

Government Securities And Their Effect On Financial Performance Of Insurance Firms In Kenya

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Abstract:

Background: There has been a downward trend in the financial performance of the insurance industry in Kenya despite increased investment in the sector. Against a backdrop of limited pertinent empirical research, the present study seeks to determine the effect of investment in government securities on financial performance of insurance firms in Kenya. The modern portfolio theory and economic value added theory were reviewed and discussed in the context of government securities and financial performance.

Materials and Methods: An explanatory research design, quantitative approach and positivism philosophy were adopted. All the 55 licensed insurance firms were involved in the study with four taking part in the seminar one while 51 were involved in the main study. However, only 31 of these firms had adequately reported on their investment practices and financial performance. A census survey was adopted. A secondary data collection sheet was used to collect data from the published financial reports of the aforementioned insurance firms. The collected data were analyzed with the aid of the Statistical Package for Social Sciences. Descriptive statistics and inferential statistics were employed in the analysis. Tables and graphs were used to present the results of the analysis.

Results: According to the study findings, government securities had statistically significant effect on the financial performance of insurance firms. The null hypothesis was rejected and its alternative taken to be true.

Conclusion and Recommendation: It was concluded that government securities substantially affected the profitability of insurance firms. The study recommended that if insurance firms decide to invest in government securities, they should consider doing so without having any other investments.

Key Word: Financial performance, Government securities, Insurance Firms, Investments.

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I. Introduction

Background of the study

Investment involves putting a given asset at risk (of reducing its value or losing it altogether) with the object of realizing positive returns after a specified period of time. Investments are associated with varying degrees of risk from zero to very high risk¹. Although assets which are invested fall under two categories, that is, real assets and financial assets, the present study will focus on the latter. Insurance firms fall under the category of institutional investors. Unlike individual investors, insurance firms enjoy benefits occasioned by economies of scale¹. Investment practices are strategies or measures employed by a firm with the aim of realizing a return to its shareholders or investors. Albeit the fact that there may be an array of the aforementioned practices, the present article was concerned with investment in government securities. Government securities encompass treasury bills or bonds. These are characteristic of government loans and constitute short-term treasury bills and medium- or long-term treasury bonds².

The insurance companies in the United States have increased the scope of their investment strategies by incorporating practices that are less liquid and more complex. According to global insurance market report by the International Association of Insurance Supervisors (IAIS), the foregoing is informed by the prevailing low interest rate environment. This notwithstanding, the composition of asset portfolio of the US insurance industry have remained largely the same for the period between 2010 and 2017. Investment in bonds recorded the highest proportion (67.0%) of the total cash and invested assets by the end of 2017³.

In Ethiopia, the financial and insurance sectors are highly restricted and also subject to a strict regulatory regime⁴. Although there are several studies which have addressed the concept of financial performance of the insurance industry in the country, they have fallen short of particularly examining the said performance relative to investment practices. For example, previous studies have delved into corporate governance and financial performance, and determinants of financial performance in the country⁵.

Apparently, the insurance sector in Kenya has recorded consistent growth since 2013 as reflected in revenue premium as well as capital investments. For instance, the gross written premiums increased from almost USD 1,000 million in 2013 to about USD 1,300 in 2019⁶. The total equity of the insurance sector in Kenya was Ksh 163.66 billion by the second quarter of 2020 which was a significant increase from Ksh 157.83 billion and Ksh 151.78 billion reported over the same quarter in 2019 and 2018 respectively. This was according to the insurance industry report by the Insurance Regulatory Authority (IRA) which also indicated that the total assets of the insurance sector increased from Ksh 624.59 billion to Ksh 672.13 billion and to Ksh 738.72 billion in 2018, 2019, and 2020 respectively⁷. These statistics reflect the consistent growth of the insurance industry in Kenya. In particular, investments made by insurance firms in the country by the second quarter of the years 2018, 2019, and 2020 amounted to Ksh 509.69 billion, Ksh 556.32 billion, and Ksh 618.04 billion respectively. Specifically, the sector recorded an 11.1% increase between the years 2019 and 2020⁷.

Statement of the problem

Despite the consistent increase in equity from a low of about USD 330 million in 2013 to a high of about USD 560 million reported in 2019, the life insurance industry witnessed fluctuating ROE over the same period. The highest ROE (25%) was reported in 2013 while the lowest (about 3%) was recorded in 2018⁶. Statistics also indicate that the financial performance of the local insurance industry has been on a downward trend. The profitability of the industry, for instance, dropped between the years 2019 and 2020 where ROA and ROE recorded negative deviations of 0.7% and 1.6% respectively⁷. The drop in financial performance of the insurance industry was against increased investment in the sector from Ksh 556.32 billion in 2019 to Ksh 618.04 billion in 2020.

