# EFFECT OF PORTFOLIO FRAMEWORK ON THE FINANCIAL PERFORMANCE OF GENERAL INSURANCE FIRMS IN KENYA

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# A PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

JULY, 2022

# DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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# LIST OF ABBREVIATIONS

AKI	Association of Kenya Insurers
ANOVA	Analysis of Variance
ROA	Return on Assets
IRA	Insurance Regulatory Authority
NSE	Nairobi Securities Exchange
ROE	Return on Equity
МРТ	Modern Portfolio Theory
САРМ	Capital Asset Pricing Model

**EIOPA** European Insurance and Occupational Pensions Authority

# ABSTRACT

With the advent of the COVID-19 pandemic, general insurance companies face the risk of ultimate closure or acquisition if they fail to generate an adequate rate of return to their shareholders, hence a need for strategy development and implementation. Among the viable investment strategies, asset allocation is significant. The portfolio framework of the insurance firm evolves as assets are allocated. The study's objective entailed examining how Kenyan general insurance companies' portfolio framework impacts their performance from a financial perspective. The theory anchored in the current study was Modern Portfolio Theory by Harry Markowitz, which holds that investors could achieve maximum diversification benefits, hence better financial performance, with a proper asset mix in their portfolio framework. By spreading out the risk linked with a particular asset over a collection of assets like government securities, term deposits, stocks, and real estate, such that the mean portfolio risk value is inferior to total risk per asset, investors can reduce unsystematic risk and the financial impact of macroeconomic variables. This spreads the risk per asset over the investor's asset selection, as supported by CAPM and APT. The study adopted descriptive and correlational research designs because they helped enhance the prediction and explanation of relationships among the selected variables. 49 Kenyan registered insurance entities made up population targeted by the study. The sample size comprised 31 general insurance firms that operated between 2016 and 2021. The research sought to determine whether investments in government securities, stocks, term deposits, and real estate had a favorable as well as significant influence on performance financially. A positive and considerable influence was established between financial performance and government securities, stocks, and term deposit investments. A negative and insignificant impact was established between financial performance and investment in real estate. The study hypothesized whether there was a positively significant outcome between leverage and performance financially. Leverage were found to have an immaterial and adverse association with how the firms perfomed financially. The study hypothesized whether there was a positive effect between liquidity and performance financially. The findings indicated that liquidity had an association that was positive with performance financially. The established recommendation was that general insurance companies should be regulated and encouraged to diversify their asset classes in their portfolio framework by the Insurance Regulatory Authority, by increasing investments in government securities, stocks, and term deposits. However, due to the negative association of performance financially with real estate, it recommends increased due diligence and close performance monitoring of real estate investments. The report suggests that the Insurance Regulatory Authority reassess the leverage restrictions of insurance firms in order to reduce excessive borrowing and the inability to repay debt due to the negative link between leverage and how the firms perfomed financially. Additionally, the study provided a recommendation that the The Insurance Regulatory Authority should also implement policies governing the liquidity positions that all general insurance organizations must have in order to reduce the risk of liquidity and eventual closure because liquidity had a positive correlation with how the firms perfomed financially.

#### **CHAPTER ONE: INTRODUCTION**

#### 1.1 The Study's Background

Like any other business, general insurance entities aim to enhance their profitability. One method that generates earnings over and above the premiums charged is from returns of their investments. A collection of securities held or managed by an investor or investment professional is referred to as a portfolio. Bonds, stocks, real estate, and term deposits are among the assets in a portfolio expected to preserve their value. Having a portfolio acts as both an investment framework and a risk management tool known as diversification (Chen et al., 2018).

Researchers have made significant contributions to an institution's portfolio framework and its management impact on financial performance. Modern Portfolio Theory by Harry Markowitz suggests that an investor could achieve maximum diversification benefits with a proper asset mix in the portfolio framework (Markowitz, 1991). The assets could be assessed based on their degree of risk and return and the tolerance level of the investor. Additionally, managing the portfolio framework requires a sound strategy to mitigate adverse losses.

The year 2020 caught the insurance industry off-guard with the advent of the COVID-19 global pandemic. People's health was in jeopardy, and unprecedented global responses from governments such as lockdowns and business closures negatively impacted insurers' financial performance and claim experience (Khan et al., 2022). Some regulators, like the EIOPA, advised insurance companies to exercise prudence and refrain from paying dividends and beginning buyback programs if their profitability declined after 2020 as a result of an increase in claims payments (OECD, 2022). The Australian Prudential Regulation Authority (APRA) estimated that earnings for the general insurance sector would decline in 2020 and may potentially be negative for life insurance (OECD, 2022). With the vaccine's introduction in 2021, financial markets have slowly recovered hence better prices of equity and other investments for general insurers.

Several nations, including Kenya, saw a decline in the cost of motor insurance premiums, thus pegged way for alternative investments such as insurtechs and liquid financial instruments in their portfolio framework. Despite worries about COVID-19 variants, general insurers in Kenya anticipate a quicker economic recovery and increased

investments in digital technologies in 2022. Shareholders look upon general insurance firms to fulfill their primary goal: wealth maximization. Consequently, insurance firms face the risk of ultimate closure or acquisition if they fail to generate an adequate rate of return to their shareholders, hence a need for strategy development and implementation. Among the viable investment strategies, asset allocation is significant. The portfolio framework of the insurance firm evolves as assets are allocated. A well-structured portfolio framework can boost a company's profitability and provide more outstanding dividend payments to shareholders. Better returns imply that the business is performing well financially. Moreover, other stakeholders such as creditors and banks look at the general insurance entities' profitability to assess their financial performance, ability to meet debt obligations, and overall going-concern capability. Therefore, it is essential to research how the portfolio framework of general insurance firms in Kenya affects their financial performance.

# 1.1.1 Framework of the Portfolio

A portfolio is a group of financial assets that include bonds, equities, currencies, commodities, and other cash-related equivalents and their fund counterparts, such as closed, exchange-traded, and mutual funds (Chen et al., 2018). According to Jordan et al. (2021), a portfolio refers to a set of investors' financial and material assets, such as stocks and debentures. Joseph and Varghese (2017) state that a portfolio is an assets' collection or instruments used in investing dependent on the revenue made by an investor, budget, and expedient time horizon. A portfolio framework is a structure established by an investor to serve as a compass for determining the viable investments or projects to indulge in and generate maximum returns based on the tolerable risk level. Making judgments on investment strategies, establishing a reliable asset mix, and aligning investments to personal or organizational objectives are all part of managing a portfolio framework.

An increase in the prevalence of any type of risk is translated to a higher return. This concept calls for optimal use of resources and time value of money consideration. Returns to general insurance companies in Kenya originate mainly from premiums. Thus, to maximize these premiums, risk management is essential (Cheluget, 2018). A necessary part of managing risk is reviewing the portfolio framework. Well-managed asset classes in

the insurance company's portfolio may produce viable returns. Therefore, a portfolio framework is vital for Kenyan general insurance organizations.

