FIRMS CHARACTERISTICS AND FINANCIAL PERFORMANCE OF GENERAL INSURANCE FIRMS IN KENYA

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Abstract: Firms characteristic of insurance firms has gained the importance in the corporate finance literature because as intermediaries. However, insurance companies have for the last two decades been reporting poor financial performance. Some of the firms have reported profit warnings, others have collapsed and others have been blacklisted over failure to reduce majority shareholders stake. The general objective of this study was to establish the influence of firm's characteristic on financial performance of insurance firms in Kenya. The study also sought to find out how firm size, ownership structure, firm age and capital structure influence financial performance of insurance firms in Kenya. The study used a descriptive survey research design. The target population was all the 47 General insurance companies in Kenya. Secondary panel data was obtained from the financial statements of insurance companies in Kenya, company annual reports and IRA reports. The secondary data was quantitative in nature and was analyzed using descriptive as well as inferential statistics. Descriptive statistics included frequency distributions, mean, standard deviation and percentages. Inferential statistics included analysis of variance, correlation analysis and multivariate regression analysis. Data was analyzed by use of statistical software known as STATA (version 14). The study found that among firm characteristics, capital structure has the most significant influence on the financial performance of insurance companies in Kenya, followed by firm age and firm size. The study found that firm size has an inverse influence on the financial performance of insurance companies while firm ownership has no significant influence. In addition, the study found that capital structure and firm age have a positive and significant influence on the financial performance of insurance companies in Kenya. The study established that market share has a significant effect of the relationship between firm characteristics and the financial performance of insurance companies in Kenya. The study recommends that insurance companies should have a high consideration of increasing the company assets. This is because the size of the company is an important factor as it influences its competitive power. Small companies have less power than large ones; hence they may find it difficult to compete with the large firms particularly in highly competitive markets. The study also recommends that managers in insurance companies in Kenya should consider aggressive credit policies to maximize the use of debt in capital spending activity so as to improve the financial performance of their companies An appropriate mix of capital structure should be adopted in order to increase the profitability of firms.

Key Words: Financial performance, Size, Age, Capital Structure, Ownership

Introduction

Scholars have paid attention in various fields of strategic management and business (Awunyo-Vitor, 2012). The primary concern of many organizations is that financial performance has

implication in their health and ultimately their survival. High performance results to efficient use of company resources and in the long term contributes to economic growth of a country (Kargar, 2011). Financial performance is essential for growth, development and survival of any business entity. Companies do focus on increasing profit levels of their firms instead of improving on long term values of their businesses (Babalona, 2013).

The existence of financial perform is observed in different approaches of the organization. Traditionally, measurement of financial performance was categorized basically into: liquidity/working capital, investment ratios and gearing (Mahfoudh, 2015).Proponents argued that the measurement of financial performance is important because of the primary objectives of companies. Maximizing the wealth of the shareholder is the primary goal of organization seeking to make profit. Shareholders are the legal owner of companies hence they should be given priority during consultation of interesting matters of the company (Abbasi & Malik, 2015).

The main concerns of shareholders are: future earnings, current earning, relative risk and dividend policy of their investment. Financial performance is the main drive of these concerns (Abbasi & Malik, 2015). Wealth maximization has three components of sub objectives: to enhance profit margins, to continue in survival (existence)-business success is measured in terms of existence. Without survival there will be no fulfillment of some objectives (Allen, 2004). Finance performance of a given business is measured in terms of financial ratio performance. Financial ratio is an essential tool used by businesses and managers to measure the successive progress for attaining their targeted goals. Firms normally analyze some important financial ratio such as: probability ratio, financial leverage ratios and liquidity ratios among others. Measuring the result of a firm's operations and policies in terms of monetary value composes of financial performance where the output is reflected in return of investment, value added, return of assets and many more. Financial performance is measured in various forms. For example, return of sales; indicates company earnings in relation to its sales, return on assets which explain the ability of the firm to use its assets and return on equity which reveal the investment returns of the investor. The performance of company can be evaluated into three dimensions. Firstly, company productivity, then internal inputs and external assets.

Investors can assess the characteristic of insurance firms through cooperate finance literature, determine mechanism of risk transfer and channel their funds appropriately to support their business activities Kaya (2015). Profits of non-life insurance firm is directly proportional to premium growth rate and the size of the company .Whereas profitability is indirectly proportional to the company's age, current ratio and loss ratio. Premium retention ratio and share of motor vehicle insurance are found to be less important explanatory variables. Firm characteristic such as size, age, monthly wages, marketing intensity and innovation ,current ratio, intensity and debt ratio influence firms performance in the manufacturing industry in Croatia.

According to the finding of Kisenge (2012), market related firm characteristic, structured related firm characteristics and capital related characteristic had positive effect on performance of micro finance organizations. In addition, the relationship between the age and size of microfinance was positive. On the other hand, micro finances, high capital structure and those that practice market oriented and diversification strategies are seen to be better performers. Firm size, firm age, leverage and liquidity relate positively with financial performance and size of board variable was related negatively to firm financial performance.

