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RELATIONSHIP BETWEEN INVESTMENTS AND PERFORMANCE OF INSURANCE COMPANIES LISTED ON THE NAIROBI SECURITIES EXCHANGE

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Abstract

A business that is not profitable cannot survive and the management of a company's investments is an essential function of this profitability, which directly affects shareholder value. This study aimed at identifying the relationship between investments and performance of listed insurance companies on the Nairobi Securities Exchange (NSE). The study examined investments in properties, associates, government bonds and commercial bonds as a ratio to total assets. Performance of the listed insurance companies was measured by return on investment (ROE) which was calculated as net profit after tax divided by net assets. Secondary data that was obtained by document review was used. The data was analyzed using statistical package for social science (SPSS). Descriptive statistics, correlation analysis and regression analysis were carried out on the extracted data and the results showed that investments in properties had a positive relationship with performance of listed companies on the NSE while investments in associates, government bonds and commercial bonds had a negative relationship with performance. The general results indicated a positive relationship between investments and performance as measured by ROE of listed insurance companies in Kenya. In view of the

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findings, the researchers recommend that listed insurance companies should invest more in properties for the benefit of equity holders.

Key words: Investments, Performance, Listed insurance companies, Securities Exchange.

1.0 Background of the Study

Generally, the financial system is growing quickly and gaining significance in the global financial industry. The financial system comprises of financial institutions, financial instruments and financial markets that provide an effective payment, credit system, risk transfer, and thereby transfer funds from savers to the investors of the economy. According to Mishkin (2015), financial institutions not only affect our everyday life but also involve huge flows of funds, which in turn affect profitability, the production of goods and services, and even the economic wellbeing of nations. Hence, the important role that financial institutions (such as insurance companies) hold is in the financing and insuring of economic activities and contributing to the stability of the financial system and the stability of the economy of the concerned country. The insurance sector plays an important role in the financial services industry both in the developed and developing countries, contributing to economic growth, efficient resource allocation, reduction of transaction costs, creation of liquidity, facilitation of investments, and spread of financial losses (Mishkin, 2015).

The management of a company's investments is an essential function, which directly affects shareholder value. In Kenya, insurance companies can invest in several asset classes and the portfolio weights have limitations, governed by the Retirement Benefits Authority (RBA) and the Insurance Regulatory Authority (Mwangi, 2014). Auma (2013) notes that, insurance companies have to invest and provide for liquidity requirements to ensure that they are able to meet their financial obligations when they fall due. Every firm is mostly concerned with its profitability because profitability indicates how well the management of a firm generates earnings by using the resources at its disposal. According to Menyah and Abor (2012), profitability is one of the most important objectives of financial management because financial management is about maximizing owners' wealth. A business that is not profitable cannot survive. Equally, a highly profitable business has the ability to reward its owners with a large return on their investment.

Hence, the main goal of a business entity is to earn profit in order to ensure the sustainability of the business in prevailing market conditions. Profit realization implies investment return and this investment return is fulfilled when invested money can be maintained and recycled.

In the globalized economy, firms are involved in a competitive market milieu, in which participants compete against each other; there are changing suppliers' settings, consumers change taste, and there are new technological developments. All of these change the conditions for competition. Thus, faced with this situation, the outcomes of investment can turn out to be different from what was planned and this is beginning to be reflected in the economic and financial results of firms over a period of time. In this situation and from the perspective of the firm, investment decisions are made with the aim of adding value by obtaining a profit (Damodaran, 2010). According to Ezirim (2004) (2004), institutional investors particularly pension funds, insurance companies and mutual funds are increasingly important players in the financial market. Thus there is need for studies to be conducted to be conducted to establish the role of these investors in the profitability of companies.

The insurance industry all over the world is an important part of the entire global financial industry. Apart from commercial banks, insurance companies contribute notably to financial intermediation of the economy and as such, their success often leads to the success of the economy, while their failure always leads to the failure of the economy (Ezirim, 2004). Positive performance of any firm plays the role of increasing the market value of that specific firm as well as leading towards the growth of the whole industry, which eventually leads to the success of the entire economy. The insurance industry is part of the immune and repair system of an economy and successful operation of the industry can set vigor for other industries and development of the economy. To be able to do this, the insurance industry is expected to be financially solvent and strong through being profitable in its operation. Thus, measuring the financial performance of insurance companies is critical to this role as well as clear insights into what determines profitability in the industry. This aspect of financial performance has received major attention from scholars in the diverse areas of business and it is of primary concern to virtually all business stakeholders in any sector since financial performance is an aspect of organizational health and ultimately its survival. A good financial performance shows

management effectiveness and efficiency in making good use of the company's resources and this contributes to the economy at large (Menyah & Abor, 2012).

