



EFFECTS OF FIRM CHARACTERISTICS ON FINANCIAL PERFORMANCE OF LISTED INSURANCE COMPANIES; EVIDENCE FROM NIGERIA.

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Abstract

Firm characteristics have become an area of concern among researchers and investors alike because of its strategic role in the development of contemporary organizations through increased performance. The mixed results and positions regarding the influence of firm characteristics provoked the need for this study in order to examine the effect of firm characteristics on the financial performance of listed insurance companies in Nigeria from 2008-2016. To achieve the objective of the study, data were generated from the annual reports of the twelve (12) listed insurance companies that were selected in Nigeria. The firm characteristics selected were proxied by Age of the Firm (FAG), Board Size (BSZ), Premium Growth Rate (PGR), Firm Size (FSZ) and Loss Ratio (LR), while the Return on Asset (ROA) is the surrogate for the financial performance. The structured panel data collected were analysed using the multiple regression and correlation techniques in accordance with the research objectives. The analysis of the data revealed that; Board size (BSZ) has positive but insignificant effect on the financial performance of Nigerian listed insurance companies but the Firm size and premium growth rate has positive and significant effect on the financial performance of listed insurance companies in Nigeria. The study further confirmed statistically that loss ratio and age of the firm have insignificant negative effect on the financial performance of listed insurance companies in Nigeria. Based on these findings, the following recommendations are made; insurance firms in Nigeria should extend the scope of their activities and create a new market by introducing new insurance products and services in order to expand and tap the synergy of business growth and expansion. Management of insurance companies and policy makers are therefore expected to utilize the resources effectively in pursuing growth objectives and at the same time delivering of their services in order to improve the financial performance of the

insurance companies. The insurance firms in Nigeria should diversify their investment drives to other profitable areas based on the existing business activities and not to be deceived by the misleading objective of increasing premium growth at the detriment of other investment opportunities that are capable of improving the performance of the insurance firms.

Keywords; Firm characteristics, Financial Performance, Insurance Companies.

Introduction

Insurance companies provide unique and specialized financial services to the growth and development of every economy in the world. According to Mwangi and Murigu (2015), such specialized and unique financial services ranges from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments. Also, a well-developed and evolved insurance industry is essential for economic development as it provides long- term funds for development (Charumathi,2012).

According to Oner kaya (2015), profit is the essential pre-requisite for the survival, growth and competitiveness of insurance companies and the cheapest source of funds. Thus, one of the objectives of management of insurance companies is to attain profit as an underlying requirement for conducting any insurance business (Chen and Wong, 2004). The profit that the insurance companies must create in order to sustain their role in an economy can be measured through financial performance.

Financial performance is a measure of an organization's earnings, profits, appreciations in value as evidenced by the rise in the entity's share price (Mwangi and Murigu,2015). According to Yahaya, Kutigi and Mohammed (2014), it is a measure of the results of a firm's policies and operations in monetary terms, and the appropriate measure selected to assess financial performance is considered to depend on the type of organization to be evaluated, and the objectives to be achieved through that evaluation. In insurance sector, financial performance is normally expressed in net premiums earned, profitability from underwriting activities, annual turnover, returns on investment and return on assets. These measures can be termed as profit performance measures. Profit performance includes the profits measured in monetary terms. According to Mwangi and Murigu (2015), it is simply the difference between the revenues and expenses. These two factors, revenue and expenses are in turn influenced by firm characteristics (Chen and Wong, 2004) as cited in Mwangi and Murigu, (2015).

Insurance companies are associated with certain firm characteristics which impact on their financial performance either positively or negatively such as firm size (Almajali Sameer and Alsoub, 2012), premium growth rate (Chen and Wong, 2004), firms age (Shiu, 2004). Underwriting risk or loss ratio (Oner kaya 2015) and board size (Yermack 1996).

Considerable studies have been carried out in recent years on the effect of firm characteristics on financial performance of insurance companies in developed countries (Al-Shami, 2008, Dieter, 2011, Kozak, 2011 and Charumathi, 2012), while some focused on developing countries (Ahmed, Naveed & Usman 2013, Abate, 2012, Akotoye, Osei and Gemegah, 2011, Almajali *et al*, 2012, Oner kaya, 2015, Mwangi and Murigu, 2015 and Malik, 2011). However, to the best of the researcher's knowledge, little has been done on this sector in Nigeria. Most literatures focused on factors influencing the performance of banks rather than insurance companies (Aburime 2008).