Osewe (2021) used the current ratio, computed size from total assets of a firm' natural logarithm value, and the Herfindhal-Hirschman index to operationalize a portfolio framework based on each investment's proportion to total assets of investment firms in Kenya and the effect on their performance financially from 2010 to 2019. Dhiab (2021) utilized leverage ratio, liquidity ratio, size, and a company's age to assess determinants of Saudi insurance firms' profitability from 2010 to 2018. Theuri (2021) used investments in government securities, property, money market, and quoted ordinary shares to operationalize the portfolio framework based on investment choices and their impact on Kenyan insurance companies' financial performance from 2013 to 2019. For this study, the portfolio framework will be measured jointly based on the proportion of investments that make up general insurers' portfolio, that is, government securities, stocks, term deposits and real estate, and leverage and liquidity.

## **1.1.2 Financial Performance**

Financial performance is the accomplishment of the business's financial performance during a specific time period, including the collecting and distribution of funds, as determined by capital sufficiency, liquidity, solvency, efficiency, leverage, and profitability (Fatihudin, 2018). Malik (2014) defines financial performance as assessing a company's financial position within a given time frame to determine its efficiency in resource utilization. Financial performance, according to Dalayeen (2017), is the assessment and interpretation of a company's financial circumstances and activities as well as the comparison and analysis of accounting data. The financial performance of a corporation means how efficiently and effectively an organization utilizes the available assets from its primary business mode to create revenues in subjective measures.

Monetary values are attached to examining how well an investor is financially performing. Financial performance is the drive to maximize shareholders' wealth, among other concerns such as the future dividend policy and earnings (Abbasi & Malik, 2015). Profit has been a vital segment in measuring the financial performance of businesses. Without the profit after taxation, it would be difficult to allocate funds to preference and ordinary shareholders. Moreover, the firm's capability to plow back into the money left for additional investments and projects would be futile. Encountering consistent losses could result in a critical evaluation of managerial efficiency, stock management, and debt repayment strategies.

There are various financial ratios used to gauge financial performance. These are profitability ratios and liquidity ratios (Kenton, 2003). Some of the factors affecting the performance of non-life insurers from a financial perspective include the insurance firm's size, capital structure, a firm's age, leverage, and liquidity. Adhiambo (2021) used Return on Assets (ROA) to quantify how Kenyan insurance firms performed financially between 2011 and 2020. In his investigation of the connection between Kenyan general insurance companies' capital sufficiency and financial performance, Odongo (2021) used Return on Investment to measure financial performance between 2017 and 2019. Morara and Sibindi (2021) used ROA based on general insurance data from 2009 to 2018 to identify the variables that affected the performance of Kenyan insurers from a financial viewpoint. The ROA will be used in the current study to assess the financial performance of general insurers.

#### **1.1.3 Portfolio Framework and Financial Performance**

An efficient investment portfolio improves the returns of a company. Risk diversification achieved through efficient portfolio composition increases the earning ability of a portfolio (McClure, 2017). This increase in returns contributes to the sound financial performance of a company. Alternatively, low returns contribute to the poor financial performance of a firm. According to Onsongo, Muathe, and Mwangi (2020), poor financial performance result from inadequate management of financial risks. Firms should have a proper portfolio framework to hedge against financial risks and enhance performance financially.

Markowitz's portfolio theory examines the impact of adding an asset or asset class into a given portfolio. Modern Portfolio Theory brings up the idea that for an investor to maximize expected returns for a specified risk limit, proper asset allocation is vital to ensure that different kinds of financial assets are present in the portfolio framework instead of only one type (Markowitz, 1991). General insurance corporations

consequently tend to diversify their financial assets targeting a goal to reduce the risk of the overall portfolio framework. The association of returns and the assets have to be considered before diversification. Accordingly, the diversified portfolio framework improves the overall profitability of the firm.

Kimeu (2015) established a positive connection between portfolio framework and the performance of the firm financially. Yet, according to the research, he demonstrated that stocks and overall profitability had an inverse relationship between them. Concerning the above projection, this study expects the portfolio framework and financial performance of a firm or an investor to be positively related. An effective portfolio framework brings about positive financial performance and vice versa.

#### **1.1.4 Kenyan General Insurance Entities**

The industry related to insurance activities can be backdated to the colonial era when agriculture was the primary revenue driver. Farming in Kenya centered on cash crops, and British settlers mitigated the risk by taking the necessitated insurance cover (Throup, 1988). Over time, the industry has evolved and experienced exponential growth, calling for proper monitoring and evaluation. Currently, the IRA and the insurance Act Cap 487 regulate the industry. Additionally, the industry operates under AKI, whose main aim is to uphold cautious business practice, sensitize the public and increase the policyholder uptake. Their report indicates that the umbrella body's efforts have borne fruit. It is estimated that the industry has achieved an annual compounded growth of 10% in revenue, which translates to KES 209.7 billion in premium income from underwriting risk as of the end of 2017, which was an upside of 60.53% compared to the year 2013 at KES.131.1 billion.

On the other side, the COVID-19 epidemic affected the global economy in 2020. The epidemic significantly impacted insurers' liquidity, causing claims to be delayed. The pandemic continues to influence the insurance industry, primarily through lower capital market returns, premium reductions, and a spike in insurance claims in some lines of business (IRA 2020). The restrictions on transportation had a substantial influence on companies such as automobile, aviation, marine, and travel insurance, among others (IRA 2020). The epidemic has brought to light the urgent need for a paradigm shift in the

insurance industry's whole chain of operations, including their portfolio framework. Competitors in the market include intermediaries (agents, brokers, medical insurance providers) and insurance service providers such as motor investigators, risk assessors, insurance surveyors, loss surveyors, risk managers, and claims settling agents (IRA 2017).

Despite the refreshed growth in general insurance organizations, some other setbacks threaten their competitiveness. These include market volatility of prices of the non-life assets products, highly claimable assets that may cause loss-making arising from the shortterm nature policy, high taxation levels, and inappropriate target market. General insurance firms can carefully prioritize their investments by understanding a portfolio framework. Moreover, they can consider additional factors such as taxation, time value of money, leverage, and liquidity before venturing into diverse investments to enhance their financial results. If not adequately addressed, they may derail the sector from reaching its full potential.

#### **1.2 Problem linked to the Research**

A portfolio framework improves an investor's asset selection capability, which reduces the risk of choosing loss-generating investments. When general insurance firms can apply the knowledge gained from portfolio framework creation, they can increase their performance financially. The nature of the relationship between portfolio, various investments, and their diversification and their effect on financial performance have been researched and discussed. However, the link between portfolio framework and financial performance has not been sufficiently addressed.

Several international studies have been done to depict any linkages between investment and the financial viability of these firms, with mixed results. Take the case of Lamichhane (2021), who studied the outcome of diversifying to a variety of investment classes on the performance of commercial banks in Nepal financially. The research established a negative connection between investments in real estate and the ROA and ROE of companies but a positive association with investments in corporate sector, bonds, government securities and in banks from foreign regions. This is dissimilar to Hailu and Aassew (2018), who reviewed the impact of investment diversification on the performance of commercial banks in Ethiopia financially and obtained a positive relationship between investments and performance. In Saudi, Dhiab (2021) found that ROA had no significant association with liquidity and size. Correspondingly, Derbali and Jamel (2018), who focused on elements of profitability in Tunisian insurance companies, stated that liquidity was insignificant. Nonetheless, Abebe and Abera (2019) examined the factors of financial performance in the Ethiopian Insurance market and found that liquidity and size were the most critical determinants of the financial health of insurance corporations. In the above studies, there are varying results on the components that make up a portfolio framework.Additionally,the studies have not adequately connected the overall portfolio's framework effect on financial performance.