1.1 Empirical literature

This section looks at studies that have been carried out in the field of investments and the performance of insurance companies. Malik (2011) found that there exists a positive and significant relationship between investments in tangible assets and profitability of insurance companies and argued that the higher the level of fixed assets inclusive of property investments, the higher the profitability. On the other hand, Li (2007) who did a study in the United Kingdom found no significant relationship between investment in assets and profitability of insurance companies. Institutional investors consider investment in property as the most significant alternative asset class in a portfolio mainly due to its steady and foreseeable appreciation over time, its low correlation with other assets classes, its strong risk adjusted performance in comparison to equities and bonds and its inflation hedging capabilities. Insurance companies have turned their focus to new sets of asset classes for better performance to achieve growth in their investment portfolio. Property investments have gradually become competitive and most firms are diversifying their portfolios to properties to increase their incomes. Property investments have been seen as an important asset for insurance companies due to its investment characteristics of high quality income producing, and its low risk and portfolio diversification benefits. This is confirmed by Fabozzi, Gordon & Hudson-Wilson (2003) who note that investment in property has been shown to reduce risk, helps to enhance returns, act as a hedge for inflation and deliver strong cash flows to the investor.

A study carried out by Andonov (2013), examined pension funds in insurance companies' investments in property in the United States of America (USA), Canadian, European, Australian, and New Zealand companies which invest in direct real estate and real estate investment trusts (REITs) over the period 1990-2009. The study observed that the costs and performance of insurance companies' real investments were driven by three main variables which are size, the choice to invest internally or externally, and geography. They found out that insurance companies were more likely to invest property internally and that their investment portfolio has lower costs and higher net returns.

Fama and French (2006) established that firms with higher book-to-market equity have higher than expected stock returns, when the expected profitability and investment are controlled. Moreover, given the rate of book-to-market and expected profitability, higher expected rates of investment are related to lower than expected returns.

In relating investment to profitability as measured by market value of shares, Kim (2001) carried out a study in which he selected industrial companies in the USA, listed in the Compustat Annual Tapes, for the period 1976 to 1994. After examining the data by means of a regression analysis, the results showed that, at first, there was no relation between investment and future profitability for the sample selected but after the companies had been divided between losers and winners, the investments were positively related to future profitability to winners and negatively related to the losers.

Li (2004) examined data from the financial statements of American companies for the period 1962 to 2002 and classified them into the portfolios of investment groups. He found that there ship between investment and future stock returns. Moreover, he concluded that in companies which had high free cash flow and low leverage, there was a negative relationship between capital investment and future profitability, which is consistent with management empire building; a phenomenon identified by Jensen (1986).

Jiang *et al.* (2006) sought to establish the relationship between capital expenditure and profitability, measured by accounting information. They carried out a research which involved selecting industrial companies listed in the Taiwan Stock Exchange in the period 1992 to 2002. In the study, the first five years were used as the period of investment and the last six, as the period of profitability. They concluded that investments were positively related to the future profitability, after grouping the companies according to the level of investment.

Eriotis *et al.* (2000) investigated the relationship between debt to equity ratio and firm's profitability taking into consideration the level of a firm's investment and the degree of market power; and concluded that firms that prefer to finance their investment activities through self-

finance are more profitable than firms that finance investment through borrowed capital. According to them, firms used their investment in fixed assets as a strategic variable to effect profitability. On the other hand, Sayeed and Rogue (2010) studied the impact of assets and liability management on profitability of public and private commercial banks in Bangladesh and found that all the assets have significant and positive impact on net operating income of private banks.

Ojiambo (2004) studied the effect of property mortgage loans on the financial performance of commercial banks in Kenya using five years of industry data. The model explained 59% of variance in financial performance thus, the model was effective enough in the explanation of how the property mortgage loans influence the financial performance of the listed commercial banks in Kenya. The findings showed that mortgage loans had strong negative effect on the financial performance of the listed banks. Also through the study, the researcher established that the capital adequacy had a weak negative effect on the financial performance of the banks. The cost of operations on the other hand had a strong positive effect on the performance while the foreign ownership had a weak effect. Liquidity had a strong negative effect on the performance, while inflation rate was found to have had a weak negative effect on the performance and lastly, bank size had a weak negative effect on the financial performance. There was examination of effects of mortgage loans and the study found out that mortgage loans had a strong negative effect which led to the conclusion that mortgage loans influence financial performance. The capital adequacy effect had a weak negative effect and it did not affect the financial performance.