Similarly, variables that must have been used in other studies, especially from developed economies or other emerging markets may not be consistent with rudimentary Nigeria insurance industry. To this end, the effect of firm characteristics on financial performance of insurance companies in Nigeria calls for more empirical investigation.

The quest for individuals and corporate organizations in Nigeria to insure their properties against unforeseen contingencies and the government to provide the needed infrastructural facilities in all the sectors of the Nigerian economy has made insurance companies an important subsector to be reckoned with in the country. Therefore, the question that requires answer is: what is the effect of firm characteristics on financial performance of insurance companies in Nigeria? This present study is therefore an attempt to fill this literature gap.

Therefore, the objective of this study is to assess the effect of firm characteristics on the financial performance of listed insurance companies in Nigeria from the period spanning from 2008-2016. Specifically, the paper seeks to evaluate the effect of firm size, firm age, loss ratio, board size and premium growth rate on the financial performance of listed insurance companies in Nigeria.

In order to achieve these objectives, the following hypothesis was formulated;
H₀: Firm characteristics have no significant effect on the financial performance of listed insurance companies in Nigeria.

This study will be beneficial to the management of these companies under study as it will provide them with an understanding of how these firm characteristics affect the financial performance of their companies. Also, the findings will be useful to stakeholders in the Nigerian Stock Exchange (NSE) in terms of policy

issues, investment decisions and regulatory measures as it provides evidence on the effect of these firm characteristics on financial performance of insurance companies in Nigeria.

The remaining paper is divided into the following sections: Section 2 of this study reviews previous empirical literature on the effect of firm characteristics on financial performance, section 3 deals with the methodology that was adopted for the study. Section 4 presents the analysis of results, and finally, section 5 carries the conclusion and recommendations made by the researchers.

Literature Review

Concept of firm characteristics

Firm characteristics are attributes or features which a firm possesses. These attributes are necessary for the effectiveness of the firm in achieving financial performance. The characteristics of the firm are shown to have effect on financial performance (Oner kaya,2015; Mwangi & Murigu,2015).

Firm characteristics are the wide varieties of information disclosed in the financial statement of business entities that serve as the predictors of the firms' quality of accounting information and performance (Lang & Lundholm, 1993) as cited in Oner kaya (2015). According to Charles, Ahmed and Joshua (2018), firm characteristics are factors that are mostly under the control of management. Company's characteristics vary from one business entity to another. The company's characteristics can be gotten based on the relevant information disclosed on its financial statements for a particular accounting period (Stainer, 2006). According to Golan, Krissoff, Kuchler, Nelson, Price & Kelvin (2003), firm characteristics include structure, market and capital-related variables summarized as firm's resources and objectives. Malik (2011) clearly classified firm characteristics into two major sub-categories, namely, the financial variables and non-financial variables. From his explanation, he regarded financial variables as determining factors which are directly driven from items in a statement of financial position and statement of comprehensive income. On the other hand, the non-financial variables are those factors which cannot be driven from the items in the statement of financial position and statement of comprehensive income. The non-financial variables are classified as management quality or competency, efficiency and productivity and scope of operation (Yuqili, 2007).

There are different forms of firm characteristics depending on the nature of the research to be conducted. For the purpose of this study, firm characteristics in

the insurance sector include firm size, firm age, loss ratio, board size and growth rate of premium.

Concept of financial performance

Financial performance is the measurement of the results of a firm's strategies, policies and operations in monetary terms (Kipkemoi, 2010). Mwangui and Murigu (2015), assert that these results are reflected in the firm's return on assets and return on investments. Ilaboya and Omoye (2013) regarded financial performance in relation to the capability of the organization to generate returns by efficiently and effectively employing available resources over a given period. Malik and Nadeem (2014) viewed financial performance as a measure of how well a company is using assets from its primary mode of business and generate revenues. It has been known from the literatures that the performance of corporate organizations has been one of the major concerns of management experts, investors and as well as researchers. In view of this, financial performance is the most important and reliable indicator as it gives a broad indicator of the ability of companies to raise their income level (Ahmed et al, 2013).