Statement of the Problem

Insurance is of much important to a country hence it cannot be underestimated. Insurance plays significant role in terms of economic growth of a particular country and protect various firms or individuals against monetary loses due to unexpected circumstances (Mahfoudh, 2015). Insurance industry ensures the existence of business; spread risk resulting from financial loses and eliminates uncertainty in the mind of investors, encourage commercial and industrial developments. For a county to be economically stable, insurance industry must be well established. Therefore, its failure will have a great impact on companies or individual enterprises.

Lack of regulatory body in the past decade resulted to dismal performance of insurance industry in Kenya and closure of several firms which operated without sufficient capital (Mudaki *et al.,* 2012). Hence, led to the establishment of insurance regulatory Authority- this is an arm of government that regulates, develops and supervises the insurance industry in Kenya. In the recent past, insurance companies have been experiencing decline in profits. For instance, the profit of UAP group dropped by forty six percent to KSH 896.6 million in the year 2015 from KSH 1.67 billion in the year 2014. BRITAM announced a one billion shilling lose in the year 2015 after it making profit of 2.5 billion in the year 2014 (Insurance Regulatory Commision, 2016).

In the 2014 insurance penetration was at 2.9% which decreased to 2.8% in 2015 and 2.75% in 2016. In the year 2013, the operating profit in the industry was Ksh. 20,235,881 million, which decreased to Ksh. 17,232,015 million in 2014, Ksh. 14,134,461 million in 2015, and Ksh. 12,832,642 million in 2016 (Insurance Authority of Kenya, 2016). Collapsing of Stallion insurance and Lake Star insurance companies have attributed to low penetration of insurance industry in the year 2002 (Gitau, 2013). By the year 2013, eight insurance companies had been put under receivership or collapsed. For example, KNAC and Standard Insurance. Insurance Regulatory Authority placed Blue shield under administration as a result of insurance fraud allegation. Prosperity Health Kenya and Discovery Health East Africa were blacklisted over failure to reduce majority shareholders stake in the business in the year 2013 by IRA. In addition, Resolution Health East Africa and Mercantile Insurance invited new shareholders in order to dilute the majority ownership holding and raise capital. Insurance penetration and accessibly in Kenya improved steadily in the recent year. In the year 2013, life insurance penetration Gross Domestic Product was at 1.2% and the general insurance was almost twice that, bringing the total to 3.44 percent. When the GDP was at 25 percent, the measure of insurance penetration dropped by 2.93 percent (IRA 2014).

Both firm characteristics and financial performance studies have been conducted in Kenya and at international levels. At global level, a study on the effect of firm's specific factor on the profits made by the non-life insurance industries was conducted by kaya (2015). Teodorovic (2016) examined firms characteristic and organizational performance in the Croatian Manufacturing industry. However, the finding cannot be generalized to Kenya due to difference in legal framework and micro economic factors. In Kenya, (Kombo *et al.,* 2012) assessed the effect of firm characteristics on performance of micro finance sectors in Nakuru County; and Kihoro (2012) sought to determine the effect of mobile phone service on firm performance. These studies were conducted in the telecommunication and micro finance sectors which had different

institutional structures and policies in contrast to insurance industry. Thus, the study sought to establish the effect of firm characteristic on financial performance of insurance in Kenya.

The study tested the following null hypotheses;

H_01: Firm size has a significant effect on the financial performance of general insurance firms in Kenya

H_02: Ownership structure has a significant effect on the financial performance of General insurance firms in Kenya

H_03: Firm age has a significant effect on the financial performance of general insurance firms in Kenya

H_04: Capital structure has a significant effect on the financial performance of general insurance firms in Kenya

H_04: Market share significantly moderate the effect of firm characteristics on the financial performance of general insurance firms in Kenya

Theoretical Framework

Theoretical framework is defined as a set of principles or statements that give explanation about a certain phenomenon or fact, especially one that has been tested again and again and it is widely acceptable hence it can be used for predicting natural phenomena. This study composed of four theories: theory of economy of scale, agency theory and pecking order theory.

Agency Theory

Gardiner Coit and Adolf Augustus developed agency theory concepts in the year 1993. As the name suggests, the theory tend to explain movement agency (Ruenzi *et al.,* 2014). For this reason, agency theory is used mostly in explanatory models. Conditionally, Principals normally give orders to their agents while the agents abide by the instructions of their principals. However, the agents have specific interests when taking these orders from the principals who give orders and their specific interests should not be convergent. Furthermore, because of specialization, the agent has advantage of achieving result, the used process and the important information on his /her tasks. The main challenge is that, the agent is the main actor in utility maximization might use that advantage for his / her personal interests (Yang & Peng, 2014).