In another study, Auma (2013) examined the relationship between portfolio holdings and financial performance of insurance companies in Kenya. The study established that portfolio allocation to equity shares had been on a declining trend over the period of study from 2003 to 2010. The study also showed that the insurance industry allocated 28.49% of their portfolio to government securities investments which decreased by 2006. Thereafter, a slight increase was noted in 2008 before a sharp decrease in 2009. In 2010, the industry invested 26.42% of its portfolio in government securities which increased in 2011 and later decreased in 2012. For real estate, there was a decreasing trend over the period from 2003 and the insurance industry invested 26.59% of the assets which decreased sharply in 2004 then further in 2005. In 2006, the

industry invested 5.26% of total assets in real estate assets which decreased in 2007 but latter increased the percentage of total assets invested in real estate over the next two years. For bank deposits, the industry invested 7.53% of the total assets in bank deposit that increased by 2006 then reduced slightly in 2007 before increasing in 2008 which was the highest percentage of total assets invested in the study period. Lastly, the overall profitability of the insurance industry as at 2003 was Kenya Shillings 2.9 billion which reduced in 2004 and by 2007, it had increased. The overall profitability decreased over two years that followed and at last increased by end of December 2012. With the main objective having been to establish the relationship between portfolio holdings and the financial performance of the insurance companies in Kenya, the study concluded that there was a strong and positive relationship in the overall profitability increase over the study period and it was affected by the choice of portfolio allocations made. There was also an inverse relationship between investment in equity shares and the overall profitability in the industry. For the government security investment, it concluded that it had a positive impact on the overall profitability of the insurance industry. Lastly, investment in real estate had a positive relationship with the overall profitability within the insurance industry.

Another study by Kaguri (2012) on the relationship between firm characteristics and financial performance of life insurance companies in Kenya concluded that there was a positive relationship between the size of premium and profitability of an insurance company. Opanga (2013) on the other hand, identified the effect of corporate governance on the profitability of insurance corporations in Kenya. The study concluded that there was a positive relationship between corporate governance and profitability of insurance corporations in Kenya.

1.1.1 Measurement of financial performance

Profitability is one aspect of financial performance. Financial performance is much broader and can be measured on various aspects other than profitability such as revenue growth, expense controls and working capital management. According to Schum (2014), performance also shows the quality of the senior management in a company. Profits can either be distributed to shareholders or reinvested in the company to increase solvency. One measure of financial performance is the net profit margin which is computed as an organization's net income divided by its sales revenue. This margin measures the amount of income that the organization has been

able to produce per unit currency of sales revenue. Therefore, the higher the net profit margin, the higher the performance for that company. This ratio is purely derived from the income statement and does not require any input from the balance sheet.

Performance can also be measured from metrics that come from an organization's balance sheet. A company's ability to generate profits on its investments is a key determinant of a company's overall value (Robinson, 2015). The return on assets (ROA) is a common measure of performance and is an investment performance ratio. ROA measures the return generated by a company on its total assets both fixed and current. The higher the ROA, the higher the profit generated by a given level of assets. It is computed as the net income divided by the average total assets from the current and prior year. The drawback with this computation is that net income is the return to shareholders, whereas assets are financed by both shareholders and creditors.

The final and most ideal measure of performance for insurance companies from a shareholder perspective is the return on equity (ROE). ROE measures the profits generated by a company on all of its equity capital (Lan, 2012). It is computed as the net income divided by the average total equity from the current and prior year. Interest on debt borrowing is not included in the return on equity capital computation.

1.1.2 Investments in properties

Property investments include both land and permanent fixtures such as buildings. Property investments can be made either directly or indirectly through equity ownership of real estate investment trusts (REITs) which are new in the Kenyan capital market. On the other hand, property investments can also be made through lending against the property as collateral through mortgage loans (McCord, 2011). Mwaniki (2014) notes that the Kenyan market currently has just over 20,000 active mortgage loans and the growth of this market has been slow over the last decade due to soaring interest rates which make it inaccessible and unattractive for Kenyans to take up mortgages. As a result, during years of poor operational performance, companies tend to inflate the capital appreciation of their property values in an effort to hide the losses.