Therefore, financial performance refers to the process of performing financial activities in order for a company to accomplish its financial objectives by measuring the results of company's policies and operations in monetary terms.

Empirical Review

Previous studies relating to the effects of firm characteristics on financial of companies were reviewed under this subsection:

Yuvaraj and Abate (2013) examined the effects of firm characteristics on profitability proxied by Return on Assets of listed insurance companies in Ethiopia. The sample of the study included nine of the listed insurance companies over nine years (2003-2011). Data were obtained from the annual reports and accounts of the sampled firms. From the regression results; firm size was identified as most important determinant of profitability. Hence, firm size is positively related with profitability. In contrast, age of companies is not significantly related with profitability. Abate (2012) investigated the impact of firm characteristics on performance of insurance companies in Ethiopia. Return on total assets (ROA) as key indicator of insurance company's performance was used as dependent variable while age of company, size of the company, growth in writing premium and loss ratio were among the independent variables. The sample includes 9 insurance companies over the period 2005 to 2010. Data were

obtained from the annual reports and accounts of the sampled firms. Multiple regression was used to analyze the data. The results of regression analysis revealed that insurers size is statistically significant and positively related with return on total asset; however, loss ratio (risk) is statistically significant and negatively related with ROA. Thus, insurers size and Loss ratio (risk) are important determinants of performance of insurance companies in Ethiopia. However, growth in written premium and insurers age have statistically insignificant relationship with ROA.

Charumathi, (2012) examined the effects of firm characteristics on profitability of Indian life insurance companies within the period of 2008 to 2010. For this purpose, firm specific characteristics such as firm size, premium growth and underwriting risk are regressed against Return on Assets. This study concludes that profitability of life insurance companies is positively and significantly influenced by the size (as explained by logarithm of net premium). The premium growth has negatively and significantly influenced the profitability of Indian life insurance companies. The study did not find any evidence for the relationship between underwriting risk and profitability.

Akotey *et al.* (2011) identified the determinants of profitability in the life insurance industry of Ghana. The study used investment income, underwriting profit and overall net profit as proxies for profitability. The financial statements of ten (10) life insurance companies covering a period of eleven years (2000 to 2010) were sampled and analyzed through panel regression. The findings proved that whereas gross written premiums have a positive relationship with insurers sales profitability, its relationship with investment income is a negative one. Also, the results showed that life insurers have been incurring large underwriting losses due to overtrading and price undercutting. The results further revealed a setting-off rather than a complementary relationship between underwriting profit and investment income towards the enhancement of the overall profitability of life insurers. The major drawback of this study is the combination of both the macro and micro determinant variables on life insurance neglecting the non-life insurance. Focusing on both micro and macro determinants variables may not give adequate information regarding their effectiveness in influencing the performance of insurance firms due to the combined effect of both the micro and macro determinants.

Sumaira and Amjad (2013) studied the determinants of profitability in insurance sector of Pakistan with a panel data set of 31 insurance firms (life insurance sector and non-life insurance) of Pakistan from 2006-2011. To investigate the determinants of profitability, panel data techniques (fixed effects and random

effects models) were employed and then Hausman's specification test was applied to select the more effective model. The test proved that fixed effects model was the more appropriated model for the study. The outcomes show that firm size, and age of the firm were significant determinants of profitability while growth opportunities was not significant.

A study by Ahmed *et.al.* (2013) investigated the impact of firm characteristics on performance of the life insurance sector of Pakistan over the period of seven years (2001-2007). Firm size, age, risk and growth were selected as explanatory variables while ROA was taken as dependent variable. Ordinary Least Square (OLS) regression was employed to analyze the data. The results of Ordinary Least Square (OLS) regression analysis revealed that size and risk are most important determinant of performance of life insurance sector whereas ROA has statistically more of insignificant relationship with growth of written premiums. Adams and Buckle (2003) examined empirically the determinants of corporate financial performance among insurance companies operating in Bermuda. Data were obtained from the annual reports and accounts of the sampled firms for the years 1993 through 1997. The independent variables used in this study among others are company size and underwriting risk. Multiple regression was used to analyze the data. It was discovered that, financial performance is positively and significantly influenced by underwriting risk. In contrast, company size is not significantly correlated with financial performance.