Furthermore, a report on listed insurance firms in Kenya for the year 2020 indicated that the insurance core business is still unprofitable. This is in spite of the combined ratio increasing to 126.8% in the second quarter of 2022 compared to 146.6% reported at the end of the second quarter of the preceding financial year⁸. This raises the question of why the increased investment has, ironically, resulted in a decrease in the financial performance of the insurance sector. The weighted financial performance of five of the licensed insurance companies in Kenya as demonstrated by the ROE and ROA has dropped as well. In respect of the two financial performance indicators, the insurance firms reported a decline of 11.9% and 3.3% respectively between FY 2019 and FY 2020⁹.

The empirical studies hitherto conducted in Kenya have fallen short of illustrating the nexus between investment practices and profitability of licensed insurance firms. For instance, one of the reviewed local studies examined the effects of financial factors on profitability of general insurance firms operating in Kenya but did not focus on investment practices¹⁰. A related study observed that capital structure predicted profitability of insurance firms listed at the NSE¹¹. However, the study did not relate profitability to investment practices. Although investment portfolio and financial performance of life insurance companies in Kenya have been examined, investment practices particularly in licensed insurance firms in the country have not been addressed¹². The foregoing reflects research gaps relative to investment in government securities and financial performance of the aforementioned firms. This coupled with the declining financial performance in the local insurance industry necessitated this study.

General objective

To examine the effect of investment in government securities on financial performance of insurance companies in Kenya

Research hypotheses

H₀: There is no significant effect of investment in government securities on financial performance of insurance companies in Kenya.

Modern portfolio theory

The modern portfolio theory, abbreviated as MPT, was proposed by Harry Markowitz in 1952 and advanced in 1959^{13, 14}. The theory states that there exists no perfect investment; rather, the priority of modern investors is to formulate a strategy that guarantees high returns as well as relatively low risk. The theory came up with a formula that enables investors to mathematically make tradeoff between reward expectations and risk tolerance with the view of arriving at the ideal investment portfolio¹⁵.

The theory is premised on the argument that the goal of every investor is to maximize return irrespective of risk level; and that portfolio diversification can be employed to reduce risk through individual and unrelated securities¹³. The theory holds the assumption that all investors are averse to risk where they opt for portfolios that are associated with less risk for a particular level of return. Based on this assumption, rational investors will only invest in high risk portfolios when they are guaranteed of a much bigger reward (return on investment)¹³.

The theory holds that there exists two categories of risks, that is, systematic and unsystematic risks. The former are market risks which are difficult to minimize through diversification. A case in point is when the entire market and economy will demonstrate losses that have negative effect on investments. Unsystematic risks are specific to individual stocks or investments and allows for diversification as the number of stocks or investments increases. One way of reducing risks of individual assets is for investors to combine diversified asset portfolio¹⁶.

This theory can be applied to demonstrate how insurance firms can select investment portfolios that can maximize their returns while at the same time reducing risks. The investment options available to them, in the context of the present study are government securities, property investment, term deposits, and listed equities. These investment practices are anchored to the MPT where insurance firms should advisably adopt practices that are deemed to maximize returns and reduce risks individually, and also consider merging two or more practices as long as the aforementioned objective is realized.

Economic value added theory

The economic value added (EVA) theory was developed by Stern Stewart & Co. in 1982. The aim of developing EVA was to promote value maximization behaviour among corporate managers¹⁷. EVA is described as net income after tax deductions less cost of capital. In order to compute EVA, three different inputs are required. These are Net Operating Profit after Tax (NOPAT), weighted average cost of capital (WACC) and invested capital (C) (Patel & Patel, 2012). NOPAT describes the total earnings from the operational activities are deducting taxes. WACC refers to the sum of cost of equity and cost of debt. It describes the value of the overall funds¹⁸.

When the value of EVA is positive, it implies that the company has the ability to create economic value added and rate of returns. In other words, operating profit exceeds the cost of capital. Essentially, the theory holds that a company should aspire to increase the value of EVA. Economic value added is arguably the accounting equivalent of net present value where the shareholders' wealth is increased. Yet, there are crucial concerns regarding the theory. Importantly, EVA is altered by the aspect of depreciation, and it may prompt complex adjustments. Other weaknesses of the model are the fact that it is considered an absolute measure, it is a short term measure as well as having low correlation with the stock price¹⁹. The application of the EVA theory in this study is informed by the assertion that, it is considered as the best measure of financial performance²⁰. Therefore, the concepts of the EVA will be employed to understand, interpret and determine the financial performance of insurance firms in Kenya.