The rental income and capital appreciation of all the property investments in an insurance

company's portfolio are reported as part of the investment income for the respective year. Nissim (2010) notes that insurance companies with large asset bases report higher amounts of investment income compared to insurance companies with smaller asset bases. Profit before tax (PBT) figures for larger and more mature insurance companies therefore tend to be boosted more by investment income amounts which takes up a larger portion of the overall profits compared to underwriting profits which are generated purely through insurance business.

1.1.3 Investments in Associates

According to the international accounting standards - IAS 28 (2011), an associate is an entity, including an unincorporated entity such as a partnership, over which the investor has significant influence and is neither a subsidiary nor an interest in a joint venture. Separate financial statements in accordance with IAS are presented by a controlling entity, or an investor in an associate, in which the investments are accounted for on the basis of the direct net assets and, or equity interest rather than on the basis of the reported results and net assets of the investees. Equity method in accounting is the process of treating equity investments, usually 20% to 50%, in associate companies.

The ability of a company to generate profits from its investments gives value to a company (Robinson, 2015). Investments in associates can be measured using ROA which represent the total assets of the company in the subsidiary, both fixed and current; and the higher the ROA, the higher the profits of the company; while the lower the ROA, the lower will be the profits of the company from the investments. To attain this, the separate financial statements of the associate will indicate what funds have been invested and thus, the value of investments of a company in an associate from its balance sheet will be used to measure the amount invested in associates for a particular year. The ratio of investment in associates to total assets would be used to measure investment in associates.

1.1.4 Investment in government bonds and commercial bonds

A bond is a loan that an investor makes to a corporation, government, federal agency or other organization (Bolton & Jeanne, 2011). Bonds are sometimes referred to as debt securities. Since bond issuers know an investor is not going to lend money without compensation, the issuer of

the bond or the borrower, enters into a legal agreement to pay the investor or the bondholder some interest. The bond issuer also agrees to repay investors the original sum loaned at the bond's maturity date. The majority of bonds have a set maturity date, which is a specific date when the bond must be paid back at its face value, called par value. Bonds are called fixed-income securities because many pay interest based on a regular, predetermined interest rate, also called a coupon rate that is set when the bond is issued.

According to Bolton and Jeanne (2012), public bonds are very liquid assets that play a crucial role in banks' everyday activities, like storing funds, posting collateral, or maintaining a cushion of safe assets. Because of this, banks and financial institutions hold a sizable amount of government bonds in the course of their regular business activity, especially in less financially developed countries where alternatives are fewer. When default strikes, banks and financial institutions experience losses on their public bonds and subsequently decrease their lending. Acharya and Steffen (2013) note that during default episodes, some banks and financial institutions deliberately hold on to their risky public bonds while others accumulate even more bonds. This behavior could reflect banks and financial institutions reaching for yield, or it could be their response to government moral suasion or bailout guarantees (Broner *et al*., 2013). Governments issue bonds to support country development projects and pay off the national debt. Sometimes, agencies which are government-related entities that are either fully or majority owned by the Government issue bonds as well (Livshits & Schoors, 2009).

On the other hand, corporate bonds are bonds issued by corporates in private sector to raise capital for business development or refinancing (Livshits & Schoors, 2009). They are typically structured in a similar way to government bonds. This means that they pay fixed coupons and have a fixed redemption date (Broner *et al.*, 2013). The concepts of yield and duration are applicable to both corporate bonds and government bonds. Compared to equity, corporate bonds are regarded as a safer asset class, in the sense that bonds have a liquidation priority over all equity, and the bond issuers will make coupon and capital payments due on their bonds on time. Financial institutions in Kenya, insurance companies inclusive invest in both public and corporate bonds to grow their profits, thus boosting the general performance of the institution. The ratio of investment in government bonds and commercial bonds respectively, to total assets

would be used to measure investment in government bonds and associates.

2.0 Statement of the Problem

Most research on the role of investments on performance of firms has focused on the banking industry. This is confirmed by Vejzagic and Zarafat (2014), who note that enormous studies have been carried out on the determinants of profitability focusing mainly on the banking industry. Consequently, there are few studies relating to role of investments on performance of insurance companies across the globe in general and in Kenya in particular. Thus, there is need to establish the relationship between investments and performance of insurance companies, and it is on this basis that this paper sought to study the relationship between investments and performance of insurance companies listed on the Nairobi Securities Exchange in Kenya.