Almajali *et al.* (2012) investigated firm characteristics that affect the financial performance of Jordanian insurance companies. Data were obtained from annual reports and accounts of all insurance companies listed on the Amman Stock Exchange during 2002 to 2007. In this study, the financial performance of insurance companies is measured by return on assets (ROA). Multiple regression was used to analyze the data. The results of regression analysis reveal that size of the company has a significant and positive effect on the financial performance of Jordanian insurance companies. Results also suggest that there is no significant relationship between the age of the company and ROA.

Burca and Batrîncă (2014) investigated the factors that influence the financial performance of 21 insurance companies operating in the Romanian insurance market during the interval 2008-2012. For this purpose, explanatory variables have been empirically tested: company size, number of years of operations in the Romanian market, growth of gross written premiums and underwriting risk among others. As an indicator of the financial performance, the return on total assets ratio has been used. By applying specific panel data techniques, the authors have shown that the determinants of the financial performance in the

Romanian insurance market are company size, growth of gross written premiums and underwriting risk.

Ćurak, Pepur and Poposki (2011) investigated both the firm and economic characteristics as determinants of the Croatian composite insurance companies' financial performance during the period from 2004 to 2009. Based on the results of panel data analysis, the authors have shown that size and underwriting risk have significant influence on the insurance companies' performance, which is measured by ROA.

Doğan (2013) examined the influence of firm characteristics (loss ratio, size of the company and age of the company among others) on the profitability of insurance companies listed on the Istanbul Stock Exchange for the period 2005-2011. According to the results of multiple regression and correlation methods used in the study, there is a positive and significant relationship between the size and profitability of insurance companies. However, profitability is influenced significantly and negatively by loss ratio and age of the company.

The study conducted by Lee (2014) investigated the firm characteristics and macroeconomics that affect the profitability of Taiwanese property-liability insurance companies. In this study, covering the period from 1999 to 2009, profitability is measured by operating ratio and ROA. It was found out that, operating ratio and ROA are affected significantly by the underwriting risk. However, firm size is not significantly correlated with operating ratio and ROA.

Malik (2011) investigated the firm characteristics that affects the profitability of 34 insurance companies in Pakistan during the period 2005-2009. Research results indicate that the volume of capital and the size of the company are positively and significantly related with profitability. However, loss ratio shows a significant and inverse relationship with profitability. In addition, it has been identified that there is no relationship between the age of the company and profitability.

Mehari and Aemiro (2013) examined the firm characteristics affecting the financial performance of insurance companies in Ethiopia during the period from 2005 to 2010. Data were obtained from the annual reports and accounts of the insurance firms. Multiple regression was used to analyze the data. The results of the analysis reveals that, financial performance of Ethiopian insurance companies is significantly and positively influenced by the size of the company while loss ratio has a negative and significant influence on financial performance. The results also show that the age of the company and growth in written premium are not significantly related to financial performance.

Shiu (2004) analyzed the determinants of the general insurance companies' performance over the period 1986-1999 in the United Kingdom. In this study, performance has been measured by three different indicators: investment yield, percentage change in shareholders' funds, and return on shareholders' funds. By empirically testing company-specific variables, the author has revealed that underwriting profits are statistically significant determinants of UK's general insurance companies' performance.

As can be observed from the review of empirical literature, the effect of different firm characteristics on financial performance of firms have been studied, but to the best of the researchers' knowledge no empirical evidence has been provided from the insurance sector in Nigeria. This therefore, necessitated for a study on the effect of firm characteristics on financial performance of listed insurance companies in Nigeria to be carried out.

Theoretical Framework

This study is underpinned by the resource based theory. This theory was propounded by Wernerfelt in the year 1984. Pearce and Robinson (2011) define the resource-based theory (RBT) as a method of analyzing and identifying a firm's strategic advantages based on examining its distinct combination of assets, skills, capabilities, and intangibles as an organization. This theory is concerned with firm characteristics and their effect on firm performance. It views the firm as a bundle of resources which are combined to create organizational capabilities which it can use to earn above average profitability (Grant, 1991).