As recognized by the agency theory, a wide separation exists between the management and ownership hence results in conflict of interest between the firm owners and the agents. The theory also asserts that the managers normally take advantage of the situation by expropriating the cooperate cash flow for their personal gain or interest resulting to inefficiency, loss of assets and of firm values. Moreover, the theory identifies small and large shareholders as the main variables which can affect the firms' performance. Individuals and large bloc shareholders can positively influence the performance of firms since they can monitor managers indirectly by using incentives. Corporate wealth might be expropriated by the largest shareholders who might entrench individual with the smallest share in the firm. As a result, firm values and returns on investments decrease (Kordlouie *et al.,* 2015). The agency theory also predicts insignificant

relationship between larger shareholders and smaller size of ownership. For this reason, its prediction is within the coverage area of privatization studies since it depicts expected relationship between ownership structure variables and the firm's financial performance.

Agency theory was used to give a comprehensive explanation of existing relationship between the type of firm size and financial performance. The relationship between manager and owner is similar to the one between agents and principal. When the firm owner contracts self-centered managers to manage his / her firm, they maximize utility for their personal interest and this may result to decline in the performance of some firms. Since managers effectively control the firms at the expense of the owners, they have the potential to consume benefits on behalf of the firm owners.

Theory of Economies of Scale

Publication by Marshall (1980) elaborates the economies of scale theory by attempting to explain increases on returns and competition. Marshall tried to explain the relationship between the increase of output cost and reduction of output cost. He considered the influence of external and internal economies to the small companies. Economies of scale refers to cost related advantages or benefits that business enterprises get as a result of output, scale of operation or size, with the cost of production per unit decreasing while at the same time spreading the fixed costs' scale over all units (Borello *et al.,* 2015). Operational efficiency is always higher due to increasing scale, leading to low variable cost.

Economies of scale apply to variety of business situations /organizations at various levels such as manufacturing units, plants or enterprises. For instance, large manufacturing facilities are expected to have lower cost per unit of output compared to smaller facilities. When other factors are at equilibrium level, companies with many facilities might enjoy cost advantage unlike companies with fewer facilities.

In this study, the theory of economics of scale will be used to explain the relationship between financial performance of firm and its size. Therefore, an economy of scale is defined as the external, internal, international, national, aggregative or dis-aggregative advantage due to scale and size of firms (Krishnan *et al.,* 2012). Some of the reasons which enhance performance of large firms include; research, production process aggregation, market power and development efforts. Therefore, large firms can spread the production cost realized on their firm hence; the economies of scale theory tend to explain the cost advantages that enterprises gain due to size scale of operation or output (Shen *et al.,* 2015).

Pecking Order Theory

Pecking order theory, developed by Myers and Majluf in 1984 states that equity is the least preferred method to raise the firm's capital because managers might (who have detailed information about the condition of the firm compared to investors) issue new firm equity, the investors tend to believe that the firm over value their shares and the management is taking advantage of the over -valuation. As a result, investor will place low value on the equity issuance (Myers & Majluf, 1984). This theory postulates that asymmetric information increases the cost of financing. The three main sources of financing are; debt, internal fund and new equity (Yang

& Peng, 2014). Many companies prioritize finance sources in the following respective order; financing, debt and rising equity. Hence, when internal financing is depleted, then debt is issued and finally equity is issued (Lilienfeld-Toal & Ruenzi, 2014). Most theory adhere to hierarchy of financial sources and they will prefer to borrow money from external source. Firm borrow money when they require external source of capital. Therefore, equity brings external ownership into the firm. The format in which a firm chooses its debt can indicate its source of finance (Kordlouie *et al.,* 2015).

In this study, pecking order theories tend to elaborate the significant relationship between the firm capital structure and its financial performance. This theory asserts the empirical fact that firms prefer using internal finance to external finance. Firms have the capacity to borrow money from external or external sources if they have limited resources to fund their investments. Hence, they will minimize additional asymmetric cost by accessing fund from different platforms of financial sources. Basically, most investors will request for asymmetric information in case of a business failure (Lilienfeld-Toal & Ruenzi, 2014). Pecking theory has the following order of finance hierarchy; internal source of funds, low risk debt financing and share financing in their respective order.

Profit Maximization Theory

The profit maximization theory is attributed to Marshall (1897, 1890). It states that, the ultimate goal of business entity is to maximize profit. Therefore, every individual should play their role to ensure their business make profit (Wong, 2011). From economic perspective, the firms optimizes on their profit by equating marginal costs with marginal revenue. A company make profit by converting its resources into goods and services and finally sale these goods and services to customers (Asheim, 2009). In addition, the theory argues that the survival of a company depends on its ability to make profit. During the process of profit maximization, the firm determines the output and the price of its products so as to ensure it obtain the greatest profit. Profit is calculated when by subtracting total revenue from total cost; most firms focus on how to maximize this difference in order to optimize their profits. Otherwise the aim of subtracting marginal cost from marginal revenue is based on the firm's tendency to make the highest profit when marginal cost is equal to marginal revenue (Wong, 2011).

A firm maximizes profit when it operates at equilibrium level (where marginal revenue and marginal cost are equal). Change on fixed cost does not affect profit maximization output of a given firm (Chairal & Tengku, 2010). Short term fixed cost is treated as a sunk cost by many firms as the firm continues to operate. Fixed cost is incurred at any level of business output, even during the zero output. Examples of fixed cost include; rent, general upkeep, maintenance of firm equipment and wages of employees whose numbers are constant in the short run (Asheim, 2009). Change in variables cost influence profit maximization.