3.0 Objectives of the Study

i. To determine the relationship between investments in properties and performance of insurance companies listed on the Nairobi Securities Exchange in Kenya.
ii. To establish the relationship between investments in associates and performance of insurance companies listed on the Nairobi Securities Exchange in Kenya.
iii. To establish the relationship between investments in government bonds and performance of insurance companies listed on the Nairobi Securities Exchange in Kenya.
iv. To determine the relationship between investments in commercial bonds and performance of insurance companies listed on the Nairobi Securities Exchange in Kenya.

4.0 Methodology

The study focused on the relationship between investments and performance of insurance companies listed on the Nairobi securities exchange (NSE). The target population for this study was the six insurance companies that are listed on the NSE in the period of study. A population refers to an entire or a larger group of persons that have at least one thing in common from which samples is taken (Nassiuma 2000). The census technique was used to select insurance companies that were studied since all the six listed insurance companies on the NSE were studied. This study employed correlation research design. Panel data of the six insurance companies listed on NSE from 2010 to 2015 were used.

4.1 Data collection procedures

In Kenya, all firms that are quoted on the NSE are by law required to publish their financial statements to the public. This enabled the researchers to easily gain access to the secondary data needed by use of document review. Financial statements of the six insurance companies listed on NSE from 2010 to 2015 were obtained from the NSE hand books, websites of the companies, the insurance regulatory authority (IRA), and association of Kenya insurers (AKI) for the period of reference. The investments data was obtained from the statement of financial position and income statements of the listed insurance companies were extracted together with notes to the accounts.

4.2 Data analysis

Quantitative data was analyzed using multi-linear regression and correlation (Pearson product moment correlation) analysis where ordinary least square was used to determine the relationship between the independent variables (investments) and the dependent variable (performance) as measured by return on equity.

Thus variations in insurance companies' return on equity (Y) at time (t) can be expressed for in terms of variations of investments in the following way:

$Y= F(X_1, X_2, X_3, X_4)$

$Y=\alpha_0 +\alpha_1X_1+\alpha_2X_2+\alpha 3X_3 +\alpha_4X_4+$□

Where by:

Y = performance as measured by Return on Equity

X_l = Investment in Properties

X_2 = Investment in Associates

X_3 = Investment in Government bonds

X_4 = Investment in Commercial bonds

α_0 = net fixed return on Equity that is not dependent on investments by insurance company.

α_1; α_2; $\alpha 3$; and α_4.. are marginal rates of return on equity

□= Error term

5.0 Findings

The results of the study included descriptive statistics of variables, correlation results for dependent and explanatory variables, diagnosis test for the regression models, and regression analysis for performance measures, ROE. The study sought to establish the relationship between investments and performance of insurance companies in Kenya. The data collected was presented and analyzed in line with the objectives of the study. The researchers used tables in presenting the data.

5.1 Descriptive Statistics

In this section, descriptive statistics for the dependent variable (ROE) and explanatory variables (properties, associates, government bonds and commercial bonds) involved in the regression model are presented. The Mean, maximum, minimum and standard deviation values are included in the table 2. These figures give an overall description about data used in the regression models.

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Investment in Properties	6	09	.13	.1019	.01625
Investment in Associates	6	.05	.10	.0667	.01894
Investment in Government Bonds	6	.13	.29	.2458	.05743
Investment in Commercial Bonds	6	.01	.05	.0265	.01563
Return On Equity	6	.10	.51	.2168	.15147
Valid N (list-wise)	6				

The above table indicates that the mean values of all the variables ranges from minimum of

.2168 for ROE to a maximum of .2458 for government bonds investments. The average performance as measured by ROE for Kenyan listed insurance companies during the study period is about .2168 and the value of the standard deviation for ROE is .15147 which implies the presence of variations among the performance across the listed insurance companies in the study. The maximum and minimum values of ROE are .51 and .10 respectively. The means for investments are . 1019, for investment in properties, .0667 for investment in associates, .2458 for investment in government bonds and .0265 for commercial bonds. This indicates that listed insurance companies in Kenya largely invest in government bonds and least in commercial bonds.

