six firm specific factors (size, leverage, tangibility, growth rate, premium growth and age) were selected for this study while Return on assets was used to represent performance. The results of

the study indicate that size is negatively and significantly related to performance. This suggests that large insurance companies in terms of total assets are likely to be less profitable which implies poor performance. This insignificant relationship between leverage and performance implies that insurance companies in Nigeria were not significantly affected as a result of increasing or decreasing the level of leverage after the last recapitalization exercise that ended in 2007. Growth rate was found to be significant but negatively related to performance. This suggests that insurance firms with high growth rate are likely to have poor performance in contrast with insurance firms with low growth rate who will experience better performance. The higher the growth rate, the lower the performance. As an insignificant variable, it implies that premium growth is not an important firm specific factor that determines performance of insurance companies in Nigeria. Age of insurance companies was observed to be insignificant but positively related to performance. As a significant variable, it implies that age of insurance companies is an important firm specific factor that influences performance of insurance companies in Nigeria. The results suggest that other factors might be responsible for influencing the performance of insurance companies in Nigeria after the last recapitalization exercise that ended in 2007.

Conclusion and Recommendations

The findings seem to provide evidence that size and growth rate of insurance companies are crucial as both were found to be the most important firm specific factors affecting the performance of insurance companies in Nigeria. It is suggested that insurance companies pay more attention to size and growth rate as it relates to performance of insurance companies in Nigeria. Large total assets and high growth rate of those assets are not associated or linked with better performance as shown in the significant negative relationship between size and performance and growth rate and performance. Hence, the issue of large assets and high growth rate of those assets be addressed as it does not yield better performance of insurance companies in Nigeria. Also, the use of debt by insurance companies has little or no role to play as regards performance of insurance companies in Nigeria. Investment in fixed assets should not be a major concern of insurance companies as it was not found to be a significant factor affecting their performance. Growth in writing premiums has some role to play as it relates to performance though it had an insignificant but positive relationship with performance.

In terms of recommendations for further studies, it is suggested that exogenous factors should be examined as it relates to performance of insurance companies in Nigeria. Furthermore, other firm specific factors like underwriting, profit loss ratio, liquidity and some others should be examined as they relate to insurance company's performance in Nigeria.

References

- Ahmed, I. (2015). Effect of capital size on the profitability of listed insurance firms in Nigeria. *African Journal of Business Management*, 10(5), 109-113.
- Ahmed, N., Ahmed, Z., & Usman, A. (2011). Determinants of performance: A case of life insurance sector of Pakistan. *International Research Journal of Finance and Economics*, 6(1), 123-128.
- Almajali, A.Y., Alamro, S.A., & Al-Soub, Y.Z. (2012). Factors affecting the financial performance of Jordanian insurance companies listed at Amman stock exchange. *Journal of Management Research*, 4(2), 266-289.
- Alomari, M.W & Azzam, I.A. (2017). Effect of the micro and macro factors on the performance of the listed Jordanian insurance companies. *International Journal of Business and Social Science*, 8(2), 66 – 73.
- Augustine, U., & Nwanneka, J.M. (2011). Repositioning insurance industry for operational efficiency: The Nigerian case. *Journal of Applied Finance & Banking*, 1(3), 15-32.

