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ABSTRACT

The purpose of this study was to investigate the effect of portfolio investment on the financial performance of life insurance companies in Kenya. A descriptive survey research design was used to conduct the study. All insurance companies operating in Kenya were included in the study. The target population was 26 life insurance companies in Kenya. The study targeted 113 senior managers from finance and investment departments of the 26 life insurance companies in Kenya. A sample of 75 senior managers was selected through proportionate stratified random sampling. Data was collected using questionnaires and data collection sheet. Data was analyzed using descriptive and inferential statistics. The descriptive statistics included mean, standard deviations, frequencies and percentages. Inferential statistics which included regression analysis and correlation analysis were used to establish the nature of the relationship between investment portfolios and financial performance. The data was analyzed with the aid of Statistical Package for Social Sciences (SPSS) version 25. The study concluded that investment portfolio affected financial performance of insurance companies in Kenya. 45.3% of financial performance of insurance companies was explained by mortgage investment while 49.3% of financial performance of insurance companies was influenced by bond investment. 71.6% of financial performance of life insurance companies was influenced by equity investment. Further, the R squared value of 0.731 indicated that bond investment, equity investment, mortgage investment accounted for 73.1% of the total variance in the financial performance of insurance companies. Based on the findings and conclusions the study recommended that life insurance companies in Kenya should be more proactive in diversifying investment portfolios in order to enhance financial performance. In addition, insurance companies in Kenya should expand their budgetary allocations to include adequate financial allocation to portfolio investment.

Keyword: *Financial Performance, Life insurance, Investment Portfolio, Mortgage Investment, Bond Investment & Equity Investment.*

INTRODUCTION

Portfolio is defined as an investment collection which may be owned institutionally or individually. The portfolio composition includes stocks characterized by investment held by individual investors or managed by financial professionals, hedge funds, insurance companies and other financial institutions (Murumba, 2012).According to Nyora (2015) a portfolio could comprise of hedge funds, equity funds, exchange traded funds and futures, mutual funds, options, bonds and stocks. The returns from a portfolio depend on risk. In order to minimize the risk associated with the individual assets in the portfolio, insurance firms resort to diversification whereby different assets which are negatively correlated are mixed in the portfolio in order to maximize returns and minimize risk (Vishwanath, 2007).

According to Rop, Kibet and Bokongo (2016) diversification as a portfolio strategy is designed to cut back risk by combining various investments. It refers to any combination of financial assets such as stocks, bonds and cash. Companies commit their resources for a period of time in the expectation of receiving future resources that will compensate the investor for the time the resources are committed. Performance of an organization refers to the outcome of activities of individuals and units of the organization. This can be measured in different ways depending on the purpose for which the information is required, for the insurance industry, the performance is measured in different ways including profitability, timely claims settlement and liquidity which enable it to meet its financial obligations as and when they fall due.

Insurance companies provide unique financial services to the growth and development of every economy. Such specialized financial services range from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments. Insurance companies receive money from insured investor inform of premium for the purchase of the insurance cover, they then have to manage their collections by investing within the regulated framework by the various authorities including the Retirement Benefits Authority, Insurance Regulatory Authority and Association of Kenya insurers. Indeed, a well-developed and evolved insurance industry is a boon for economic development as it provides long-term funds for infrastructure development of every economy (Charumathi, 2012).

Therefore, an effective control over the performance requires insurance companies to utilize their resources optimally by diversifying their investments in different asset classes. Investment earnings made by insurance firms make a valuable contribution to their operating results and enable them to reduce premiums and increase dividends and bonuses, thereby improving their competitiveness (Cummins & Grace, 2014; Citibank, 2014). Therefore, it is advisable for portfolio managers to make wise decisions in diversification of its investments. The risk absorption role of insurers promotes financial stability in the financial markets and provides a "sense of peace" to economic entities (Ghimire, 2013). The business world without insurance is unsustainable since risky business may not have the capacity to retain all kinds of risks in this ever changing and uncertain global economy (Ahmed, 2010).