Conceptual framework

A conceptual framework describes study variables presented diagrammatically or in narration, and how they are presumed to relate. The study adopted the conceptual framework illustrated in Figure 1.

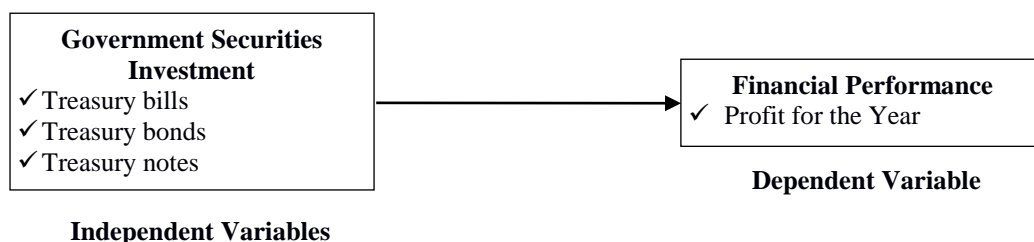


Figure 1: Conceptual Framework

According to the conceptual framework shown in Figure 1, there are two distinct categories of study variables: Independent, moderating, and dependent constructs. Independent variable constituted government securities investment while financial performance was the dependent variable. Each of these variables was operationalized using measurable indicators. The framework holds that there existed a relationship between government securities and financial performance.

Empirical literature review on government securities and financial performance

An empirical study which focused on Indonesia was concerned with how financial performance is measured²¹. A desk research was adopted to obtain the pertinent data from relevant articles where the interest was in financial statements. According to the study financial performance is a yardstick of the ability of a firm to create profit and generate revenue. The study also revealed that financial performance can be measured using various ratios including profitability ratios, efficiency ratios, leverage ratios, liquidity ratios, and solvency ratios.

It was concluded that financial performance could be benchmarked using profitability, solvency, liquidity, efficiency, and leverage.

In Nigeria, an empirical study was conducted on the innovation of government bonds and the growth of emergent capital market. The objective was to analyze the effect of government bonds on the development of the capital market in Nigeria. Panel data for the period between 2003 and 2019 were used. The study findings indicated that the bonds issued by the Federal Government of Nigeria (FGN) had a statistically significant influence on the growth of the country's capital market. The study recommended that there should be an improvement on the coupon of the government bonds²².

A study on the effect of Treasury bill rates on the development of the capital market was conducted with a focus on the NSE²³. The objective was to examine the effect of Treasury bill rates on the capital markets development in the NSE. The study relied exclusively on secondary data which covered the years from 2015 to 2019. The findings of the study indicated that the development of the capital market was negatively affected by the Treasury bill rates. However, the effect was not statistically significant. The study recommended increased investment in the treasury bills by both individual and corporate investors.

Using empirical evidence from Kenya, a study was conducted to evaluate the determinants of financial performance of insurance firms²⁴. The objective was to examine the aspects that influence financial performance of insurance companies. A sample of 53 insurance firms offering both general and life insurance were included in the study. Panel data for the period from 2009 to 2018 were used in the study. It was revealed that the size of the firm influenced its financial performance. It was also established that insurance companies with high leverage tended to perform better financially as opposed to those that were less geared.

II. Material And Methods

Research design

The study adopted an explanatory research design. This was founded on the fact that the study sought to establish how the various investment practices explained the financial performance of insurance companies in Kenya. In addition, quantitative approach was adopted. This was founded on the fact that the collected data were numerical or quantifiable²⁵. This is in addition to positivism philosophy which the study employed. Positivism philosophy holds that knowledge is premised on natural phenomena. Additionally and in tandem with the present study, this philosophy requires quantitative approach to research study where validity, reliability and representativeness are tenets that guide the entire research²⁶. Deductive research approach was as well adopted where the study sought to draw inferences on the investment practices and profitability of the aforementioned firms.

Target population

The target population is defined as a group of individuals or participants drawn from the general population and who possess particular characteristics of interest and relevance with regard to a given study²⁶. All the fifty-five (55) licensed insurance companies in Kenya (Appendix II) were targeted. Accessible population is described as the final group of participants from which data is collected by surveying either all its members or a sample drawn from it²⁷. In this respect, the stated 55 insurance firms constituted the accessible population. Therefore, both the unit of analysis and unit of observation were the same.