It works with the assumption that each firm develops competencies from these resources, and when they are well developed, these become the source of the firm's competitive advantages. This theory will aide in explaining financial performance variation of intra industry firms as it specifically addresses firm characteristics rather than industry factors. The physical resources as measured by the assets size is one of the tangible resources the firm can use to gain competitive advantage, whereas business experience of the firm gives the firm organizational capabilities that it can use to gain a competitive advantage over its competitors thus being able to earn an above average financial performance.

Methodology

Expost facto research design was employed for the study. Based on this research design, data were extracted from the annual reports an accounts of twelve (12) sampled insurance companies out of the twenty-eight (28) insurance companies listed on the Nigeria Stock Exchange as at 31/12/ 2018. See (APPENDIX A) using

judgmental sampling techniques. The study period is from 2008-2016. To achieve the stated research objectives, the study employed panel data from secondary sources which are quantitative in nature. The technique of data analysis employed in this study is the multiple regression analysis. The study adopted this technique so as to ascertain the effect of the firm characteristics (firm size, firm age, premium growth rate, loss ratio and board size) on financial performance of listed insurance companies in Nigeria. The outcome of the analysis was used to test the hypothesis formulated for the study after conducting necessary tests. Various robustness tests such as test for multicollinearity between the independent variables were carried out to improve the validity of the results obtained.

Financial Performance of insurance companies is the dependent variable proxied by Return On Assets. In this study, net profit after tax to total assets (ROA) was adopted to measure financial performance of listed insurance companies in Nigeria. Firm characteristics are the independent variables and the firm characteristics of interest to the current study are proxied by five variables viz- Firm Age, Firm Size, Premium Growth Rate, Loss Ratio and Board Size. The variables were measured as specified below:

Age of insurance companies was measured by natural logarithm of year of incorporation (Ahmed *et al*, 2013). Size of insurance companies was measured as the natural logarithm of total assets (Oner kaya, 2015). Loss Ratio was measured as the ratio of incurred claims to the earned premiums (Mwangi and Murigu, 2015). Premium Growth Rate was measured as percentage increase in gross written premiums (Oner kaya, 2015). Board Size was measured as total number of members sitting on the board (Shukeri, Shin & Shari, 2012).

Model Specification

The theoretical model is as follows:

$$FP=(FC).....(1)$$

It is also expressed as

$$ROA = f (AG, FSZE, PG, LR, BSZE) (2).$$

The multiple regression model was used to estimate the effect and the econometric model is given below:

$$ROA_{it} = \beta_0 + \beta_1 AG_{it} + \beta_2 FSZE_{it} + \beta_3 PG_{it} + \beta_4 LR_{it} + \beta_5 BSZ_{it} + e_{it}..... (3)$$

Where:

ROA_{it} = Return on asset for firm i at time t

AG_{it} = Age for firm i at time t

$FSZE_{it}$ = Firm size t for firm i at time t

PG_{it} = Premium growth for firm i at time t

LR_{it} = Loss ratio for firm i at time t

β_0 = Parameter estimated (average amount of the dependent variable increase when the independent variable increases by one unit, other independent variable held constant).

$\beta_1, \beta_2, \beta_3, \dots, \beta_5$ are parameters to be estimated with a priori expectation. They are partial derivatives of the independent variables.

e = Error term.

i, t = Firm, Time

Results and Discussion

This section presents the results from the analysis of data and their interpretation. Table 1 below presents the *summary of the descriptive statistics of the dependent and independent variables as follows;*

Table 1: Descriptive Statistics of the Dependent and Independent Variables.

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	108	-3798.919	1921.949	9.556	433.221
FAGE	108	13.000	58.000	32.583	12.718
LNFSZ	108	1.668	2.162	2.113	.044
LNPB	108	1.127	3.457	2.064	.330
LR	108	.589	50.723	3.913	4.834
BSZ	108	4.000	15.000	9.324	1.874

SOURCE: Obtained from SPSS 24 output.