Firm Size and Financial Performance

Abbasi and Malik, (2015) studied how firms' Size affected financial performance of growing firms. The study gathered secondary cross-sectional data from fifty firms listed in Karachi stock Exchange. The findings from multiple regression analysis demonstrated that the alternative hypothesis that firm sizes have moderating effects on (independent variable) Firms' growth and Firms' performance (dependent variable). Similarly, Pervan and Visic (2012) conducted a study

on the influence of firm size on business performance. The analysis was conducted from 2002 to 2010 period and the results indicated that size of the firm had a weak positive influence on its profitability. Velnampy and Niresh (2015) evaluated the relationship between size and profitability of listed manufacturing industries in Sri Lanka. Data of fifteen selected companies which were active in CSE from the year 2008 to the year 2012; ROE and Net Profit were used to indicate firms' profitability whereas Total Sales and Total Assets were used to indicate the size firm. The results indicated that the relationship between firm sizes and profitability of listed manufacturing firms were insignificant. In Turkey, Dogan (2013) examined the effect of firm's size on its profitability. Data of two hundred companies which were active in ISE between the years 2008-2011 was used. ROEs are used as to indicate the profitability of firms while total assets and staff numbers are used to indicate firm sizes. Analysis of the results indicated positive relationship between the firm sizes and firms' profitability.

Ownership Structure and Financial Performance

Gitundu et al. (2016) studied how ownership structure affected the financial performance of the firms in Kenya. The findings from the study indicated that there were coexisting relationships between financial performances and ownership structures. ROS was positively affected by the Tobin's Q and ownership structure and negatively were affected by efficiency costs. Institutional shareholder and ROA positively affected technical efficiency and cost efficiency was negatively affected by large shareholders. Moreover, Return on Sale was affected positively while cost efficiency was affected negatively by the dispersed shareholders. Ogega (2015) studied the effect of financial performance on ownership structure study was conducted on commercial banks in Kenya. Secondary data from the year 2009 to the year 2013 of selected commercial banks in Kenya was used to obtain information concerning accounting records and bank ownership. Financial performances of commercial banks in Kenya were positively affected by ownership structure as revealed by result from the research and the relationships of the variables were positive.

Firm Age and Financial Performance

In Europe, Loderer and Waelchli (2010) assess the association between firm age and performance. The study used an explanatory research design. The results indicated that firm age affects the financial performance of commercial banks. Osunsan et al. (2015) examined the effect of firm age and performance of small business enterprises in Kampala. The study used a descriptive research design. The results indicated that firm age significantly affects level of performance among small business enterprises in Kampala. Pervan, Pervan and Curak (2017) examined the effect of age on firm performance in Croatian Food Industry. The study adopted a descriptive research design and used 956 firms operating in Croatian food industry. The results indicated that firm age had a negative effect on firm performance in Croatian Food Industry. In Kenya, Mahfoudh (2015) examined the relationship between firm age and financial performance of firms listed in the agricultural sector at the Nairobi Securities Exchange. The study adopted correlational research design and covered a period of 5 years between 2007 and 2012. The results indicated that firm age influences financial performance of firms listed in the agricultural sector at the Nairobi Securities Exchange positively.

Capital Structure and Financial Performance

Mburu (2015) sought to elaborate how financial structure at the Nairobi Security Exchange was affected by capital structure. A descriptive approach was used to give a detailed explanation of the study. The findings elaborated how financial performance was negatively affected by capital structure variables such as; long term liabilities to total assets ratio, total liabilities to total assets ratio and current total liabilities to total assets ratio. Similarly, Githire and Muturi (2015) examined how financial performance of selected firms in NSE had been affected by capital structure and found that long term debt and equity had affected financial performance positively, while financial performance was affected negatively by short term debt. In conclusion, financial performance was enhanced by short term debt and equity as the financial performance was reduced by the short term debt. Kihumba (2014) studied on how financial performances of selected manufacturing companies were affected by capital structure and found that financial performance was influenced slightly by the capital structure. ROC and net profit was determined by use total debt of the selected manufacturing industries which were in Kenya.