In African countries most empirical studies have highlighted the significance of investment portfolio to the extent of identifying factors influencing the structure of investment portfolio (Oyatoye&Arileserre, 2012). In a study by Ubom (2014) on the link between investment portfolio of insurance firms and the variables of economic development investment in Nigeria, found out that insurance companies in Nigeria got over 95% of income on yearly basis from premium and accumulated large sum of funds after expenditures on claims but invest less than 1% of such funds, he therefore recommended that insurance companies should increase their wealth allocations to

investments with proper spread and mix of investment portfolio. In a study by Karimi (2013) on the relationship between portfolio choice and profitability of investments companies listed in Nairobi Securities exchange indicated that investment involved selecting the right combination of stocks with minimal risks. In insurance business it is essential to try to have a balance between short-term risks and long-term rewards; this is a mix on offering the right products, having the right people to sell that product and managing the risks associated with the industry. Insurance companies pools together premiums from a large clientele, who purchase the insurance in order to offset the risk of loss. Risks are related to different areas and insurance companies provide different insurance policies for different purposes. This entitles the insurance industry to have a mix of asset types, so that entire portfolio does not suffer the impact of a decline of any one security since different securities perform differently at any point in time. Construction of an efficient investment portfolio enables the firm to diversify its risks thereby improving the earning ability of the portfolio (Abdalla, 2012). A study by Elango and Ma (2003) established that diversification has a significant effect on the level of financial performance recorded by firms. This was basically because diversification provides an avenue for firms to minimize their operational costs and optimize their performance. According to Eukeria and Favourate (2014) the relationship between diversification and firm profitability indicates a negative relationship especially at relatively low portfolio diversification levels. As the portfolio diversification levels improve, the relationship improves to positive and significant improvement on the firm's financial performance.

The insurance industry in Kenya is regulated by the Insurance Regulatory Authority (IRA), a State Corporation whose mandate is to regulate, supervise and develop the industry. The main business of insurance companies is risk mobilization of individuals and companies based on the system of pooling and diversification, such specialized financial services range from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments (Simpson &Damoah, 2008).According to IRA (2016) there were 52 operating insurance companies, as at the end of 2016. 26 companies wrote non-life insurance business only, 14 wrote life insurance business only while 12 were composite (both life and non-life). There were 186 licensed insurance brokers, 29 medical insurance providers (MIPs) and 6481 insurance agents. Other licensed players included 123 investigators, 98 motor assessors, 31 loss adjusters and 24 insurance surveyors and 7 risk managers.

Statement of the Problem

Insurance companies provide financial services which promote the growth of the economy (Simpson &Damoah, 2008). This is supported by the continuous growth of global life insurance premiums over the years. For instance, in 2016 the growth of insurance premiums rose by 5.4% up from 5% in 2015. In addition, the penetration of life insurance in 2016 rose by 2.75% compared to 2.78% in 2015. This represented a penetration rate of 1.03% in 2016. Despite the enhanced growth in premiums, the industry earnings from investments and other incomes decreased from 13% in 2015 to 10% in 2016. This was as a result of weakened investment returns on investments. This led life insurers to adjust their product and asset portfolio in a bid to boost profitability (AKI Annual Report, 2016). Life insurance companies have to diversify asset portfolio in order to improve on its financial performance. Several empirical studies have been done on the effect of investment portfolio on financial performance. For example, Ramakrishnan (2010) studied the financial performance of the Indian insurance industry and established that investment portfolio depended on liquidity need, profitability, reinsurance arrangements, leverage and stream of premium. Kamwaro (2008) studied the impact of portfolio

choice on financial performance of investment companies listed at the Nairobi securities exchange and found that investment in bonds, mortgage, equity and company size positively impacted on financial performance of the listed companies. Karimi (2013) studied the relationship between portfolio choice and profitability of investment companies listed in Nairobi Securities exchange and established that the financial performance was influenced by a careful selection of the right combination of stocks with minimal risks. In all these studies, it was evident that a relationship existed between investment portfolio and financial performance of a firm. However, the studies did not focus on the investment portfolio and their effect on financial performance of life insurance companies. Further, the measure of financial performance in most of these studies was profitability. Thus, the study sought to bridge this evident research gap by investigating the effect of investment portfolio on financial performance of life insurance companies in Kenya.