Locally, work has been done on how investments affect organizations' financial viability in the insurance industry. Theuri (2021) examined how portfolio investment choices affect the performance of Kenyan insurance firms from an economic viewpoint. The work demonstrated that portfolio investment in quoted shares, real property, money market, and government securities had an optimistic and statistically significant connection with profitability. Other studies in Kenya include Ombima & Njiru (2018), who evaluated how investment portfolios impacted how life insurance entities financially performed; both studies portrayed a positive link for both investments and the performance of the companies financially.

The quoted local researchers focused on the insurance industry as a whole. Most of them provide conflicting results, with some revolving from negative to positive. There is insufficient research on general insurance entities, specifically in Kenya. Additionally, while most of the local studies seem to agree that there exists correlation with a positive value between investments and the how profitable the insurance entities are, but results on portfolio framework components, that is, stocks, bonds, and real estate, among others, remain mixed. The local studies mentioned have not satisfactorily established an association between portfolio framework as a whole on financial performance. As such, this research bridged these existing gaps by providing the solution to the research problem: What is the effect of the portfolio framework on the financial performance of general insurance firms in Kenya?

#### **1.3 Objective of the Research**

The aim of this study was to establish the effect of portfolio framework on the financial performance of general insurance companies in Kenya.

# 1.4 Value pertaining to the Study

It is hoped that the study findings will be of benefit to regulatory authorities, investment managers, financial analysts, academicians, and researchers.

The findings established by this research would hopefully benefit regulatory authorities, including the IRA and the Central Bank of Kenya, who are the key regulators in the insurance industry. They could use this to ensure fairness in the industry by assessing the feasibility of the existing investment regulations. It could give them a multidimensional view of the industry's financial performance and formulate policies that enhance the practice of non-life insurance.

The insurance firms' managers would hopefully benefit from utilizing the research outcomes to ensure that they have the proper portfolio framework for their firms that could improve the overall performance and increase their penetration ratio in the market.

Financial analysts could use this study's findings to advise investors appropriately to make informed investment decisions because they would have a vast knowledge of the market and the industry performance. By comparing various companies in the industry, one could know what portfolio combination choices to invest in.

It is also hoped that the findings from this study would be of use as references by academicians and researchers as they undertake their research and provide new insight into the finance field, primarily in portfolio management. It would hint at areas for further study where these scholars could broaden their knowledge base.

#### **CHAPTER TWO: LITERATURE REVIEW**

## **2.1 Introduction**

This section theoretically surveyed the framework and reviewed the empirical reviews projected on the significance of the portfolio framework on how general insurance entities financially perform in Kenya. The significant areas of focus included the theories of portfolio framework, empirical studies- both local and international, factors that influenced how general insurance companies financially performed, and the research gap.

#### **2.2 Framework linked to Theories**

Three theories served as the study's foundation. These included the capital asset pricing model, the modern portfolio theory, and the theory of arbitrage pricing. The theories and objections to them were examined.

#### 2.2.1 Theory of Modern portfolio

The theory was postulated by Markowitz (1991) and stated that for a rational investor to maximize his expected returns, they should construct a portfolio of assets, each having a given level of risk and return. Proper asset allocation requires consideration of the risk-return relationship of assets. Different assets have different risk levels. Therefore, it is less risky to the investor if their portfolio framework constitutes different asset types rather than only one, thus the concept of diversification. An investor should assess the risk-return relationship of a given asset to the overall portfolio. As an element of portfolio theory, Markowitz considered measuring the risk using standard deviation (Markowitz, 1991). The standard deviation of the portfolio, which is the average deviation from the mean, is a measure of the total risk of investing in a combination of assets.

Modern portfolio theory poses an assumption that investors have a risk-averse perspective. Hence, a rational investor would select the one with the lowest risk after comparing two portfolios based on their risk and return. However, an investor will only be willing to invest in a portfolio if the overall expected return (the compensation for accepting a high risk) is favorable. Systematic and unsystematic risks consist of an asset's total risk (McClure, 2017).

This theory defines a portfolio frontier as a portfolio of investment that takes the efficient parts of the risk-return spectrum ("Efficient Frontier," 2010). The risk-return spectrum

refers to the ratio of the quantity of the gained returns and the risk taken in that particular investment. The higher the amount of returns one seeks, the higher the amount of risk one is to take ("Risk-return spectrum," 2007). Having an "efficient portfolio" implies coming up with an optimum portfolio for wealth maximization. An efficient frontier curve can be constructed by plotting the expected returns of different portfolios against their standard deviations. Portfolios below the efficient frontier curve could offer low expected returns at high-risk levels (high standard deviation). Those portfolios along the curve could provide high returns at low-risk levels; hence such dominate the rest. Therefore, the portfolio framework selection by general insurance firms should consider the position along the efficient frontier curve.

A criticism of this theory is that it reproduces expected returns based on past data. However, it does not incorporate market fluctuations. Still, MPT does not consider additional costs such as broker commissions or taxes.

# 2.2.2 Model on Capital Asset Pricing

The theory was pioneered by Litner (1965) and Sharpe (1992). The model states that in the condition of balance, an asset's return is the total of the risk-free rate and the beta and the number of times the excess return (Kisman, 2015). The excess return of the asset also refers to its risk premium. The capital asset pricing model assumes that an investor has a broad range of assets to invest in, thus reducing unsystematic risk through diversification. The Beta factor is the volatility or rather the systematic risk of a single stock compared to the entire market risk that is not systematic (Kenton, 2003). It measures the sensitivity of the asset's yields relative to the market's returns. It is a ratio of covariance of yields on an individual asset with the returns on the market to the variance of the market's return.

Nonetheless, the model's essential criticism is that it assumes all investors are rational and highly intolerant to taking significant risks, with homogenous expectations from investments, a risk-free rate on borrowing and lending, and a perfect capital market. The model assumes that no transaction costs or taxes are present and prices of securities adjust to changes in forces of demand and supply. Additionally, this single-period model highlights the limitation of using it on multi-period projects. In addition, the above subscribes to the notion that a single factor influences the returns of an asset, which may not be the case in the real-world scenario as there are various macroeconomic variables

such as inflation that are likely to impact them if not included. General insurance businesses in Kenya invest in different assets for their portfolio framework, each with varied risk characteristics, hence a strategy to manage their portfolio risk.

#### 2.2.3 Theory on Arbitrage Pricing

Scholar Ross (1984) formulated this theory. It highlights that the potential yield of a financial asset is a linear representation of several theoretical market indices, where the sensitivity to alterations in individual factors is a factor-specific beta coefficient represented (Roll & Ross, 1984). It is a multi-factor model instead of CAPM, which was a single-factor model. It assumes that the return of an arbitrage portfolio is nil at equilibrium. This model tries to identify various macroeconomic variables that can lead to a change in the beta coefficient and defines their relationship with risk. Interest rates, inflation, industrial production, and exchange rates are some of the macroeconomic factors. APT tries to address the deficiencies in the CAPM model through the support for multiple periods, thus a more substantial perspective for investment decision-makers.