Conceptual Framework
This study sought to elaborate how financial performance is affected by the characteristic of a firm. The independent variables were firm size, ownership structure, firm age and capital structure. Financial performance is used as independent variable.
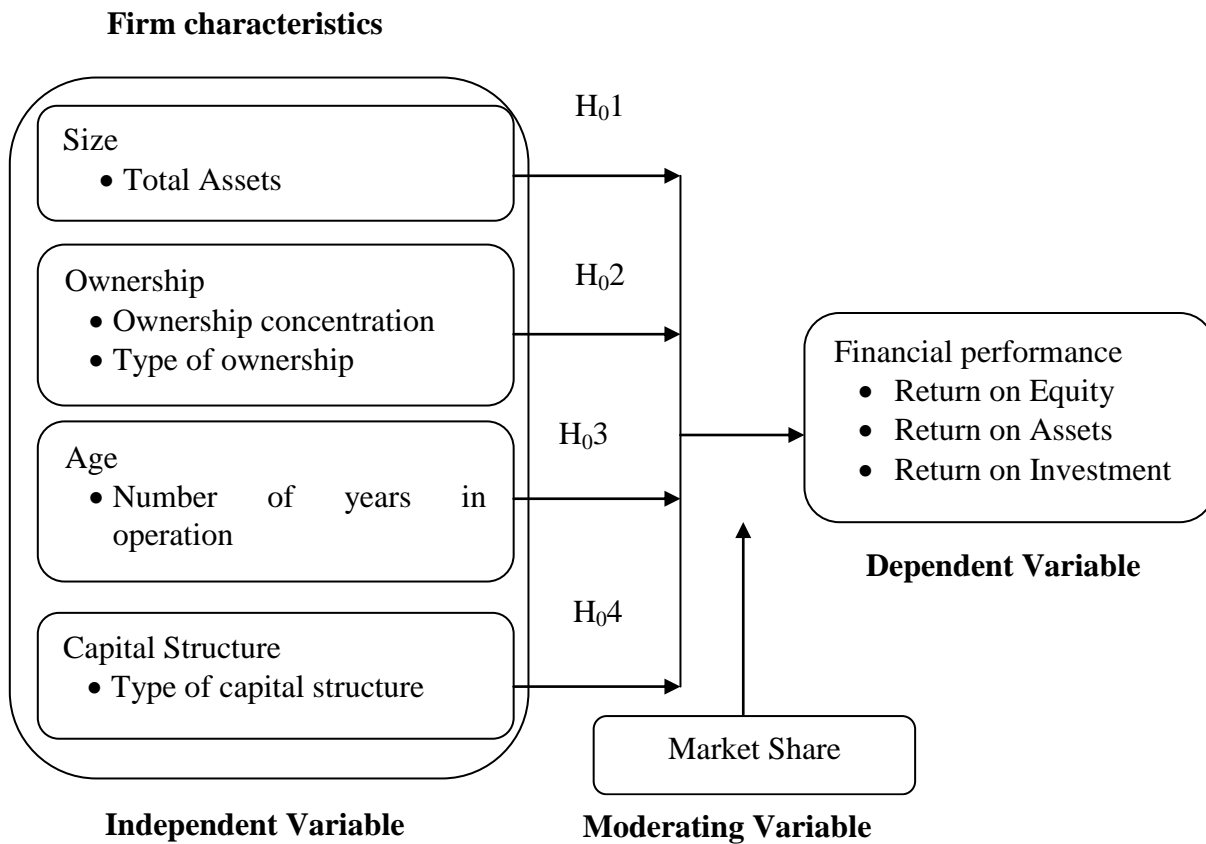
Firm characteristics

Figure 1: Conceptual Framework

Research Methodology

The study used a descriptive survey research design. Panel data was used and panel data analysis are determined through establishing the existing relationship between economic variables by using panel data models containing cross sectional data of a given time. A balanced panel can be defined as a set of panel data including the time series which contain equal measurement (Bryman & Cramer, 2012). Missing times in a series of a particular cross section may result to occurrence of unbalanced panel.

The general formula of a Regression in a panel data model is as follow

$$[Y_{it} = \alpha + X_{it}\beta + \mu_{it} \, i = 1, ..., N; t = 1, .., T]$$ ………………………………….. (1)

where i denotes the cross-section dimension and t subscript denotes the time dimension; Y represents the dependent variable; X represents the independent variable; β denotes the regression coefficient of independent variable; α is the intercept; and μ is the error term.

Forty seven insurance companies in Kenya were used as the target population. The time series data from the year 2011 first quarter to the year 2015 first quarter was used since the 2011 draft of insurance bill supposed to bring significant change in insurance industry. The study adopted a census method, where, all the 47 insurance companies in Kenya were included in the study. This study used secondary panel data or longitudinal or cross sectional time series data. Secondary data was obtained from the financial statements of insurance companies in Kenya, company annual reports and IRA reports.

The secondary data was quantitative in nature and was analyzed using descriptive as well as inferential statistics. Descriptive statistics included frequency distributions, mean, standard deviation and percentages. Inferential statistics included analysis of variance, correlation analysis and multivariate regression analysis. The inferential statistics were used to establish the existing relationship between the dependent variables and the independent variables. Data was analyzed by use of statistical software known as STATA (version 14). The time series analysis tests that were performed on the model include multicollinearity test, normality test, Heteroscedasticity Test, Autocorrelation and Stationarity and Unit Root Test.

The study used panel models to estimate a functional model where financial performance treated as the dependent variable while the independent variables are firm size, ownership structure, firm age and capital structure.