Objectives of the Study

The general objective of the study was to establish the effect of investment portfolio on financial performance of life insurance companies in Kenya. The specific objectives were:-

- To establish whether mortgage investment has an effect on financial performance of life insurance Companies in Kenya
- To establish whether bond investment has an effect on financial performance of life insurance companies in Kenya
- To determine whether equity investment has an effect on financial performance of life insurance Companies in Kenya

LITERATURE REVIEW

Theoretical Review

Investment Theory

A modern investment theory was founded by Neumann and Morgenstern (1953) in his expected utility model. Financial decisions to invest are guided by the risk-return tradeoff. The decision-makers' choice depended upon his risk preference. A rational investor would maximize his utility and is therefore expected to accept an investment that would yield the maximum return. The most widely applied in finance is the expected utility model of choice under risk (DeBondt, 1998). Its rationale is based on the axioms underlying expected utility maximization. The different types of assets are traded in the market and they include stocks, bonds, and mortgages. Many of these instruments have long maturity periods. One has to determine the risk and return for individual assets and portfolio of assets when pricing these instruments. This theory was useful to the portfolio managers in determining the risk and returns involved in each set of assets invested.

Modern Portfolio Theory

The study of finance focuses on the decision making processes that precede the allocation of money or other financial assets by individuals and businesses. The main issue in finance is concerned with finding the optimal balance between risk and return of certain investments. Every investment comes with a relative amount of uncertainty or risk which financial experts' call volatility. The more certainty exists about the expected returns of an investment, the less risky the investment is. What it all comes down to is making efficient financial decisions and finding the optimal balance between perceived risk and expected return of an investment. This optimal balance can be achieved through the spreading of risk by investing in different assets at the same time and forming a portfolio of assets. Finding the optimal distribution of asset streams is one of the complex tasks of the portfolio managers of organizations. A rational Portfolio manager should create an investment portfolio which is considered efficient with respect to the risks and returns of different financial stakeholders. This theory was useful to portfolio managers of insurance companies in identifying a

proper portfolio of investment streams that will yield high returns and are less risky.

Agency theory

Agency theory addresses the agency issue in which one party (the principal) delegates work to another (the agent), who performs that work (Jensen &Meckling, 1976). There is an agency relationship when the actions of one individual affect both his welfare and that of another person in an explicit or implicit contractual relationship. The individual who undertakes the actions is the agent and the person whose welfare (utility), measured in monetary terms, is affected by the agent's actions is called the principal (Myles, 2010).The typical case of agency relationship is the one that exists between an employer (the principal) and his employee (the agent). In an agency relationship, the principal wants the agent to act in the principal's interest. However, both the principal and agent are confronted with uncertainty.

Conceptual Framework

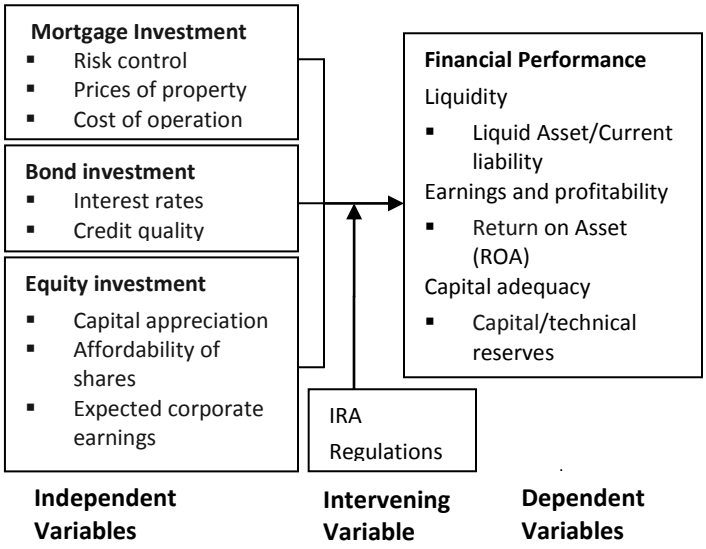

Figure 1: Conceptual Framework

Source: Author (2018)