The APT Model takes into consideration the aspect of asset mispricing. Mispricing occurs when the model predicts that the asset's price differs from its current price. The APT Model assumes that the net present value of an asset is the sum of discounted cash flows. Generally, an arbitrageur takes advantage of the mispricing of an asset by selling an expensive asset and using the proceeds from the sale to purchase a relatively cheap asset. In the APT context, when the current portfolio price is too low, there is an implication that it will have appreciated at the APT rate by the end of the given period. In contrast, the mispriced asset is expected to have appreciated at a higher rate than APT. Thus, in the present day, the investor would short sell the portfolio and then buys from the proceeds the mispriced asset. At the end of the period, the mispriced asset is first sold, and proceeds from the sale are used to buy back the investor's portfolio. Any difference in these two amounts leads to an arbitrage profit. The investor can also take advantage of an arbitrage opportunity that occurs when the current price of the portfolio is too high. In this case, the portfolio's price appreciation would be at the rate given by the APT by the end of the period. The mispriced asset's price appreciation would be at a lower rate than the APT implied rate. At this time, the investor should sell the mispriced asset. The proceeds would be used to purchase the portfolio. The investor would sell the portfolio when the time frame reaches its end, and its proceeds would be used to purchase back the mispriced asset.

The difference in the amounts is the arbitrage profit an investor earns.

A criticism of the theory is that it is only valid when examining a single item for risk. Because of this feature, exploring a whole portfolio with various investments is nearly difficult. As a result, the arbitrage pricing theory assesses the entire portfolio. Because it only accounts for the portfolio and not each account, some assumptions must be made throughout the evaluation. Consequently, there may be causes of uncertainty, lowering the accuracy of the outcomes being assessed. Risk arbitrageurs consider this model vital; the same should be the case for any rational investor. General insurance firms in Kenya can use this model when building a portfolio framework that will help them consider various macroeconomic factors with their beta coefficients and ultimately maximize their returns, improving performance from a financial standpoint.

**2.3 Determinants of Financial Performance of General Insurance Firms** How general insurance entities perform financially is typically expressed in terms of profits derived from activities relating to underwriting, returns on investment, net premiums that have been earned, returns on equity, and annual turnover. The performance of general insurance entities financially is determined by several factors other than the portfolio framework. These determinants are elucidated below.

# 2.3.1 Leverage

Organizational leverage refers to the ratio that reveals the capability of the company to control the money borrowed to generate wealth. It reflects the business's potential in dealing with exposure to economic risks to overcome unforeseen losses. Based on previous studies, leverage has a fair impact on the firm's net worth, for example, increased tax benefits that often boost financial performance. The debt-equity ratio also directly affects shareholders' dividends and the associated risks. Leverage ultimately plays a significant part in influencing the corporation's market value and capital cost. Kamran et al. (2016) found a significant correlation with a positive coefficient between leverage and a firm's performance in a study of Pakistan's publicly traded chemical companies.

#### 2.3.2 Liquidity

The above refers to the capability of insurance companies to take care of their short-term financial obligations. Based on various researches, it negatively influences the return on assets. Therefore, it implies an inverse relationship between the performance of insurance organizations financially and their liquidity. A low liquidity ratio suggests the firm may have difficulties paying short-term obligations to policyholders (Saleem & Rehman, 2011). On the contrary, a firm with a high liquidity ratio holds too much cash that could be invested in other areas.

#### 2.3.3 Underwriting Risk

Underwriting risk arises from inaccurately assessing the risks involved in writing an insurance policy. The above may lead to earned premiums being significantly exceeded by the insurer's costs. Underwriting risk measures the ratio of benefits paid to net premium. Underwriting risk and return on assets have a positive relationship (Murigu, 2014).

#### **2.3.4 Size of the entity**

How insurance companies financially perform is also affected by how big or small it is (Teece et al., 2009). The company's size positively influences the efficiency of its operations. Companies that have been associated with the enjoyment of the economies of scale are always large in size and can immensely minimize their operation expenses, which contribute to how they perform. On the other hand, small firms struggle to gather enough resources and have high operating costs.

#### **2.4 Empirical Review**

Local and international levels of empirical reviews on the influence of portfolio components on insurance companies' performance financially. This section reviews researchers' information in uncovering projections associated with the research variables. Both international and local evidence has been reviewed.

# 2.4.1 Studies established Globally

Derbali and Jamel (2018) dwelt on entity-level variables influencing how profitable the nineteen sampled Tunisian insurance companies were. They employed ROA to quantify performance which was regressed against predictor variables such as leverage, size, liquidity, age, and premium growth rate. The yearly statements of the sampled organizations from 2005 to 2015 were incorporated to obtain secondary data. It came to a conclusion that size was negatively connected with the performance of Tunisian insurance businesses, whereas age and premium growth rate favorably affected ROA. Liquidity and leverage had little impact on how well Tunisian insurance companies performed. This research was finalized in Tunisia, a country with different economic and social conditions than Kenya. Additionally, the study looked at the entire insurance sector

rather than just those that focus on general insurance.

Using data from 2013 to 2017, Hailu and Aassew (2018) pursued to determine how diversifying to various investments affects Ethiopian commercial banks' performance from a financial viewpoint. The study used 17 commercial banks with operations in Ethiopia as its sample size. The study employed a quantitative research methodology, and the regression model was utilized for data examination. According to the study's findings, adding to a bank's size, loan portfolio, financial assets, insurance, and government security investments significantly improves its financial performance in Ethiopia. Additionally, it was discovered that diversifying to various investments positively affects Ethiopian commercial banks' performance from an economic viewpoint. The study focused on the impact of diversification of various assets,but did not adequately discuss on a portfolio framework's effect on financial performance prior to diversifying. Moreover, it touched on how Ethiopian banks performed financially, which may have unrelated portfolio framework components to those of general insurance firms in Kenya.

Abebe and Abera (2019) examined the determinants of financial performance in the Ethiopian Insurance market from 2010 to 2015. Researchers employed a quantitative research tactic due to the quantitative nature of the data. They implemented a purposive sampling technique and selected nine insurance companies. The selected dependent variable were ROA and ROE, whereas leverage, capital adequacy, liquidity, age, size, and loss ratio were predictor variables. Regression analysis indicated that capital adequacy, liquidity, size, age, loss, and leverage were the main determinants of performance financially. Age and loss ratio had a significant and negative impact on performance financially. The study's focus was on the determinants of financial performance, leaving a gap in the effect of having a portfolio framework.

Dhiab (2021) also carried out some work on the possible dterminants influencing how profitable and efficient Saudi insurance firms were. His main objective was to evaluate factors determining how 20 Saudi insurance organizations performed according to the panel data from 2010 to 2018. The study used a quantitative data collection method, and the regression model was utilized for data examination. The dependent variable selected for the study was profitability (ROA), and explanatory variables included growth rate of written premium, company size, fixed assets, liabilities ratio, tangibility ratio, leverage, and liquidity. The research outcomes revealed that the written premium rate of growth,

the ratio of tangibility, and the assets that are fixed in nature positively affect the insurers' performance. In contrast, the ratios of liabilities and leverage, and the entity's age adversely affected their performance. The examination also showed that the corporation size and the liquidity had no substantial influences on profitability. The study focused on factors affecting Saudi insurance firms' profitability and efficiency and, consequently, a conceptual gap.