Table 1 contains the result of the descriptive statistics of the dependent and independent variables, the minimum value of ROA is -3798.92 while the maximum value of return on assets is 1921.95. The positive values indicate good financial performance while negative return on assets shows negative financial performance. The average firm age is 13 and the maximum number is 58 years. This indicate that most of the firms have operated for a long period with a mean age of 32.58 and a corresponding standard deviation of 12.72 years. The analysis of the size of the firms revealed that the minimum size proxy by the total assets of the firms is about N1.668billion worth and the maximum value is about N2.162billion with a mean size of N 2.113billion. This result shows that there is small variation across the size of the sampled insurance firms in Nigeria. The premium growth of the firms in Nigeria has a minimum value of 1.127 and the

maximum value of 3.457 with standard deviation of 0.33 from its mean value of 2.064. The values of the minimum and maximum loss ratios are 0.589 and 50.723 billion naira, which signifies that the average LR for the firms in Nigeria is N3.913b with a corresponding standard deviation of 4.834. The board size of the firms ranges from 4 to 15 members, which is the minimum and maximum numbers respectively with a standard deviation of 1.874. The analysis also reveals that the mean board size is 9 members

Table 2 below depicts the results of the Pearson's correlation between the dependent and the independent variables and between the independent variables themselves.

Table 2: Correlation Coefficients

	ROA	FAG	FSZ	PG	LR	BSZ
ROA	1.000					
FAG	-.158	1.000				
FSZ	.999	-.156	1.000			
PG	-.224	.042	-.216	1.000		
LR	-.030	-.181	-.030	.005	1.000	
BSZ	-.166	-.093	-.166	.158	-.043	1.000

SOURCE: Obtained from SPSS 24 output.

The Pearson correlation coefficient shows the linear relationship between explained and explanatory, and between the explanatory variables. Table 2 shows the correlation between the Return On Assets (ROA) and the firms' age (FAG), the firm size (FSZE), premium growth (PG), loss ratio (LR), and board size (BSZ).

Considering the individual relationships among the variables, the ROA is positively related to FSZ (0.999) but it has a negative relationship with FAG (-0.158), PG (-0.224), LR (-0.030), and BSZ (-0.166). The result indicated that statistical significance is established in the relation between ROA and FSZ, PG, and BSZ. However, the test of correlation between FAG and FSZ, LR, and BSZ is negative. The statistical significance is only established in the relationships between FAG and PG (0.030) and none of the negative relationship is statistically significant at 5%. The result therefore revealed an inverse relationship between FSZ and the other explanatory variables that is not statistically significant. FSZ

has negative relationships with PG (-0.216), LR (-0.030), and BSZ (-0.166). Hence, only two relationships were statistically significant at 5%. That is for PG (0.012) and BSZ (0.043). It is also important to note that PG has positive relationship with LR (0.005), BSZ (0.158). The analysis of loss ratio which is calculated by ratio of net claims incurred to net premium earned revealed a negative and significant relationship with return on asset indicating a decrease in the performance of the firms.

Table 3: Panel EGLS (Cross-section random effects)

Variable	Coefficient	t-Statistic	Prob.
C	-18322.26	-19.65769	0.0000
FAGE	-0.683318	-0.405679	0.6858
FSZ	8800.043	21.29521	0.0000
PG	-153.6670	-2.838265	0.0055
LR	-1.407162	-0.375899	0.7078
BSZ	6.755817	0.670159	0.5043
YR2-YR9	13.94588	0.366443	0.7148
R-squared	0.845357	Mean dependent var	7.657280
Adjusted R-squared	0.836170	S.D. dependent var	422.9271
S.E. of regression	171.1837	Sum squared resid	2959689.
F-statistic	92.01930	Durbin-Watson stat	1.679079
Prob (F-statistic)	0.000000		

Source: Researcher's Computation using Eviews 10.0.