Census survey

Due to their relatively small number (55 insurance firms) a census design was adopted where all of them were projected to take part in the study. A census is described as a complete enumeration of objects, subjects or entities in a study population²⁸. Essentially the unit of observation was the same as the unit of analysis. The census approach enhances reliability and generalizability of the study findings. The foregoing are some of the reasons which justified the choice of a census design.

Research instrument

The present study was restricted to secondary data. These data refer to dataset obtained from a documented source where it is purposed to have the same reused²⁹. The said data were collected from secondary sources. A structured data collection sheet was used in data collection. The sheet was structured in a manner that allowed collection of data with regard to investment in government securities financial performance.

Data analysis

Prior to analysis, the collected data were screened with the view of addressing outliers that could have been occasioned by incomplete or inappropriately filled questionnaires. The data were then analyzed using the Statistical Package for Social Sciences (SPSS) Version 25. Descriptive statistics in form of range, sum, mean, standard deviation, skewness, and kurtosis were used. Inferential statistics will include Pearson's Product

Moment Correlation Coefficient (PPMCC), simple linear regression, and multiple regression analyses. Inferential statistical analyses were carried out with the assumption that there was linear relationships between investment in government securities and financial performance; the data were normally distributed; the data were homoscedastic; and that there was no or minimal autocorrelation in the collected data. Null hypotheses was tested at p-value = 0.05 using the t-statistics. The following regression model was adopted.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where

Y = Financial performance

β_0 = Constant

X_1 = Investment in government securities

ε = Precision level

β_1 = Regression coefficients of independent variables

The results of the analyses were presented in tabular and graphical forms.

III. Result

Descriptive statistics on government securities

The study examined various government securities that insurance firms in Kenya invested in. These included T-bills, T-bonds, and T-notes. The descriptive statistical results to this effect are presented in Table 1.

Table 1: Descriptive statistics for government securities

	Range	Sum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
T-Bills (Ksh)	105961186	2389595870	5357838.27	13489264.554	4.558	.116	23.153	.231
T-Bonds (Ksh)	6627176	96074977	475618.70	1027947.191	4.135	.171	18.655	.341
T-Notes (Ksh)	11347543	118864275	579825.73	1243192.844	5.993	.170	45.505	.338
Government Securities (Ksh)	107446936	2599869973	5349526.69	13317337.940	4.598	.111	23.911	.221

According to the results shown in Table 1, it is apparent that, inasmuch as the insurance firms in Kenya invested in various government securities, notably T-bills, T-bonds, and T-notes, the former was comparatively the most predominant investment (sum = Ksh 2.390 billion). The Treasury bonds constituted the least investments in government securities where the insurance firms averaged Ksh 475,618.70 in that category of investments. Cumulatively, the insurance firms had invested Ksh 2.60 billion in government securities over the 10 years period. The skewness of the respective government securities was greater than 1.0 (T-bills = 4.558; T-bonds = 4.135; T-notes = 5.993). This was interpreted to mean that distribution of data regarding the aforementioned government securities was right skewed. In other words, the distribution of respective data was positively skewed. This positively skewed distribution was attributed to the presence of lower bounds that were extremely low relative to the rest of the data. In support of this observation, the range of data in respect of all the three types of government securities was comparatively big. The range values of all these investments surpassed their respective mean values, hence the observed positive skewness. Similarly, the data in respect of the government securities were observed to have a distribution that was too peaked (Kurtosis > 2.0). The presence of excess kurtosis implied that these government securities were associated with ‘kurtosis risk’, that is, likelihood of witnessing losses occasioned by rare events. This was exemplified by the COVID-19 which was, apparently, a rare occurrence.

Descriptive statistics on financial performance

The financial performance of the insurance firms was measured using profits for the year for the period from 2013 to 2022. The results are illustrated in Table 2.

Table 2: Descriptive statistics for financial performance

	Range	Sum	Mean	Std. Dev	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Financial Performance	6309911	121079381	295315.56	630665.113	2.315	.121	11.408	.240

According to the results shown in Table 2, the insurance firms cumulatively recorded Ksh 121.08 million profit for the year. It is important to note that the range between the lowest and highest reported profits was considerably small (range = Ksh 6.31 million; std dev = Ksh 630,665.11). The distribution of data in respect of financial performance was minimally positively skewed (skewness = 2.315). However, the distribution of the said data was considerably leptokurtic (kurtosis = 11.408 > 3.0). The results depicted significantly high level of risks that the insurance firms are obliged to contend with in order to realize profits.