Lamichhane (2021) aimed to investigate how diversifying to various investments affected the financial success of Nepal's commercial banks. Return on equity and Return on Assets were the study's dependent variables. Purchasing of bonds, investing in real estate, total loan portfolio, buying government securities, investing in corporate sector and banks in foreign countries were the independent variables. 20 commercial banks served as the study's sample, and information from secondary sources from 2011 to 2016 was gathered. Regression modeling was used for data scrutinization. The study came to the conclusion that bond and government securities investments significantly enhanced financial performance as indicated by ROA. Real estate investment, however, had a detrimental impact on financial results. The focus of this study was on investment diversification with the financial performance of Nepal commercial banks, whereas the current research focuses on portfolio framework and the performance of Kenyan general insurance firms financially.

#### **2.4.2 Studies established Locally**

Ombima & Njiru (2018) researched how investment portfolio influenced the financial viability of Kenyan insurance companies that dwelt on the life business. The analysis elucidated 45.3%, 49.3%, and 71.6% of how insurance organizations performed financially in Kenya through a mortgage, investing in bond, and purchase of equity instruments. This research derived a conclusion that mortgage, investing in bond, and purchase of equity instruments influenced performance in a positive manner financially of Kenyan insurers. The most substantial influence was explained by purchase of equity instruments, then by investing in bond and mortgage. The study suggested that Kenyan life insurance entities should increase working capital investment in mortgages, and asset management should be enhanced to improve profitability. The study's focus was life insurance entities which cannot be used to generalize on general insurance organizations in Kenya.

Ngunguni, Misango, and Onsiro (2020) identified what financial factors influenced how general insurance companies performed financially in Kenya. The work also analyzed data from 2013 to 2017 from 28 general insurance entities for five years. To determine the link between the research's predictor as well as dependent variables, analysis based on multiple regression was utilized. To assess how profitable the firms were, the Return on Assets (ROA) served as the dependent variable. In contrast, the variables that were independent in this study were the ratios of expenses to revenue, loss ratio, leverage, and liquidity. A unit increase in liquidity was projected to raise the insurance industry's profitability from the study. They established that the liquidity and expenses ratio had a strong and a connection that was substantial statistically with the profitability of Kenya's general insurance entities. The leverage and loss ratios had a negative regression coefficient, implying a negative association with ROA, and were statistically insignificant. A strong and positive connection was established between liquidity and ROA, thus financial performance. According to their outcomes, the amount of leverage and loss ratio should not be a major concern for the management of these insurance organizations. Additionally, regulators and other sector participants should step up their efforts to determine the claims management practices now employed by insurance companies in Kenya. To increase the industry's profitability and performance, the government must regulate the sector, create regulations to prevent false insurance claims, and normalize prompt and effective payment of customer claims. The focus of the study was on financial factors' effect, although the current research focuses on the portfolio framework's impact on Kenyan general insurance corporations financially.

Osewe (2020) used a descriptive research design to assess how diversifying a portfolio would affect on unit trusts' performance on Nairobi Securities Exchange in Kenya financially. All the five-unit trusts listed on the NSE were subjected to a census study. For the years 2011 through 2019, secondary data was gathered. A regression model and descriptive statistics were used for data examination. Diversification of investment portfolios was positively connected to performance in the research. The focus of this research dwelt on the financial performance of unit trusts, though the current study focuses on Kenya's general insurance organizations.

Theuri (2021) examined the connection present between portfolio investment choices and the viability of finance of insurance firms in Kenya using data from the six years from 2013

to 2019. Thirty seven of the fifty four targeted organizations were purposefully chosen as the sample out of the total. Secondary information was gathered from pertinent sources, such as published accounts of insurance companies. Correlation analysis and analysis by use of simple regression aided to examine data and assess hypotheses. The study established that portfolio investment in quoted shares, real property, money market, and government securities had a connection that was positive and significant from a statistical assessment with ROE, hence performance financially. Theuri's study established a connection between the overall profitability and the choice of portfolio allocations made that was positively strong. However, the study was on investment choices rather than the portfolio framework, hence a conceptual gap.

It is recommended that policymakers develop policies that support the investment efforts made by the insurance industries. The study further recommends that the insurance companies' regulator (IRA) modify the ceilings for investing linked with the insurers, hence allowing them to divert more funds to invest in these choices of investment since they are confirmed to be substantial contributors of return on equity. Therefore, the management in the industry has to come up with measures to ensure that the investments being made by this industry contribute toward enhancing the industry's overall profitability. The insurance companies in Kenya should review their budgets so that there is a suitable allocation of finances towards portfolio investment. General insurance companies also need to embrace purchase of equity instruments because of the greater outcome on profitability, and managers should be vigilant in devising investment portfolios in insurance companies.

#### **2.5 Conceptual Framework**

The conceptual framework highlights how the predictor and variables that are dependent in nature are related. The variable that was independent in this study was the portfolio framework variable as measured by investments in government securities, stocks, term deposits, and real estate investments. The financial performance of general insurance firms in Kenya was the dependent variable indicated by the Return on Assets (ROA). Liquidity and leverage were used in this study as control variables. A diagrammatic link between the predictor variable and the variable which was dependent in nature was illustrated in the figure below;



# Figure 2.1: Conceptual Framework Source: Author (2022)

# 2.6 Summary of Empirical Review and Research Gaps

The CAPM, APT, and MPT theories support adopting an effective portfolio framework to boost a business' performance. According to Murungi (2013), the most significant benefit of portfolio investment is the ability to diversify investment risk across various types of financial instruments. The risk-return potential of a particular sector is relatively crucial in assessing its portfolio framework quality as it either boosts or slows profit earnings. Moreover, it helps establish the future financial prospects of the general insurance industry. There are contradictory conclusions on some of the factors affecting the profitability of companies. From empirical studies on liquidity and size, there are varying results. For example, in his study in Saudi, Dhiab (2021) found that ROA has no significant relationship with liquidity and size. Similarly, Derbali and Jamel (2018), who dwelt on entity-level variables influencing how profitable the nineteen sampled Tunisian insurance companies were, stated that liquidity was insignificant.

In contrast, Abebe and Abera (2019) examined the what factors determined performance financially in the Ethiopian Insurance market and found that liquidity and size were the most critical factors determining the financial health of insurance corporations. Lamichhane (2021) sought to examine the effect of investment diversification on the financial performance of commercial banks in Nepal and observed that real estate investment had a negative association with performance financially. However, Theuri (2021) examined the connection present between portfolio investment choices and the viability of finance of Kenyan insurers and found a significant and positive connection between firm profitability and real property investing.