The Random Effects Regression Model reported an F-statistic of (F= 92.019, P< 0.05). This shows that the model is correctly specified and that the null hypothesis of variable inclusion is rejected at the 1% level of significance and we therefore conclude that at least one of the variables in the model explain the magnitude of the significant effect of firm *characteristics on the financial performance of insurance firms in Nigeria*. The adjusted R-squared of 0.8361 indicates that about 83.62% variation in financial performance spreads of the *listed insurance companies in Nigeria* is explained by the included explanatory variables, while the remaining 16.38% variations are attributed to variables not captured by the model. From the heteroskedasticity test carried out, the regression model proved to be heteroskedastic. Hence, fixed and random effects regression were carried out, and as both models proved to be significant at 1%

level of significance, a Hausman specification test was carried out (SEE APPENDIX B) to choose between the two models which is more appropriate for the study. From the results of the test, it showed that random effects model is the more appropriate model for the study, hence, our discussion of results will be based on the results of the random effects model which is presented in Table 3 above. From the table, it can be seen that variables such as firm size and premium growth are significant, while firm age, loss ratio and board size are not significant. Firm size (FSZE) is significant at 1% and premium growth (PG) is significant at 5%. On the other hand, age of the firm (FAG), loss ratio (LR) and board size (BSZ) are not significant

Discussion of Regression Results

Firm Age and Financial Performance

The age of insurance firms measured by the natural logarithm of difference between observation year and year of incorporation shows a t-value of -0.405679 and a coefficient of -0.683318 with p-value of 0.6858 in random effects model which is statistically insignificant. This result shows that age of insurance companies is not significant in explaining and predicting the financial performance of listed insurance firms in Nigeria within the study period. This result contradicts the resource based theory which states that older firms will perform better than younger firms because they are more experienced and are not prone to the liabilities of newness. This finding is in line with the finding of Yuvaraj and Abate (2013), but it is in contrast with that of Sumaira and Amjad (2013).

Firm Size and Financial Performance

The random effects regression result revealed that firm size as shown in Table 3 has a t-value of 21.29521 and a coefficient value of 8800.043 with a significant p-value of 0.0000. This result signifies that firm size has a positive significant effect on financial performance of listed insurance firms in Nigeria, that is, the greater the size of a firm, the higher its reported ROA. The finding supports the resource based theory which articulates a positive and significant relationship between firm size and profitability of a firm. The result is also in line with the finding of Daniel and Tilahun (2012).

Premium Growth Rate and Financial Performance

The Premium growth rate variable is measured by the percentage increase in gross premium. The test *of the effect based on the Multiple regression analysis*

results contained in Table 3 revealed that premium growth is negatively and significantly associated with the financial performance of listed insurance firms in Nigeria ($\beta = -153.68$, $t = -2.84$, $p < 0.05$) which led to the conclusion that premium growth rate has significant negative impact on the financial performance of listed insurance firms in Nigeria. The findings of this study is in divergence with the ones conducted by Ahmed et.al. (2013) and Abate (2012) who found out that premium growth has statistically insignificant effect on the financial performance of insurance companies in Pakistan and Ethiopia respectively.

Loss Ratio and Financial Performance

It was established in this study that the *Loss ratio is negatively associated with the financial performance (ROA) of listed insurance firms in Nigeria but it is not statistically significant as evidenced from the random effects regression results shown in Table 3 above. The test result shows that the loss ratio is negatively associated with the financial performance (ROA) of listed insurance firms in Nigeria but the result is not significant at 5% level. ($\beta = -1.418$, $t = -0.376$, $p > 0.05$). This result shows that the relationship is not statistically significant that the higher the underwriting risk by the insurance firms, the lower the value of ROA of listed insurance firms in Nigeria. The findings of this study is in consonance with the one conducted by Malik (2011), Ahmed, et al. (2011) but the result of this study is contrary to the findings of Charumathi (2012) and Adams and Buckle (2000) who established a positive relationship instead.*

Board Size and Financial Performance

A cursory examination of Table 3 reveals that the BSZ independent contribution to the ROA is ($\beta = 6.76$, $t = -0.376$, $p > 0.05$). BSZ contributes positively to the financial performance of the listed insurance companies but the variable is not significantly associated with financial performance of the companies in Nigeria. The study established statistically that the BSZ contributes positively with no significant effect on the financial performance of the listed *insurance firms in Nigeria*. This study is somewhat different from the conclusion of the studies of Shukeri, Shin and Shaari (2012), who found a positive and significant relationship between board size and financial performance of listed companies in Malaysia proxied by ROA.