- Ayele, A.G. (2012). *Factors affecting profitability of insurance companies in Ethiopia: Panel Evidence* (An Unpublished M.Sc Thesis, Addis Ababa University, Ethiopia) Retrieved from <http://etd.aau.edu.et/bitstream/handle/123456789/298/Abate%20Gashaw.pdf?sequence=1&isAllowed=y>
- Bawa, S.K., & Chattha, S. (2013). Financial performance of life insurers in Indian insurance industry. *Pacific Business Review International*, 6(5), 44-51.
- Berhe, T.A., & Kaur, J. (2017). Determinants of insurance companies profitability : Analysis of insurance sector in Ethiopia. *International Journal of Research in Finance and Marketing (IJRFM)*, 7(4), 124~137.
- Berteji, A., & Hammami, S. (2016). The determinants of the performance of the life insurance companies in Tunisia. *International Journal of Economics, Commerce and Management*, 4(7), 334-343.
- Boadi, E. K., Antwi, S. & Lartey, V.C. (2013). Determinants of profitability of insurance firms in Ghana . *International Journal of Business and Social Research (IJBSR)*, 3(3), 43-50.
- Burca, A.M., & Batrinca, G. (2014). The determinants of financial performance in the Romanian insurance market. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(1), 299-309.
- Cekrezi, A. (2015). Determinants of financial performance of the insurance companies: A case of Albania. *International Journal of Economics, Commerce and Management*, 3(4), 1-10
- Charumathi, B. (2011). The determinants of profitability of Indian life insurers: An empirical study. *Proceedings of the World Congress on Engineering* (pp.1-6).London,UK:WCE.
- Daare, W.J. (2016). Determinants of non-life insurance companies profitability: An empirical study in India. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*, 3(13), 6 – 11.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance and Accounting*, 30(3) & (4), 573–588.
- Derbali, A. (2014). Determinants of performance of insurance companies in Tunisia: The case of life insurance. *International Journal of Innovation and Applied Studies*, 6(1), 90-96.
- Dey, N.B., Adhikari, K., & Bardhan, R. (2015). Factors Determining financial performance of life insurance companies of India: An empirical study. *EPRA International Journal of Economic and Business Review*, 3(8), 42-48.
- Emmett, V., & Curtis, M. (1978). *Fundamentals of Risk and Insurance*. United States: John Wiley and Sons.
- Epps, R.W., & Cereola, S.J. (2008). Do institutional shareholders services corporate governance ratings reflect a company's operating performance? *Critical Perspectives on Accounting*, 19, 1135-1148.
- Grossman, Sanford and Hart, Oliver D. (1982). Corporate Financial Structure and Managerial Incentives. In John McCall (Eds.), *The Economics of Information and Uncertainty* (pp.107-140). USA : National Bureau of Economic Research.
- Gujarati, D. N. & Porter, D. C. (2009) *Basic Econometrics*. Boston: McGrawHill Company
- Hagedoorn, J., & Cloudt, M. (2003). Measuring innovative performance: Is there an advantage in using multiple indicators? *Research Policy*, 32(8), 1365-1379.
- Hailegebreal, D. (2016). Macroeconomic and firm specific determinants of profitability of insurance industry in Ethiopia. *Global Journal of Management and Business Research:C Finance*, 16(7), 26 – 36.
- Hamadu, D & Mojekwu, J.N (2010). An investigation of Nigerian insurance stock option prices. *Medwell Journals of International Business Management*, 4(1), 1-8.
- Hansen, R., & Mowen, M. (2005). *Management Accounting*, Singapore: South-Western.