Based on the above discussion, it is evident that most local research findings and empirical evidence have been majorly holistic in giving a general overview of the influence of the portfolio framework on the industry's performance in a financial way. Moreover, the studies did not adequately find a link between a portfolio framework and its effect on financial performance in Kenyan general insurance entities. Consequently, driving a research gap on what could be the effect of the portfolio framework on the Kenyan general insurance industry's financial performance? The gap is yet to be sufficiently addressed as most conclusions are based on total observations of all types of insurance organizations in other nations outside Kenya and are not specific to the Kenyan general insurance field. Additionally, empirical research elucidated lack of universally agreeable position on whether liquidity, size, and real estate investment positively or negatively influence the firms' performance financially. Hence, this research seeks to identify any linkages of the various financial instruments that make up the portfolio framework and how general insurance companies performed financially to validate the right kind of influence. This is all targeted to back the penetration of the Kenyan insurance industry on a long- term basis.

#### **CHAPTER THREE: RESEARCH METHODOLOGY**

# **3.1 Introduction**

Research methodology considered the mechanisms of collecting data, how the same data was analyzed, and the researcher's procedures. Moreover, the chapter also explored the research design utilized, the population targeted and sample, and the techniques used to determine them.

#### **3.2 Design for the Research**

The research adopted descriptive and correlational research designs. Based on Dulock (1993), descriptive research defines the association between or among selected factors. The study focused on general insurance firms in Kenya. Descriptive design aided in describing the degree to which general insurance firms used the portfolio framework. A correlational research design enhances the prediction and explanation of relationships among variables without the researcher controlling or manipulating them (Seeram, 2019). A correlation represents the intensity or direction of how two or more variables are related. A correlation might have either a positive or negative direction. Therefore, it was justified to use both research designs to validate the connection between portfolio framework and financial performance.

#### **3.3 Target Population**

The population which was of key interest for the research comprised forty nine registered insurers in Kenya; some offered general and some life insurance, while composite insurers sold both life and general (IRA, 2021). The research used data spanning a six-year duration, from 2016 to 2021. This is because, within the period, the study sought to incorporate the impact that COVID-19 had before and after its inception on the firms' portfolio framework and, ultimately, financial performance.

#### **3.4 Design of the Sample**

The study incorporated a portfolio framework approach, with a preference for only general insurance firms to determine a clear and precise outcome. The sample size encompassed 31 general insurance firms. Purposive sampling design was used based on

the sampled firms' criteria that have been in operation between 2016 and 2021 and solely focused on the general insurance business.

# **3.5 Collection of the Data**

The investigation utilized six years of secondary data from general insurance organizations in Kenya from 2016 to 2021. The research deployed utilization of data that was secondary in nature for analysis sourced from Insurance Regulatory Authority's industrial reports posted annually on their website. The data was collected relating to the four variables: investments in government securities, investments in stocks, investments in term deposits, and investments in real estate. A data collection sheet served as a platform for transfer of the extracted data which was exhibited in appendix I.

#### 3.6 Analysis of the Collected Data

For data analysis, the researcher used quantitative methods. After that, the data was edited, categorized, coded, and presented in a statistical package for social science for quantitative data analysis (SPSS) as well as XLSTAT. The study used tables for purposes of presentation and interpretation. Regression analysis was used to provide assistance with determining how a portfolio framework affects performance in a financial way, whether it is significant or not, and whether negative or positive.

#### **3.6.1 Diagnostic Tests**

Normality, stationarity, multicollinearity, and autocorrelation tests were done. Normality tests determined whether a normal distribution appropriately represented a set of data and calculated the probability that a random variable would have a normal distribution in data collection. The Shapiro-Wilk test was ideal for normality tests because it allows one to see the relationship between data and corresponding normal scores using power (Razali & Wah, 2011). The variables were not substantially different from a normal distribution, according to the null hypothesis. Since the null hypothesis is rejected for the variable with a p-value less than 0.05, there is a statistically significant difference between this variable and the normal distribution.

The presence of whether the variable values were related based on connected attributes

was determined using autocorrelation. To find patterns in the data, the autocorrelation function was used. Durbin Watson was performed to check autocorrelation. The thumb rule applied is that if the Durbin-Watson statistic is above four, there is negative autocorrelation, while if the Dublin Watson is less than four, then there is no autocorrelation (Turner, 2020). The study performed a stationarity test to assess the presence of a unit root in a variable. A stationary time series has statistical properties such as mean, variance, and autocorrelation constant (Ajewole et al., 2020). The test used was the augmented Dickey-Fuller test. A multicollinearity test was performed to determine a significant correlation between predictor variables.

#### **3.6.2 Analytical Model**

For the data collected, analysis based on regression was performed to examine the association between portfolio composition and how general insurance firms in Kenya performed financially. A regression model,  $Y = a + b_1 x 1 + b_2 x 2 + b_3 x 3 + b_4 x 4 + b_5 x 5 + b_6 x 6$ , was used to depict how performance in terms of finance and portfolio framework (investments) were related.

Where: Y= the financial performance that was measured using ROA;

a= the value of Y when x=0;

- x1= Government Securities Investment
- x2= Stocks Investment
- x3= Term Deposits Investment
- x4= Real Estate Investment
- x5=Leverage
- x6=Liquidity

Variable	Operationalization
Financial Performance	ROA= Net Income/Total Assets
Investment in Government	Natural log of Government
Securities	Securities
Investment in Stocks	Natural log of Stocks
Investment in Term Deposits Investment in Real Estate	Natural log of Term Deposits Natural log of Real Estate
Leverage	Debt to equity=Debt/Equity
Liquidity	Current Ratio=CA/CL

**Table 3.1: Operationalization of Study Variables** 

Source: Author (2022)

# **3.6.3 Significance Tests**

Correlation analysis was done, and a correlation matrix was obtained to examine how the variables in this study were associated. The findings were presented in tables. To investigate and test the strength of the model and the overall effect of variables on financial performance, (ANOVA) Test-Analysis of Variance was conducted at a 95% confidence level. If the p-value is less than 0.05, the model would be viable for describing changes in the variable that was dependent in nature. However, a p-value of more than 0.05 would make the model statistically insignificant for predicting the changes in the dependent variable.

# **CHAPTER FOUR: RESULTS AND DISCUSSIONS**

# **4.1 Introduction**

The results and discussion are presented in this fourth chapter. Descriptive, diagnostic, and inferential analyses formed the basis of the outcomes. Descriptive statistics including variables' mean value, the value established as standard deviation, the variables' minimum value and the variables' largest value labeled as maximum were used in the descriptive analysis. Normality, stationarity, multicollinearity, and autocorrelation were among the diagnostic tests. Inferential analysis comprised of correlation and regression analyses.

# 4.2 Analysis of Descriptive Statistics

The descriptive analysis's objectives were to give a dataset's variables some background knowledge and to identify any potential links between them. As a result, a first data analysis with the use of basic descriptive methods was offered to explain and compile the information gathered for the research. Table 4.1 illustrates the output.