METHODOLOGY

This study was based on a descriptive survey design. The accessible population constituted 113 senior management staff working with the life insurance companies in Kenya. The sample size of the study was 75 respondents. This was a survey study which according to Mugenda and Mugenda (2003) should employ a questionnaire to collect data from the surveyed respondents. The study used primary data and secondary data. Descriptive and inferential statistics were used in data analysis, with the aid of Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics included mean, standard deviations, frequencies and percentages. Correlation analysis was used to determine the nature of the relationship between variables at a generally accepted significant level of P=0.05(Castillo, 2009). In addition, the relationships among the study variables were determined using multivariate regression analysis. Regression and correlation analysis were used at 95% level of significance. This helped to ascertain the extent to which each of the independent variables significantly influenced financial performance. For robustness of results, the empirical model investigated the effect of investment portfolio on financial performance of life insurers' companies.

RESULTS AND FINDINGS

The study targeted a sample size of 75 respondents drawn from insurance companies in Kenya. However, 69 respondents filled in and returned the questionnaires making a response rate of 92% which was considered satisfactory. This was in agreement with Mugenda and Mugenda (2003) who observed that a response rate above 50% is sufficient for a study in business and social sciences.

Correlation Coefficients

In this section, the correlation analysis of the study variables was presented using the Pearson's Product Moment Correlation Coefficient, which is a non-parametric measure of the strength and direction of association that exists between variables.

Table 1: Relationship between investment portfolio and financial performance

		Financial Performance	Mortgage	Bond	Equity
Financial Performance	Pearson Correlation	1	.453	.493	.716
	Sig. (2-tailed)	.	.008	.007	.0023
	N	5	5	5	5
Mortgage	Pearson Correlation		1	.753	.685
	Sig. (2-tailed)		.	.006	.009
	N		5	5	5
Bond	Pearson Correlation			1	.341
	Sig. (2-tailed)			.	.008
	N				5
Equity	Pearson Correlation				1
	Sig. (2-tailed)				.
	N				5

From Table 1, the findings indicated the presence of a moderate and significant positive relationship between mortgage investment and financial performance in insurance companies in Kenya (r=0.453; p=0.008). Moreover, the relationship was statistically significant at p<0.05 level of significance. Therefore, the researcher observed that mortgage investment significantly influenced financial performance in insurance companies in Kenya. As such, the first hypothesis $\mathbf{H_{01}}$ which stated that there was no statistically significant effect of mortgage investment on financial performance in insurance companies in Kenya was rejected, thus accepting that mortgage investment significantly affected financial performance of insurance companies in Kenya. It can be noticed that the research hypothesis, in general, is supported by data. This is also supported by a previous study by Macharia (2013) which revealed that high property prices were a contributory factor to the low uptake of mortgage products.

From Table 1, it was established that there was a moderate and significant positive relationship between bond investment and the insurance companies' financial performance (r=0.493; p=0.007). The relationship was statistically significant at p<0.05 level of significance. Therefore, the null hypothesis ($\mathbf{H_{02}}$) that there was no statistically significant effect of bond investment on financial performance in insurance companies in Kenya was rejected. Therefore, the researcher concluded that financial performance of insurance companies in Kenya depended on bond investment. This is in harmony with Singh (2013) who revealed that the rate of investment in bonds lead to an increase in investment activity.

Findings in Table 1 further revealed the presence of a strong and significant positive relationship between equity investment and financial performance of insurance companies in Kenya (r=0.716, p=0.0023). The relationship was found to be statistically significant at p<0.05 level of significance. Therefore, the null hypothesis $\mathbf{H_{03}}$ which stated that equity investment had no effect on financial performance in insurance companies in Kenya was rejected. Thus, the researcher observed that equity investment influenced financial performance in insurance companies in Kenya. This concur with Browne, Carson and Hoyt (2001) who noted that as equity returns increase, returns on insurer's investment portfolio also increased and improved the performance of the insurer.