5.2 Correlation analysis

The correlation coefficient represents the linear relationship between two variables. The p-level represents the probability of error that is involved in accepting the observed result as valid, that is; as representative of the population. Thus, the focus is to test the significance of the four variables that affects ROE and their relationship degree.

Table 2: Correlations

		Investment in Properties	**Investment in Associates**	**Investment in Government bonds**	**investment in Commercial bonds**	**Return On Equity**
Investment in Properties	Pearson Correlation	1	.898*	-.884*	.775	.862*
	Sig. (2-tailed)		.015	.019	.070	.027
	N	6	6	6	6	6
Investment in Associates	Pearson Correlation	.898*	1	-.907*	.620	.779
	Sig. (2-tailed)	.015		.013	. 189	.068
	N	6	6	6	6	6
investment in Government Bonds	Pearson Correlation	-.884*	-.907*	1	-.685	-.935**
	Sig. (2-tailed)	.019	.013		.133	.006
	N	6	6	6	6	6
Investment in Commercial Bonds	Pearson Correlation	.775	.620	-.685	1	.563
	Sig. (2-tailed)	.070	.189	.133		.245

	N	6	6	6	6	6
	Pearson Correlation	.862*	.779	-.935**	.563	1
Return On Equity	Sig. (2-tailed)	.027	.068	.006	.245	
	N	6	6	6	6	6

*Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

From table 2, the results show that there is a strong and positive relationship between investment in properties and ROE (r = .862, p<0.05). The table also reveals that there is a strong and positive relationship between investment in associates and ROE (r = .779, p < 0.05). Also, results from table 2, show that there is strong and negative relationship between investment in government bonds and ROE (r -.935, p < 0.05) and lastly, based on results from table 2, there is positive relationship between investment in commercial bonds and ROE (r .563, p<0.05).

5.3 Regression analysis

In this section, regression analysis for insurance performance as measured ROE has been undertaken to establish a prediction of the relationship between insurance performance and investments as determinants of insurance performance. The result in the table 4 shows the summary of multiple regression.

Table 3: Model summary

Model	R	R square	Adjusted R Square	Std. Error of the Estimate	Change statistics				
					R Square change	F change	Df1	Df2	Sig F. Change
1	.998[a]	.996	.981	.02068	.996	66.833	4	1	.091

a. Predictors: (Constant), Investment in Commercial Bonds, Investment in Associates, Investment in Government Bonds, Investment in Properties

Table 3 shows that there is a good linear association between the return on equity of listed insurance firms in Kenya and investments by the listed insurance firms. The results show that there is strong and positive relationship between ROE and investment in properties, associates, government bonds and commercial bonds of R is 0.998, coefficient of determination (R2) is 0.996. This depicts that the model accounts for 99.6% of the total observations while 0.4% remains unexplained by the regression model.

Table 5: Coefficients

Model	Unstandardized coefficients		Standardized coefficients	t	Sig	95.9% confidence interval for B	
	B	Std Error	Beta			Lower bound	Upper bound
(Constant)	.765	.218		3.511	.177	-2.004	3.534
Investment in Properties	8.055	1.702	.864	4.734	.133	-13.566	29.676
Investment in Associates	-6.852	1.403	-.857	-4.885	.129	-24.674	10.970
I investment in Government Bonds	-3.265	.420	-1.238	-7.778	.081	-8.599	2.069
Investment in Commercial Bonds	-4.104	.990	-.423	-4.147	.151	-16.680	8.471

a. Dependent Variable: Return on Equity

To predict the relationship between investments and performance of insurance companies, a multi-linear regression model of the form below was established:

$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2, X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \square$

$Y = 0.765 + 8.055X_1 – 6.852X_2 – 3.263X - 4.104X4$

In the table above, the independent variables of investment in properties (8.055), associates (-.6852), government bonds (-3.265) and commercial bonds (-4.104) were found to significantly

influence the return on Equity of insurance companies listed on NSE. This means that the independent variables do contribute to performance of the insurance companies. The results show investment in properties has greatest marginal effect on performance (8.055), and thus, an increase in investment in government bonds, increases performance, associates (-6.852), government bonds (-3.265) and commercial bonds (-4.104), indicate a negative relationship between investment in government bonds, associates and commercial bonds and performance, thus an increase in any of these types of investments decreases ROE of the insurance firm.

6.0 Summary of findings and conclusion

The objective of this study was to establish the relationship between investments and the performance of insurance companies listed on NSE between 2010 and 2015.