The functional relationship of the empirical model appeared as follows:

FP (ROA, ROE, ROI) = f(FS, OS, FA, FCS, FMS)………………………………………. (2)

The model of this study is as specified below:

$$FP_t = \beta_0 + \beta_1 FS_{1it} + \beta_2 OS_{2it} + \beta_3 FA_{3it} + \beta_4 FCS_{4it} + \varepsilon_t$$ …………………………. (3)

FP_t is the dependent variable (financial performance), B$_0$ is the y intercept (Constant), β_1- β_5 are coefficients of determination, FS$_1$ is firm size (independent variable), OS$_2$ is ownership structure (independent variable), FA$_3$ is firm age (independent variable), FCS$_4$ is capital structure

(independent variable), ε is the error term, t subscript represented time and i subscript represented the number of insurance companies.

The model including the moderating variable (market share) was as follows;

$$FP_t = \beta_0 + \beta_1 FS_{1it} + \beta_2 OS_{2it} + \beta_3 FA_{3it} + \beta_4 FCS_{4it} + \beta_5 FMS_{5it} + \varepsilon_t \ldots\ldots\ldots\ldots (4)$$

FP_t is the dependent variable (financial performance), B_0 is the y intercept (Constant), β_1- β_5 are coefficients of determination, FS_1 is firm size (independent variable), OS_2 is ownership structure (independent variable), FA_3 is firm age (independent variable), FCS_4 is capital structure (independent variable), FMS_5 is market share (moderating variable),ε is the error term, t subscript represented time and i subscript represented the number of insurance companies.

Results and Discussions

The sample size of this study was all the 47 general insurance companies in Kenya. However, the data available was for 43 insurance companies, which is 91.84% of the sample size.

Diagnostic Tests

Diagnostic tests were conducted before conducting regression analysis to assess the assumption of ordinary least squares method. There tests included linearity test, test for autocorrelation test, heteroscedasticity test, Haussmann test normality, unit root test and. multicollinearity test.

Test for Normality

Normality of data was tested by the use of Shapiro-Wilk W test. The results indicated that return on assets (p-value=0.118), return on equity (p-value=0.091), return on capital (p-value=0.093), firm ownership (p-value=0.167), debt to equity ratio (p-value=0.128), firm age (p-value=0.144) and market share (p-value=0.156) were normally distributed. However, firm size was not normally distributed (p-value=0.000). These findings imply that the data for all the variables was normally distributed and hence could be used in running inferential statistics.

Table 1: Tests of Normality

| | Shapiro-Wilk | | |
	Statistic	df	Sig.
ROA	.662	215	.118
ROE	.642	215	.091
ROC	.648	215	.093
Firm size	.630	215	.000
Firm ownership	.935	215	.167
Debt to Equity Ratio	.702	215	.128
Firm age	.882	215	.144
Market share	.841	215	.156

Heteroscedasticity test

Cook-Weisberg or Breusch is used to test for heteroscedasticity (Creswell, 2006). From the findings, as shown in table 2, it was revealed that the p- value of 0.0002 was more than the significance level (0.05) implying that the study rejects the homoscedasticity.

Table 2: Breusch-Pagan/Cook-Weisberg test for heteroscedasticity

```
 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
          Ho: Constant variance
          Variables: fitted values of ROE


          chi2(1)      =     14.06
          Prob > chi2  =    0.0002
```

Multicollinearity Test

From the findings, the VIFs for the variables, firm size (1.89), market share (1.67), Debt to equity ratio (1.17), Firm ownership (1.08) and Firm age (1.07) were less than 10. This implies that there was no multicollinearity between the variables and hence the variables were not highly correlated.

Table 3: Variance Inflation Factor

Variable	VIF	1/VIF
Firm size	1.89	0.527994
Market share	1.67	0.598609
Debt to equity ratio	1.17	0.851534
Firm ownership	1.08	0.924997
Firm age	1.07	0.931817

Autocorrelation Test

Simple OLS regression and random effect regression can be decided by the use of the Lagrangaian multiplication test (Kothari, 2004). Since the p-value (0.000) is less than the significance level (0.05), we can arrive into conclusion that the variances across entities are not zero, which means that the difference is significant across the units (panel effect).

Table 4: Breusch and Pagan Lagrangian multiplier test for Random Effects

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Breusch and Pagan Lagrangian multiplier test for random effects

        ROE[Company,t] = Xb + u[Company] + e[Company,t]

    Estimated results:
                         |        Var        sd = sqrt(Var)
               ----------+-----------------------------------
                     ROE |     2.146818           1.465202
                       e |      .4817492            .6940816
                       u |      .8794662            .9377986