					Value of Std.
	Ν	Min. Value	Max. Value	Mean Value	Deviation
ROA	186	-1.1806	.1381	.007923	.1060789
Government	186	4.0637	6.9758	5.883705	.6421327
Securities					
Investment					
Stocks Investment	186	.0000	6.3880	3.869413	2.3293527
Term Deposits	186	.0000	6.3879	5.397551	.9876066
Investment					
Real Estate	186	.0000	6.5698	4.435961	2.5785191
Investment					
Leverage	186	-16.7707	16.8554	.278912	2.2878585
Liquidity	186	.4215	31.0282	3.823665	4.3076013
Valid N (listwise)	186				

#### **Table 4.1: Descriptive Statistics**

The ratio of after-tax profit to total assets, or return on assets (ROA), was used to gauge financial performance. The six-year average return on assets for the sampled general insurance firms was roughly 0.79%, according to the average financial performance of 0.0079. Given that the bulk of the entities' profits were adversely harmed by the COVID 19 epidemic, the mean ROA was low. The individual observations were spread out by 10.608% about the mean according to the standard deviation, which was 0.10608. The company with the worst financial results had a ROA of -1.1806, which indicates that they lost KES 118.06 for every shilling of invested assets. In contrast, the company with the maximum performance had a ROA of 0.1381 financially which is 13.81%, suggesting that for each Kenyan shilling of assets invested, they generated a net profit of KES 0.14 is returned.

The natural logarithm of the value of each asset was used to calculate the investment in stocks, bonds, term deposits, and real estate. The average amount invested in government bonds was 5.8837. The natural logarithm units of this particular investment were distributed about the mean by 0.6421, as indicated by the standard deviation of 0.6421. The minimum and largest investments in government securities were 4.0637 and 6.9758, respectively. The average stock investment was 3.8694. The standard deviation was 2.3294, indicating that this particular investment was spread 2.3294 natural logarithm units from the mean. Stocks might be purchased for as little as 0 or as much as 6.3880. The average term deposit investment was 5.3976. The precise investment was dispersed about the mean by 0.9876 natural logarithm units, according to the standard deviation of 0.9876. Term deposits might be invested with a minimum of 0 and a maximum of 6.3879. The average real estate investment was \$4.4360. The standard deviation was 2.5785, indicating that this particular investment had a 2.5785 natural logarithm unit dispersion around the mean. Real estate investments ranged from a minimum of 0 to a maximum of 6.5698.

The debt-to-equity ratio, which is the ratio of total debt to total equity, was used to calculate leverage. It draws attention to the capital structure of a firm and how it is skewed toward debt or equity funding. A high debt-to-equity ratio can be advantageous since it indicates that a company can easily meet its debt obligations and is leveraging its

assets to boost equity returns. The corporation may profit from low cost of debt and hence boost the company's return on equity if the value is greater than one, indicating that total debt exceeds total equity. An extremely high ratio would, however, pose a concern because, in the event of significant losses, the company might not be able to pay off its debt. A value below one indicates that the company relies more on equity funding than debt financing. The sampled general insurance firms were generally more dependent on equity than debt as a source of capital, as indicated by the mean leverage of 0.02789. The individual observations were spread out by roughly 2.2879 units around the mean, as indicated by the standard deviation of 2.2879. Since the company's minimal leverage was -16.7707, it has more liabilities than assets. This is often seen as a highly worrisome indicator, indicating that there may be a chance that the company will go out of business. The maximum leverage was 16.8554, which means that the corporation is employing more debt and is very risky because the total debt was sixteen times the total equity.

The current ratio, which is calculated as the ratio of current assets to current liabilities, was used to measure liquidity. A score more than one unit depicts that the entity is liquid and able to pay its short-term bills since current assets exceed current liabilities. Given that short debts exceed assets which are short term in nature, a number below one indicates that the company cannot sufficiently meet its debts that are short term. The average current ratio was 3.8237, suggesting that the listed general insurance companies were generally sufficiently liquid. The individual observation was scattered around the mean by approximately 4.3076 units, as indicates that the firm is experiencing liquidity issues since its debts that are short term are more than its short-term assets. The corporation is in a strong liquidity situation because the highest liquidity value was 31.0282, which means that the short-term assets were thirty times greater than the short-term loans.

#### **4.3 Analysis of Diagnostic Tests**

Diagnostic tests included a test for normality, stationarity, multicollinearity, and autocorrelation.

#### **4.3.1** Normality test

The Shapiro-Wilk test of normalcy statistic was employed to check for normality. The null and alternative hypotheses, as well as the alpha level of significance, were used to interpret the test results. The variable from which the sample was taken having a normal distribution was the null hypothesis. An alternative hypothesis was that the variable from which the sample was drawn did not have a normal distribution. Therefore, for ROA, Investment in government securities, stocks, term deposits, real estate, leverage, and liquidity, the null hypothesis is accepted given a p-value (significance level alpha) of greater than 0.05, indicating that there is a statistically insignificant difference between each variable and the normal distribution. We accept the null hypothesis and assume that these variables' values were regularly distributed because there is no statistically significant difference between them and the normal distribution.

Table 4.2 illustrates the above information.

	Kolma	aorov-Smi	rnov <sup>a</sup>	Shapiro-Wilk		
	Konnogorov-Simmov					
					Degrees	
		Degrees	Significa		of	Signific
	Statistical	of	nce	Statistical	Freedo	ance
	Value	Freedom	Value	Value	m	Value
ROA	.184	186	.069	.511	186	.165
Government	.086	186	.185	.962	186	.157
Securities Investment						
Stocks Investment	.218	186	.145	.777	186	.155
Term Deposits	.217	186	.071	.630	186	.070
Investment						
Real Estate	.360	186	.087	.642	186	.141
Investment						
Leverage	.432	186	.135	.326	186	.096
Liquidity	.216	186	.110	.667	186	.062

#### **Table 4.2: Normality Results**

a. Lilliefors Significance Correction

#### **4.3.2 Multicollinearity Results**

For the purpose of evaluating the data, the research made an assumption of a confidence interval of 95%, that is, a significance level of 5%. Multicollinearity was examined through a test. Multiple substantial correlations between the predictor variables are referred to as multicollinearity. Table 4.3's results show that all independent variables' tolerance values were above 0.2 while the VIF (variance inflation factor) values were established to be under 5. As a result, there was no multicollinearity among the study's variables that were independent in nature.

	Tolerance Value	Variance Inflation Factor Value
Government Securities Investment	0.5934	1.6851
Stocks Investment	0.5541	1.8046
Term Deposits Investment	0.9017	1.1091
Real Estate Investment	0.7046	1.4193
Leverage	0.9685	1.0325
Liquidity	0.8752	1.1427

#### **Table 4.3: Multicollinearity Results**

#### **4.3.3 Autocorrelation Results**

To ascertain whether there is a link between error terms across different time periods, an autocorrelation test was conducted. Autocorrelation was evaluated using the Durbin-Watson test. The statistic, 1.9869, was found to be within the acceptable range of 1.5 to 2.5, indicating that the variable residuals were not serially associated. As a result, the normality assumption in OLS regression was not broken.