- Haynes, P., & Senneseth, K. (2001). A panel study of firm growth among SMEs in networks. *Small business economics*, 16(4),293-302.
- Himmelberg, C., Hubbard, G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics*, 53(3), 353-384.
- Kaguri, A.W (2012). *Relationship between firm characteristics and financial performance of life insurance companies in Kenya*. (An Unpublished M.Sc Thesis, University of Nairobi, Kenya.) Retrieved from http://chss.uonbi.ac.ke/sites/default/files/chss/AGNES%20WANGUI%20KAGURI_0.pdf.
- Kaya, E.O. (2015). The effects of firm specific factors on the profitability of non-life insurance companies in Turkey. *International Journal of Financial Studies*, 3(4), 510-529.
- Kazeem, H.S. (2015). *Firm specific characteristics and financial performance of listed insurance firms in Nigeria* (An Unpublished M.Sc Thesis, Ahmadu Bello University, Zaria, Nigeria) Retrieved from <http://kubanni.abu.edu.ng/jspui/bitstream/123456789/8085/1/FIRM%20SPECIFIC%20CHARACTERISTICS%20AND%20FINANCIAL%20PERFORMANCE%20OF%20LISTED%20INSURANCE%20FIRMS%20IN%20NIGERIA.pdf>.
- Lire, A & Tegegn, T (2016). Determinants of profitability of private insurance company in Ethiopia. *Journal of Poverty, Investment and Development*, 26, 85-92.
- Malik, H. (2011). Determinants of insurance companies' profitability: An analysis of insurance sector of Pakistan. *Academic Research International*, 1(3), 315-321.
- Mazviona, B.W., Dube, M., & Sakahuhwa, T. (2017). An analysis of factors affecting the performance of insurance companies in Zimbabwe. *Journal of Finance and Investment Analysis*, 6, 11 – 30.
- Mehari, D., & Aemiro, T. (2013). Firm specific factors that determine insurance companies performance in Ethiopia. *European Scientific Journal*, 9(10), 245-255.
- Melese, M.G (2014). *Determinants of insurance companies' profitability in Ethiopia*. (An Unpublished M.Sc Thesis, Addis Ababa University, Ethiopia) Retrieved from <http://etd.aau.edu.et/bitstream/handle/123456789/3990/Meaza%20Melese.pdf?sequence=1&isAllowed=y>
- Mwangi, M., & Murigu, J.W. (2015). The determinants of financial performance in general insurance companies in Kenya. *European Scientific Journal*, 2(1), 288-297.
- Naser, K. and Mokhtar, M. Z. 2004. Determinants of corporate performance of Malaysian companies. In *Fourth Asia Pacific Interdisciplinary Research in Accounting Conference*, (pp. 16-25). Singapore.
- Nucci, F., Pozzolo, A., & Schivardi, F. (2005). Is Firm's Productivity Related to its Financial Structure? Evidence from Microeconomic Data. *Rivista di Politica Economica- SIPI Spa*, 95(1), 269-290.
- Olaosebikan, O. (2012). *The Determinants of the Profitability of Micro-Life insurers in Nigeria*, (An Unpublished M.Sc Thesis, University of Bath. United Kingdom). Retrieved from <https://researchportal.bath.ac.uk/en/publications/ba419bb8-3d57-4e84-8644-7b201c37ad21>
- Ostroff, C., & Schmitt, N. (1993). Configuration of Organizational Effectiveness and Efficiency, *Academy of Management Journal*, 36(6), 1345-1361.
- Sambasivam, Y., & Ayele, A.G. (2013). A study on the performance of insurance companies in Ethiopia. *International Journal of Marketing, Financial Services & Management Research*, 2(7), 138 – 150.
- Sumaira, B.J.K., & Amjad, T.S. (2013). Determinants of profitability: Panel data Evidence from insurance sector of Pakistan. *Elixir Finance Management*, 57A, 14377-14382.
- Williams, J (1987). Perquisites, risk, and capital structure. *Journal of Finance*, 42(1) , 29-49.

APPENDIX**Hausman Test**

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 56.714848 | 6 | 0.0000 |

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

| Variable | Fixed | Random | Var(Diff.) | Prob. |
|----------|-----------|-----------|------------|--------|
| SIZE | -0.086084 | -0.002404 | 0.000766 | 0.0025 |
| LEV | 0.000812 | -0.002891 | 0.000000 | 0.0000 |
| TANG | -0.160445 | 0.118000 | 0.017143 | 0.0334 |
| GRATE | -0.040801 | -0.081547 | 0.000044 | 0.0000 |
| PG | 0.035063 | 0.010580 | 0.000060 | 0.0016 |
| AGE | 0.006444 | 0.000741 | 0.000011 | 0.0858 |

Fixed Effect Model Estimation

Dependent Variable: ROA

Method: Panel Least Squares

Date: 05/10/18 Time: 09:50

Sample: 2007 2015

Periods included: 9

Cross-sections included: 12

Total panel (balanced) observations: 108

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | 1.292157 | 0.408555 | 3.162745 | 0.0021 |
| SIZE | -0.086084 | 0.027909 | -3.084467 | 0.0027 |
| LEV | 0.000812 | 0.001371 | 0.592486 | 0.5550 |
| TANG | -0.160445 | 0.159493 | -1.005966 | 0.3171 |
| GRATE | -0.040801 | 0.017747 | -2.298969 | 0.0238 |
| PG | 0.035063 | 0.022652 | 1.547897 | 0.1252 |
| AGE | 0.006444 | 0.003378 | 1.907937 | 0.0596 |

Effects Specification

 Cross-section fixed (dummy variables)

| | | | |
|--------------------|----------|-----------------------|-----------|
| R-squared | 0.517502 | Mean dependent var | 0.025956 |
| Adjusted R-squared | 0.426364 | S.D. dependent var | 0.084744 |
| S.E. of regression | 0.064184 | Akaike info criterion | -2.503105 |
| Sum squared resid | 0.370766 | Schwarz criterion | -2.056083 |
| Log likelihood | 153.1677 | Hannan-Quinn criter. | -2.321854 |
| F-statistic | 5.678196 | Durbin-Watson stat | 2.462382 |
| Prob(F-statistic) | 0.000000 | | |

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