    Test:   Var(u) = 0
                            chibar2(01) =    157.05
                          Prob > chibar2 =    0.0000
```

Unit Root Test

According to Shin and Pessarian, time series dimension information and information from the cross section dimension was supposed to be tested by IPS test (Kultar, 2014). The results show that the return on assets (p-value=0.9999), return on equity (p-value=0.9525), return on capital (p-value=0.0176), firm size (p-value=0.8667), firm ownership (p-value=0.9083), debt to equity ratio (p-value=0.9273), firm age (p-value=0.2912) and market share (p-value=0.9837). The p-values for all the variables were greater than the significance level (0.05). This implies that all the variables had unit root.

Table 5: Unit Root Test

Variable	Number of panels	Number of periods	Fixed N exact critical value			P-value
			1%	5%	10%	
ROA	43	5	-2.210	-1.990	-1.890	0.9999
ROE	43	5	-2.210	-1.990	-1.890	0.9525
ROC	43	5	-2.210	-1.990	-1.890	0.0176
Firm size	43	5	-2.210	-1.990	-1.890	0.8667
Firm ownership	43	5	-2.210	-1.990	-1.890	0.9083
Debt to equity ratio	43	5	-2.210	-1.990	-1.890	0.9273
Firm age	43	5	-2.210	-1.990	-1.890	0.2912
Market share	43	5	-2.210	-1.990	-1.890	0.9837

Hausman Test

The hausman Test, which is also known as Hausman specification test, is used in the detection of endogenous repressors in a regression model (Saunders, Lewis & Thornhill, 2013). In a regression model, the presence of endogenous repressors may cause OLS estimators to fail. For this reason, it is assumed that correlation is absence between predictor variable and error term.

Null hypothesis during this study is that the random effect is a preferred model while the fixed effect mode is the alternative hypothesis.

From the findings, the p-value for the Hausman specification test was 0.0701, which was more than the significance level (0.05). This implies that we can accept the null hypothesis as the preferred model is random effects and therefore use random effects model.

Table 6: Hausman specification test

```
            ───── Coefficients ─────
              (b)            (B)            (b-B)         sqrt(diag(V_b-V_B))
             fixed          random        Difference            S.E.

   FS      -3.89e-08      -2.97e-08       -9.12e-09          1.46e-08
   FO      -.0264121       .0072339        -.033646           .0311308
   DE       .1656877       .1831716        -.0174839          .0067098
   FA      -.0274804       .0081477        -.0356281          .0412379
   MS       .1266979       .1241204         .0025775          .1371468


            b = consistent under Ho and Ha; obtained from xtreg
   B = inconsistent under Ha, efficient under Ho; obtained from xtreg

 Test:  Ho:  difference in coefficients not systematic

         chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                 =        8.66
       Prob>chi2 =      0.0701
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Regression Analysis

The study used panel models to estimate a functional model where financial performance (return on equity) treated as the dependent variable while the independent variables are firm size, ownership structure, firm age and capital structure.

The model of this study was as specified below:

$$ROE_t = \beta_0 + \beta_1 FS_{1it} + \beta_2 FO_{2it} + \beta_3 FA_{3it} + \beta_4 FCS_{4it} + \varepsilon_t \dots\dots\dots\dots\dots\dots\dots (3)$$

FP_t is the dependent variable (Return on equity), B_0 is the y intercept (Constant), β_1- β_4 are coefficients of determination, FS_1 is firm size (independent variable), FO_2 is ownership structure (independent variable), FA_3 is firm age (independent variable), FCS_4 is capital structure (independent variable), ε is the error term, t subscript represented time and i subscript represented the number of insurance companies.

Table 7: Effect of Firms Characteristic on Return on Equity

Source	SS	df	MS		Number of obs =	215
					F(4, 210) =	30.90
Model	170.201674	4	42.5504186		Prob > F =	0.0000
Residual	289.217421	210	1.37722582		R-squared =	0.3705
					Adj R-squared =	0.3585
Total	459.419096	214	2.1468182		Root MSE =	1.1736

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FS	-1.79e-08	8.09e-09	-2.21	0.028	-3.38e-08	-1.92e-09
FO	.0136676	.0089394	1.53	0.128	-.0039549	.0312901
DE	.2313478	.0222093	10.42	0.000	.187566	.2751296
FA	.0090905	.0036631	2.48	0.014	.0018693	.0163118
_cons	.4534199	.3202923	1.42	0.158	-.1779803	1.08482

Moderating Effect of Market share

The model including the moderating variable (market share) was as follows;

$$ROE_t = \beta_0 + \beta_1 FS_{1it} + \beta_2 OS_{2it} + \beta_3 FA_{3it} + \beta_4 FCS_{4it} + \beta_5 FMS_{5it} + \varepsilon_t$$

FP_t is the dependent variable (financial performance), B_0 is the y intercept (Constant), β_1- β_5 are coefficients of determination, FS_1 is firm size (independent variable), OS_2 is ownership structure (independent variable), FA_3 is firm age (independent variable), FCS_4 is capital structure (independent variable), FMS_5 is market share (moderating variable),ε is the error term, *t* subscript will represents time and *i* subscript represented the number of insurance companies.

R-squared shows the variation in the dependent variable explanation can be derived from independent variables. From the findings the overall r-squared was 0.3705. This implies that the independent variables (firm size, ownership structure, firm age and capital structure) explain 37.05% of the return on equity. The F-test was conducted to establish whether the model was a good fit for the data. In this study, the p-value for the F-test was 0.000, which is less than the significance level (0.05). This means that the overall model is a good fit for the data.