In order to measure the correlation between specific attributes of investment portfolio and the various variables in financial performance, the Pearson's Product Moment Correlation Coefficient, which is a non-parametric measure of the strength and direction of association that exists between variables,

was used. Although the 0.05 level of significance is considered because it is neither too high nor too low, Kerlinger (1986) noted that the significance of all levels is acceptable by scholars. Following this assertion, results of each significance level (0.05, 0.01 and 0.001) are reported. The Pearson's Product Moment Correlation analysis indicating the relationship between mortgage investment, bond investment, equity investment, liquidity, profitability and capital adequacy is presented in this section.

Table 2: Relationship between mortgage investment and financial performance

Variable		Liquidity	Profitability	Capital Adequacy	Overall
Mortgage investment	Pearson Correlation	-.474	-.993(**)	.973(**)	.453
	Sig. (2-tailed)	.004	.001	.005	.008
	N	5	5	5	5

From table 2, overall, the findings indicated the presence of a moderate and significant positive relationship (r = 0.453; p = 0.008) between mortgage investment and financial performance in insurance companies in Kenya. However, the analysis of findings indicated that mortgage investment had negative relationships with liquidity and profitability. From table 2, mortgage investment showed moderate but negative relationship with liquidity (r = -0.474; p=0.004) and strong but negative relationship with profitability (r = -0.993; p=0.001). This implied that mortgage investments negatively affect the liquidity index as well as profitability levels of insurance companies. This negated findings by Nyora (2005) who found out that increases in investments in mortgage led to increase in profitability of insurance companies. Analysis of findings indicated the presence of a strong and significant positive relationship (r = 0.973; p = 0.005) between mortgage investment and capital adequacy of insurance companies in Kenya. This supported assertion by McFarlan (2011) who observed that mortgage investment will have each positive and negative effect on firms' performance and that among the potential paybacks are diversifications of money flows.

Table 3: Relationship between bond investment and financial performance

Variable		Liquidity	Profitability	Capital Adequacy	Overall
Bond investment	Pearson Correlation	-.541	-.704	.850	.493
	Sig. (2-tailed)	.006	.004	.008	.007
	N	5	5	5	5

From table 3, overall, the findings indicated the presence of a moderate and significant positive relationship (r = 0.493; p = 0.007) between bond investment and financial performance in insurance companies in Kenya. This implied that bond investment has a significant effect on financial performance of insurance companies. These findings were in line with those by Nyora (2015) who found out that increase in bond investment positively affected the performance of insurance companies. However, the analysis of findings indicated that bond investment had negative relationships with liquidity and profitability. From table 3, bond investment showed moderate but negative relationship with liquidity (r = -0.541; p=0.006) and strong but negative relationship with profitability (r = -0.704; p=0.004). This implied that bond investments negatively affect the liquidity index as well as profitability levels of insurance companies. This was because bond investment is affected by fluctuation in interest rates, a factor that was key in driving the liquidity and profitability of the insurance companies. However, findings showed that there exists a strong and

significant positive relationship (r = 0.850; p = 0.008) between bond investment and capital adequacy of insurance companies in Kenya. This was because bonds investment increased availability of capital in insurance companies as these companies had the capacity to purchase large volumes of bonds.

Table 4: Relationship between equity investment and financial performance

Variable		Liquidity	Profitability	Capital Adequacy	Overall
Equity investment	Pearson Correlation	.240	-.683	.645	.716
	Sig. (2-tailed)	.007	.003	.004	.0023
	N	5	5	5	5

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

From table 4, overall, the findings indicated the presence of a strong and significant positive relationship (r = 0.716; p = 0.0023) between equity investment and financial performance in insurance companies in Kenya. This implied that equity investment had a significant effect on financial performance of insurance companies. These findings were in line with those by Carson and Hoyt (2001) who argued that as equity returns increase, returns on insurer's investment portfolio may also increase and this will improve the performance of the insurer. They also supported findings by Boateng and Jones (2004) who found that the use of equity investment is positively related to the financial performance of firms. However, the analysis of findings indicated that equity investment had a negative relationship with profitability. From table 4, equity investment showed moderate but negative relationship with profitability (r = -0.683; p=0.003). This could be attributable to the fact that that a higher proportion of investment in equities could lead to a higher risk of insolvency if the values of the assets dropped.