6.1 Summary of findings

The analysis of descriptive statistics showed that the arithmetic mean over the 5 year period for the ROE was 2 I .68%, the mean of the ratio of investments in property was 10. 19%, the mean of the ratio of investments in associates was 6.67%, the mean of the ratio of investments in government bonds was 24.58%, and the mean of the ratio of investments in commercial bonds was 2.65% over the same period.

The results of the analysis of correlations from the study indicated a strong and positive relationship between investments in properties (8.05562) and performance of insurance firms at 5% significance level. There was also a strong and negative relationship between investments in associates (-.6852) and performance at 5% significance level, a negative relationship between government bonds (3.265) at 5% significance level and a negative relationship between commercial bonds (4.104) at 5% significance level.

The findings from the regression analysis reveal that the variables under the study will explain 99.6% variation in return on equity of insurance firms. The adjusted value of R square (.981) indicates the independent variables in this study i.e. properties, associates, government bonds, and commercial bonds jointly will excellently be used to explain the types of investments by insurance companies that influence the variation in the performance of the listed insurance companies.

6.2 Conclusion

The study concluded that there was a positive relationship between the ratio of property investments to total assets and performance as measured by ROE for listed insurance companies in Kenya over the 6 year period.

The results of the analysis of correlations from the study indicated a strong and positive relationship between investment in properties and performance, agreeing with the studies carried out by Malik, (2011), who found out that there exists a positive and significant relationship between investments in tangible assets and profitability of insurance companies. Specifically, the results showed a strong and positive relationship between associates and performance, and a possibility of a positive relationship between commercial bonds and performance at 5% significance level. However, the results also indicated a strong and negative relationship between government bonds and performance at 1% significance level, and the regression analysis R, revealed that there was a strong and positive relationship between investments and performance of insurance firms. The independent variables of properties, associates, government bonds, and commercial bonds explained 98. 1 percent of the variation in the performance of the listed insurance companies as well as the positive variation ROE due to variations in the independent variables.

7.0 Recommendations

The objective of this study was to examine the relationship between investments and performance of listed insurance companies as measured by ROE for the period of 2010-2015. This study thus recommends that management bodies of insurance companies should strive and give emphasis to investment aspects like properties, associates, government bonds and commercial bonds, because, these factors have significant effect on the performance of the company.

This study also recommends that new policies by management on the ratio of properties, associates, government bonds, and commercial bonds investments to the total assets of insurance companies be imposed to control volatility of the asset mix, so as not to over invest in assets that will be less relevant to the ROE of the company. On this basis, this study suggest that listed

insurance companies should reduce their investments in government bond and increase investments in properties. This would increase the return to the owners of these firms as measured by return on equity. Investments in properties proved to be the main driver of performance in the investments mix and its far below the recommended proportion of 20% by the insurance regulatory authority.

This study is significant to insurance companies for it identifies the best options for investment of their funds that will in turn yield them greater profits. It is also significant to government and the regulatory authorities interested in identifying indicators of success and failure of the insurance industry for necessary action to improve the performance of the industry and make the right decisions. It gives critical tips to investors to be able to know how to protect their investment, and for direction to the best investment options.

8.0 Suggestions for further study

This study was confined to listed insurance companies on the NSE, which may not be representative enough. Therefore, the study suggest that a similar study to be conducted on all other insurance companies that are not listed on the NSE. Again, since the independent variables were confined to a particular set of investment assets, more asset types can be included in subsequent studies to widen the range of investments and performance.

This study generalized the insurance companies, not separating the activities of the companies into life, general or motor thus giving a general view of all the products of insurance companies. Thus, distinction can be done in future studies as concerns areas and products offered by insurance companies.

9.0 Limitations of the study

The main limitation of the study was that secondary data from the IRA, NSE, the various insurance companies and AKI websites was available for the previous 6 years as opposed to the previous 10 years that would have been desirable for the study. This was partly because the secondary data that was obtained from these websites prior to the year 2010 did not show a detailed balance sheet and revenue account breakdown where the researcher could identify the

properties, associates, government bonds and commercial bonds investments as a percentage of total assets. A six year study was therefore the longest study period that could have been used for this particular study with the available secondary data sources. Lastly, of all registered insurance companies in Kenya, only six are listed on NSE, thus limiting the number of insurance under study to six. Thus there was a limitation in terms of the time span of study and number of insurance companies available for study; an aspect that would limit the generalizability of the study findings.

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