The results show that firm size has a negative coefficient with return on equity. This means that firm size has a negative effect on return on equity in general insurance companies in Kenya. These findings are contrary to Abbasi and Malik, (2015) who demonstrated that firm size has a positive and significant effect on firm performance. However, the findings agree with Velnampy and Niresh (2015) findings that the relationship between firm size and profitability of listed manufacturing firms was insignificant.

The results show that firm ownership has a positive but insignificant effect on return on equity. Firm ownership had no significant effect on performance as the p-value (0.128) was greater than the significance level (0.05). This implies that firm ownership has no significant effect on return on equity of insurance companies in Kenya. The findings are contrary to Lee (2011) argument

that the relationship between ownership concentration and firm's performance. However, the findings agree with Ogega (2015) findings that the financial performance of selected commercial banks in Kenya increases with increase in foreign ownership structure and domestic ownership of the banks.

The results further show that capital structure has a positive coefficient with return on equity. This implies that that capital structure has a positive effect on return on equity. The findings are contrary to Mburu (2015) findings that financial performance was negatively affected by capital structure. In addition, firm age has a positive coefficient with return on equity. This implies that firm age has a positive effect on return on equity. The findings agree with Kargar (2011) findings that firm age negatively effects performance.

From the findings, as shown in Table 4.9 the introduction of market share in the regression model led to an increase in the r-squared from 37.05% to 39.44%. The results also show that market share had a positive coefficient with return on equity, which implies that market share has a positive effect on return on equity. These finding imply that market share has a significant effect of the relationship between characteristics of the firm and the financial performance Kenya insurance firms. These findings agree with Kargar (2011) that market share moderates the effect of firm characteristics on financial performance.

Table 8: Moderating Effect of Market Share

Source	SS	df	MS		Number of obs =	215
					F(5, 209) =	27.22
Model	181.184758	5	36.2369516		Prob > F =	0.0000
Residual	278.234338	209	1.33126477		R-squared =	0.3944
					Adj R-squared =	0.3799
Total	459.419096	214	2.1468182		Root MSE =	1.1538

ROE	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FS	-3.57e-08	1.01e-08	-3.54	0.000	-5.56e-08	-1.58e-08
FO	.0130604	.0087915	1.49	0.139	-.004271	.0303919
DE	.2361363	.0218992	10.78	0.000	.1929648	.2793079
FA	.008597	.0036056	2.38	0.018	.001489	.015705
MS	.1217662	.0423933	2.87	0.004	.038193	.2053394
_cons	.2506278	.3227203	0.78	0.438	-.3855762	.8868319

Conclusions

The study concludes that among firm characteristics, capital structure has significantly affected the financial performance of Kenya insurance companies, followed by the age of the firm and its size respectively. The study also concludes that the size of a firm has an inverse and significant

effect on the financial performance of Kenya insurance companies. The study further concludes that capital structure positively and significant effect on the financial performance of insurance companies in Kenya. In addition, firm age has a positive effect on the financial performance of insurance companies in Kenya. The study further concludes that market share has a significant effect of the relationship between firm characteristics and the financial performance of insurance companies in Kenya.

Recommendations

The findings of the study indicated that the size of the firm expressed in terms of its total assets positively affected the financial performance of Kenya insurance companies. Hence, the study recommends that Kenya insurance companies should consider increasing their assets. This can be done by obtaining loans from commercial banks to increase their total assets. Firm size significantly affects the companies' competitive power. Large firms enjoy more competitive advantage in the market compared to small firms because of their size.

The study found that ownership structure affects financial performance of insurance companies. This study recommends that insurance companies in Kenya should come up with policies to improve ownership structure of insurance companies. This will play a major role in preventing insurance companies from collapsing or making losses.

The study found that capital structure affects the financial performance of Kenya insurance companies. The study recommends that managers in insurance companies in Kenya should consider aggressive credit policies to maximize the use of debt in capital spending activity so as to improve the financial performance of their companies. Capital structure should be adopted appropriately so as to increase the firm's profitability. The study recommends that the Insurance Regulatory Authority should revised policies on liquidity of institutions and capital adequacy. This will help these insurance companies to improve their financial performance.

The study found that firm age had a negative effect on financial performance of insurance companies. Therefore, insurance companies should not consider their firms age as a key factor in their performance and hence should adopt other strategies to improve their performance. The study found that market share has an effect on the performance of insurance companies in Kenya. The study therefore recommends that insurance companies in Kenya should seek to increase their market share every year by using marketing strategies such as promotions and advertising as a way of increasing the level of financial performance in their firms.

Areas for Further Research

This study was limited to the insurance industry within Kenya. Due to differences in organizational structures in different industries, the findings of this study cannot be generalized to other sectors in Kenya. Therefore, the study recommends that similar studies in other sectors in Kenya including the banking sector and the manufacturing sector. The study also found that the five variables (firm size, ownership structure, firm age, capital structure and market share) could only explain 39.44% of the financial performance of general insurance firms in Kenya. The study therefore suggests further studies on other factors which may affects the financial performance of Kenya insurance companies.

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