Regression Analysis

Relationship between Investment Portfolio and Financial Performance

The researcher attempted to fit a regression model for this study to show the relationship between the independent variables and the dependent variable. Multiple regression analysis was performed and the results are presented in this section.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.855[a]	0.731	0.77	0.7403

The model summary indicated the presence of a positive multiple correlation (R=0.855) between the independent variables and the dependent variable. Further, the R squared value of 0.731 indicated that bond investment, equity investment, mortgage investment accounted for 73.1% of the total variance in the financial performance of insurance companies. Therefore, the researcher observed that the independent variables influenced financial performance.

Table 6: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.045	0.763		3.237	0.001
Mortgage investment	0. 453	0.145	0.041	0.332	0.001
Bond investment	0.493	0.111	0.297	2.128	0.011
Equity Investment	0.716	0.128	0.097	0.749	0.018

From the model coefficients table, the following mathematical model was fitted $Y = 3.045 + 0.453X_1 + 0.493X_2 + 0.716X_3 + e$. From the derived regression model, with all the other factors remaining constant, financial performance in insurance companies in Kenya had a constant value of 3.045. It was also evident that the *B* value of 0.453 supported by a probability value of 0.001 indicated how much of the variation in financial performance could be explained by mortgage investment. In this case, while holding other factors constant, 45.3% of financial performance in insurance companies in Kenya could be explained by mortgage investment. Also the *B* value of 0.493 supported by a probability value of 0.011 indicated how much of the variation in financial performance could be explained by the independent variable, Bond investment. In this case, 49.3% of financial performance in insurance companies in Kenya could be explained by bond investment.The results also showed the regression coefficient for equity investment. The *B* value of 0.716 supported by a probability value of 0.018 indicated how much of the variation in the dependent variable, financial performance, could be explained by the independent variable, equity investment. This meant that 71.6% of financial performance in insurance companies in Kenya was motivated by equity investment.

Table 7: Analysis of Variance showing the effect of the study variables (ANOVA[a])

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.015	3	0.005	.905	0.630[b]
	Residual	.005	1	0.005		
	Total	.020	4			

From the information presented in the ANOVA table, given that the probability of variation (.630) was more than the critical value (.05), then the effect of variability was insignificant. Thus, the regression model was statistically significant in that, all the independent variables put together were significant. This implied that it was a suitable prediction model for examining how mortgage investment, bonds investments and equity investments impacts financial performance in insurance companies in Kenya.

Relationship between Investment portfolio and Liquidity

The researcher attempted to fit a regression model for this study to show the relationship between the independent variables and the liquidity aspect of the dependent variable (financial performance). Multiple regression analysis was performed and the results are presented in this section.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908(a)	.825	.301	.1440506

The model summary indicated the presence of a positive multiple correlation (R=0.908) between the independent variables and the liquidity aspect of the dependent variable (financial performance). Further, the R squared value of 0.825 indicated that equity investment, bond investment, mortgage investment accounted for 82.5% of the total variance in liquidity of insurance companies. Therefore, the researcher observed that equity investment, bond investment, mortgage investment influenced liquidity of insurance companies.