Test of Hypothesis

H₀: Firm characteristics have no significant effect on profitability of listed consumer goods companies in Nigeria.

Firm characteristics which are measured by firm age, firm size, premium growth, loss ratio and

Board size of the companies showed that two out of the five proxies (firm size, and premium growth) have significant effects on profitability of listed consumer goods firms in Nigeria. This therefore suggests that, firm characteristics significantly affect profitability measured by ROA. Thus, this provides enough evidence to reject the null hypothesis of the study which states that: Firm characteristics have no significant effect on financial performance of listed insurance companies in Nigeria.

Robustness Test

Multicollinearity test was conducted using tolerance and variance inflation factor (VIF) values. A tolerance value above 10 indicates that the variable under consideration is almost a perfect linear combination of the explanatory variable already in the equation, and that it should not be included in the regression equation. The tolerance value and VIF are employed in this study to test for multicollinearity between the independent variables. The result of the multicollinearity test is presented in APPENDIX B. The Variance Inflation Factors (VIF) and Tolerance Values (TV) for all the variables showed to be consistently smaller than 10 and 1.00 respectively, indicating absence of multicollinearity. This shows the appropriateness of the model of the study with the five explanatory variables.

Conclusion and Recommendations

Insurance is considered to be paramount in the development of a nation, which is enforced by the combined effect of the performance of the insurance firms. The analysis of the result of this study revealed that Firm size has positive and significant effect on the financial performance of listed insurance companies in Nigeria. It was further confirmed statistically that premium growth rate has significant negative effect on the financial performance of listed insurance firms in Nigeria.

Based on the analysis and findings, it is recommended that;

- (i) *the growing influence of the increased size of business is likely to result in operational inefficiency as managers may find it difficult to manage the affairs of their insurance outfits. Management of insurance companies and policy makers are therefore expected to utilize the resources effectively in pursuing growth objectives and at the same time delivering their service in order to improve the general performance of*

the insurance firms.

- (ii) *Also, insurance firms in Nigeria should diversify their investment drives to other profitable areas based on the existing business activities and not to be deceived by the misleading objective of increasing premium growth at the detriment of investment opportunities that are capable of improving the financial performance of the insurance firms.*
- (iii) *Insurance companies should make sure that well-trained and qualified personnel in the area of underwriting activities and risk evaluation are employed in order to guard against undue price undercutting and overtrading by insurance marketing agents, always soar underwriting risk, which reduces the financial performance of the firms through increased cost of investigation and other related management expenses.*

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Appendix A

List of Sampled Insurance Companies.

<i>S/N</i>	<i>Companies</i>	<i>Nature of Business</i>	<i>Year listed on NSE</i>
1	AIICO Insurance Plc	Composite	1990
2	Continental Reinsurance Plc	General	2007
3	Cornerstone Insurance Plc	Composite	2007
4	Equity Assurance Plc	General	2007
5	Law Union and Rock Insurance Plc	General	1990
6	Mutual Benefit Assurance Plc	General	2002
7	N.E.M Insurance Plc	General	1990
8	Prestige Assurance Co. Plc	General	1990
9	Regency Alliance Insurance Plc	General	2007
10	Standard Alliance Insurance Plc	Composite	2003

11	Standard Trust Assurance Plc	General	2007
12	WAPIC Insurance Plc	General	2005

Source: compiled by the Author from the population.

Appendix B

Multicollineary test

Mean Variance Inflation Factor

Variables	Tolerance	VIF
FAGE	0.934	1.071
LNFSZ	0.887	1.128
LNPG	0.938	1.066
LR	0.991	1.009
BSZ	0.918	1.089
Mean VIF		1.071

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.582	6	0.859

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
FAGE	-7.839	-0.683	70.293	0.3934
FSZ	8761.304	8800.043	10632.468	0.7072
PG	-142.363	-153.667	257.601	0.4812
LR	-1.021	-1.407	1.988	0.7844
BSZ	10.938	6.756	44.329	0.5299
(YR2-YR9)	-14.928	13.946	855.647	0.3236