Correlation analysis

The Pearson’s Product Moment Correlation Coefficient (PPMCC) was applied to analyze the relationship between respective investment practices (government securities, investment property, term deposits, and listed equities) and financial performance (profit for the year). The PPMCC was employed, as opposed to other types of correlation, because the collected data were continuous. Indicatively, PPMCC is advisably used to establish linear relationship between two variables whose data are normally distributed³⁰. The results of PPMCC are as shown in Tables 3.

Table 3: PPMCC of financial performance against government securities

		Financial Performance
Government Securities	Pearson Correlation	.393**
	Sig. (2-tailed)	.000
	n	404

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

The results shown in Table 3 indicate that there exist a positive, moderately strong, and statistically significant correlation between government securities and financial performance of insurance firms ($r = 0.393$; $p = 0.000 < 0.05$). Interpretively, as the insurance firms increased their investment in government securities, there was likelihood that their financial performance (reflected in their profits for the year) would increase moderately and substantially.

Simple linear regression analysis

Simple linear regression was employed to analyze the effect of respective investment practices (government securities, investment property, term deposits, and listed equities) on the financial performance of insurance firms in Kenya. The relevant results are presented in Tables 4, 5 and 6.

Table 4: Model summary of financial performance against government securities

Model	r	r Square	Adjusted r Square	Std. Error of the Estimate
1	.393 ^a	.155	.153	583108.040

a. Predictors: (Constant), Government Securities

According to the results shown in Table 4, the coefficient of determination ($r^2 = 0.155$) indicated that government securities could explain 15.5% of variation in the profits for the year in respect of the insurance firms. The remaining proportion (84.5%) of variation in financial performance (measured using profits for the year) could be attributed to other factors besides government securities.

Table 5: ANOVA of financial performance against government securities

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25033485792330.860	1	25033485792330.860	73.625	.000 ^b
	Residual	136686024695742.110	402	340014986805.329		
	Total	161719510488072.970	403			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Government Securities

The results of F-statistic shown in Table 5 ($F_{1, 402} = 73.625$; $p = 0.000 < 0.05$) were found to be statistically significant. The results meant that there existed a linear relationship between financial performance and government securities. Therefore, the simple linear regression model linking the two constructs ($Y = \beta_0 + \beta_1 X_1 + \epsilon$) could be used to establish the effect of government securities on financial performance of insurance firms in Kenya as shown in Table 6.

Table 6: Regression coefficients of financial performance against government securities

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	200818.197	31275.443			6.421	.000
	Government Securities	.018	.002	.393		8.580	.000

a. Dependent Variable: Financial Performance

According to the results shown in Table 6 ($Y = 200818.197 + 0.018X_1$), it was established that in order to increase financial performance (profits for the year) by a single unit, investment in government securities was required to be increased by 0.018 unit while other factors were held constant. On the same breadth, it was revealed that the effect of government securities on financial performance of insurance firms in Kenya was statistically significant ($t = 8.580$; $p = 0.000 < 0.05$). Consequently, the respective null hypothesis which stated that, 'There was no significant effect of investment in government securities on financial performance of insurance companies in Kenya' was rejected, and the alternative hypothesis taken to be true.

IV. Discussion

High kurtosis, as witnessed in this case of investment in government securities by insurance firms in Kenya, meant that investors (insurance firms) would potentially experience extreme price fluctuations when investing in these securities³¹. Use of profits as a measure of financial performance of the insurance firms was in tandem with the results of a study conducted in Indonesia that indicated that profitability ratios were some of the measures of the aforesaid performance²¹. The results led to the conclusion that, government securities were of substantial importance to the financial performance of the aforementioned companies. These results were in concurrence to the findings of a past study conducted in Cape Verde which indicated that government debt securities were an apt way of enhancing the long-run profitability of commercial banks³².

V. Conclusions and Recommendations

The study inferred that T-bills were the form of government securities most preferred by insurance firms to invest in. Government securities were concluded to be quite risky although they were bound to bring about relatively high returns. The study further drew the conclusion that, government securities were very substantial to the financial performance of insurance firms in Kenya. It was also inferred that it was more rational for the insurance firms to decide to invest in these securities only or omit them altogether in the event they decide to invest in other options if they wanted to realize substantial enhancement of their financial performance.

The insurance firms are persuaded to consider various government securities, in addition to the T-bills and T-bonds that they already invest in, as a way of enhancing their financial performance. They should also consider increasing the amount of investment in these securities.

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