Table 9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.006	.610		0.009	0.099
	Mortgage investment	-1.16	.000	-0.003	-0.004	0.009
	Bond investment	-2.38	.000	-1.204	-1.370	0.004
	Equity investment	3.70	.000	1.064	1.727	0.033

From the model coefficients table, the following mathematical model was fitted: -

$Y = 0.006 - 1.16X_1 - 2.38X_2 + 3.70X_3 + e$. From the derived regression model, with all the other factors remaining constant, liquidity in insurance companies in Kenya had a constant value of 0.006. Holding all the other variables constant, a unit increase in mortgage investment will lead to a 1.16 decrease in liquidity in the insurance companies; a unit increase in bond investment led to a 2.38 decrease in liquidity in the insurance companies; while a unit increase in equity investment led to a 3.70 increase in liquidity in the insurance companies. This implied that equity investment was the most significant factor positively influencing liquidity in the insurance companies followed by mortgage investment and lastly bond investment.

Table 10: Analysis of Variance showing the effect of the study variables (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.098	3	.033	1.573	.516(a)
	Residual	.021	1	.021		
	Total	.119	4			

From the information presented in the ANOVA table, given that the probability of variation (.516) was more than the critical value (.05), then the effect of variability was insignificant. Thus, the regression model was statistically significant in that, all the independent variables put together were significant. This implied that it was a suitable prediction model for examining how mortgage investment, bonds investments and equity investments impacts liquidity in insurance companies in Kenya.

Relationship between Investment portfolio and profitability

The researcher also attempted to fit a regression model for this study to show the relationship between the independent variables and the profitability aspect of the dependent variable (financial performance). Multiple regression analysis was performed and the results are presented in this section.

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996(a)	.991	.965	.0488

The model summary indicated the presence of a positive multiple correlation (R=0.996) between the equity investment, bond investment, mortgage investment and profitability. Further, the R squared value of 0.991 indicated that equity investment, bond investment, mortgage investment accounted for 99.1% of the total variance in profitability of insurance companies. Therefore, the researcher observed that equity investment, bond investment, mortgage investment influenced profitability of insurance companies.

Table 12: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.696	.207		3.364	0.018
	Mortgage investment	-7.02	.000	-0.112	-0.729	0.006
	Bond investment	-3.27	.000	-1.098	-5.548	0.011
	Equity investment	-1.58	.000	-0.030	-0.217	0.008

From the model coefficients table, the following mathematical model was fitted: - $Y = 0.696 – 7.02X_1 - 3.27X_2 - 1.58X_3+e$. From the derived regression model, with all the other factors remaining constant, profitability in insurance companies in Kenya had a constant value of 0.696. Holding all the other variables constant, a unit increase in mortgage investment led to a 7.02 decrease in profitability in the insurance companies; a unit increase in bond investment led to a 3.27 decrease in profitability in the insurance companies; while a unit increase in equity investment led to a 1.58 decrease in profitability in the insurance companies. This implied that mortgage investment was the most significant factor negatively influencing profitability in the insurance companies followed by bond investment while equity investment had a less negative influence on the profitability in the insurance companies.

Table 13: Analysis of Variance showing the effect of the study variables (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.266	3	.089	44.50	.120(a)
	Residual	.002	1	.002		
	Total	.268	4			

From the information presented in the ANOVA table 13, given that the probability of variation (.120) was more than the critical value (.05), then the effect of variability is insignificant. Thus, the regression model was statistically significant in that, all the independent variables put together are significant. This implied that it was a suitable prediction model for examining how mortgage investment, bonds investments and equity investments impacts profitability in insurance companies in Kenya.

Relationship between Investment portfolio and capital adequacy

The researcher also attempted to fit a regression model for this study to show the relationship between the independent variables and capital adequacy. Multiple regression analysis was performed and the results were presented in this section.

Table 14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.990(a)	.980	.920	.1268499

The model summary indicated the presence of a positive multiple correlation (R=0.990) between the independent variables and capital adequacy. Further, the R squared value of 0.980 indicated that the equity investment, bond investment, mortgage investment accounted for 98% of the total variance in capital adequacy of insurance companies. Therefore, the researcher observed that equity investment, bond investment, mortgage investment influenced capital adequacy of insurance companies.

Table 15: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.001	.537		0.002	0.009
	Mortgage investment	5.18	.000	.057	0.274	0.008
	Bond investment	3.26	.000	.711	2.692	0.003
	Equity investment	3.21	.000	.295	1.281	0.008

From the model coefficients table, the following mathematical model was fitted: - $Y = 0.001 + 5.18X_1 + 3.26X_2 + 3.21X_3+e$. From the derived regression model, with all the other factors remaining constant, Capital Adequacy in insurance companies in Kenya had a constant value of 0.001. Holding all the other variables constant, a unit increase in mortgage investment led to a 5.18 increase in capital adequacy of the insurance companies; a unit increase in bond investment led to a 3.26 increase in capital adequacy of the insurance companies; while a unit increase in equity investment led to a 3.21 increase in capital adequacy of the insurance companies. This implied that mortgage investment was the most significant factor positively influencing capital adequacy in the insurance companies followed by bond investment while equity investment has the least influence on the capital adequacy in the insurance companies.

Table 16: Analysis of Variance showing the effect of the study variables (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.788	3	.263	16.44	.179(a)
	Residual	.016	1	.016		
	Total	.804	4			

From the information presented in the ANOVA table 16, given that the probability of variation (.179) was more than the critical value (.05), then the effect of variability is insignificant. Thus, the regression model was statistically significant in that, all the independent variables put together are significant. This implied that it was a suitable prediction model for examining how mortgage investment, bonds investments and equity investments impacts capital adequacy in insurance companies in Kenya.

CONCLUSIONS

The purpose of this study was to establish the effect of investment portfolio on financial performance of life insurance companies in Kenya. From the findings, the study concluded that mortgage investment affected the financial performance of insurance companies as indicated by correlation analysis. Based on the analysis, 45.3% of financial performance of insurance companies in Kenya was explained by mortgage investment. It was also concluded that 49.3% of financial performance of insurance companies in Kenya was influenced by bond investment.

The study also concluded that equity investment affected financial performance of insurance companies in Kenya. The correlation analysis revealed that 71.6% of financial performance of life insurance companies in Kenya was influenced by equity investment. The analysis revealed that 82.5% variations in liquidity, 99.1% variations in profitability and 98% variations in capital adequacy were explained by the independent variables.(Mortgage, Bond and Equity).

In general, the study concluded that bond investment, equity investment and mortgage investment positively influenced financial performance in insurance companies in Kenya. The R-squared value of 0.731 indicated that the independent variables accounted for 73.1% of the

total variance in financial performance of life insurance companies in Kenya. The highest influence was explained by equity investment, followed by bond investment and mortgage investment.

RECOMMENDATIONS

Based on the findings and conclusions drawn from the study, several recommendations were made. Life insurance companies in Kenya should be more proactive to diversify investment portfolios in order to enhance financial performance. Insurance companies should increase the level of investment in mortgage in life insurance companies. However, the management of these assets should be enhanced since it has a high impact on profitability. In addition, more working capital should be invested in mortgage to avoid risks of holding high liquidity funds. This is because when idle funds are kept it will not save life insurance companies of interest cost. The insurance companies in Kenya should expand their budgetary allocations to include adequate financial allocation to portfolio investment. There is also need for insurance companies to embrace equity investment since it has a higher impact on financial performance of life insurance companies in Kenya. In regard to practice, it is also pertinent to note that most studies on financial performance in life insurance sector have reported an average to moderate level of overall financial performance compliance. In view of the utmost importance of investment portfolio in the insurance sector, managers need to be more proactive, innovative and flexible in devising investment portfolios in insurance companies. The need to utilize innovative investment portfolios is essential.

Areas for Further Research

The study sought to establish the effect of investment portfolio on financial performance of life insurance companies in Kenya. Due to sampling errors that might have arisen, further research is recommended on the same topic in other institutions in order to enhance generalizability of the findings. It was also suggested that further research be done on the factors influencing investment portfolio in life insurance companies in Kenya. There is also a need for a further study to establish the perception of employees toward financial performance in insurance companies in Kenya. A further study is also suggested to investigate the role of investment portfolio on investment decision in life insurance companies in Kenya.

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