#### **Table 4.4: Autocorrelation Results**

	Durbin-Watson test
Statistic value:	1.9869

# **4.3.4 Test for Stationarity**

A stationary time series has its statistical characteristics, including average and variance, remain the same over time. The assumption underlying the majority of statistical forecasting techniques is that the time series can be made roughly stationary (or "stationarized") through the application of mathematical modifications. It is quite simple to anticipate a stationarized series by simply asserting that its statistical characteristics will remain constant throughout time. A unit root test determines whether a time series variable has a unit root and is non-stationary. Depending on the test performed, the alternative hypothesis is either stationarity, trend stationarity, or explosive root, with the null hypothesis typically being the existence of a unit root. The augmented Dickey-Fuller test is a frequently applied test. This evaluates the null hypothesis that a unit root exists in the sampled time series. Typically, stationarity or trend-stationarity is the alternative hypothesis. The p-values for each predictor and control variable were less than the significance level alpha of 0.05, as calculated in table 4.5. As a result, we should adopt the alternative hypothesis rather than the null hypothesis, H0, which claims that there is a unit root for each of the series. As a result, these series were stationary. The dependent variable's p-value exceeded the 0.05 alpha threshold for significance. As a result, we should accept the null hypothesis and reject the alternative hypothesis, Ha, which claims that the series has no unit root.

	Observed value	Critical value	p-value	alpha
ROA	-3.1442	-0.8741	0.0946	0.05
Investment	-4.1908	-0.8741	0.0047	0.05
in				

Table 4	1.5:	Station	arity	Results
---------	------	---------	-------	---------

Government							
Securities	Securities						
Investment in Stocks	-5.3979	-0.8741	<0.0001	0.05			
Investment in Term Deposits	-4.9212	-0.8741	0.0004	0.05			
Investment in Real Estate	-9.6239	-0.8741	<0.0001	0.05			
Leverage	-6.1501	-0.8741	< 0.0001	0.05			
Liquidity	-7.5256	-0.8741	< 0.0001	0.05			

# 4.4 Analysis of Correlation

The study looked at the relationships between the studied variables. To investigate how investments in government securities, equities, term deposits, real estate, leverage, liquidity related with performance financially, the study used the Pearson correlation coefficient. Each variable that was independent in nature was associated with the variable that had a dependent feature using the bivariate correlation method in this study. Table 4.6 provides the study's findings.

## **Table 4.6: Bivariate Pearson Correlation Coefficients**

	Investmen					
	t in					
	Governme		Investmen	Investmen		
	nt	Investmen	t in Term	t in Real	Levera	Liqu
ROA	Securities	t in Stocks	Deposits	Estate	ge	idity

ROA	Pearson	1	.336	.237	.182	003	036	.010
	Correlatio							
	n							
	Significan		.000	.001	.013	.971	.624	.888
	ce value							
	Ν	186	186	186	186	186	186	186

According to the study results shown in table 4.6, there was a positive connection between holding government bonds and performance financially, which suggests that as government bond holdings increased, so did performance financially (r=.336, p=.000<.05). The relationship between stock investment and performance financially was positively correlated, indicating that rising stock investment was associated with rising performance financially (r=.237, p=.001<.05). The negative correlation between real estate investment and financial performance indicates that as real estate investment increased, performance financially decreased (r=-.003, p=.971>.05). Given that leverage and performance financially were associated in a negative way (r=-.036, p=.624>.05), it can be concluded that as leverage increased, performance financially decreased. Positive correlations between liquidity and financial performance indicate that rising liquidity was correlated with rising performance financially (r=.010, p=.888>.05).

## 4.5 Analysis of Regression Output

The goal of the study was to determine how Kenyan general insurance companies' financial performance was impacted by their portfolio framework.

Model	Multiple R	R <sup>2</sup> Value	Adjusted R <sup>2</sup> Value	Standard Error of the Estimate Value			
1	.732 <sup>a</sup>	.536	.501	.1002523			
a. Predictors: (Constant), Liquidity, Leverage, Investment in Term Deposits, Stocks							
Investment, Real Estate Investment, Government Securities Investment							

Table 4.7: Model Summary	' (With	Control	variables)	)
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According to the findings in table 4.7, the adjusted R squared ( $R^2$ ) is the coefficient of determination that depicts the variation in ROA brought on by changes in investments in stocks, real estate, term deposits, and government securities as well as leverage and liquidity. It was 0.501, which indicates that the variables that had an independent feature in this model accounted for 50.1% of the total variance in ROA. The R squared ( $R^2$ ) value was 0.536, indicating that changes in investments in government securities, equities, term deposits, and real estate, as well as leverage and liquidity, accounted for 53.6% of variations in ROA. The multiple R value was determined to be 0.732. Without using any control variables, the study looked at how the portfolio framework affected financial performance (leverage and liquidity). Based on table 4.8, the model summary showed that the coefficient of determination ( $R^2$ ) was equal to 433, indicating that the portfolio framework alone accounts for around 43.3% of the variation in financial performance across Kenya's general insurance firms. The control variables and unobserved factors that weren't included in the study account for the remaining 56.7%.

 Table 4.8: Model Summary (Without Control variables)

Мо				Standard Error of the				
del	Multiple R	R <sup>2</sup> Value	Adjusted R <sup>2</sup> Value	Estimate Value				
1	.658ª	.433	.414	.0998493				
a. I	Predictors: (C	Constant), Investme	ent in Real Estate, Inv	estment in Term Deposits,				
Gov	Government Securities Investment, Stocks Investment							

#### Table 4.9: Analysis of Variance Statistics (Without Control variables)

ANOVA <sup>a</sup>						
		)egrees				
		of				Signifi
	Sum of Squares	freedo	Mean	Square		cance
Model	Value	m	Value		F-value	Value

1	Regression	.277	4	.069	6.951	.000 <sup>b</sup>
	Residual	1.805	181	.010		
	Total	2.082	185			

a. Dependent Variable: ROA

b. Predictors: (Constant), Investment in Real Estate, Investment in Term Deposits, Government Securities Investment, Stocks Investment

#### Table 4.10: Regression Coefficients (Without Control variables)

Coej	fficients <sup>a</sup>					
				Standardized		
		Unstandardiz	ed Coefficients	Coefficients		
Mod	lel	В	Std. Error	Beta	t	Sig.
1	(Constant)	313	.082		-3.802	.000
	Investment in	.041	.014	.247	2.866	.005
	Government					
	Securities					
	Investment in	.006	.002	.130	2.421	.016
	Stocks					
	Investment in	.011	.005	.107	2.482	.014
	Term Deposits					
	Investment in	001	.003	021	251	.802
	Real Estate					
a. D	ependent Variable:	ROA				

According to the Analysis of Variances (ANOVA), Kenyan general insurance companies' financial performance is significantly impacted by their portfolio framework (F= 6.951, p=.000<.05). Additionally, Table 4.10's regression analysis showed that the intercept term (a) indicated that performance financially was -.313 when the framework of the portfolio was kept constant at zero (a= -.313, t= -3.802, p=.000<.05). When performance

financially is regressed against the portfolio framework without incorporating control variables, the fitted model equation (1) displays the parameter estimates.

Y = -.313 + .041X1 + .006X2 + .011X3 - .001X4....(1)

# Table 4.11: Analysis of Variance Statistics (With Control variables)

ANOVA	a						
			Degree				
			s of				Significa
		Sum of Squares	freedo	Mean	Square		nce
Model		Value	m	Value		F-value	Value
1	Based on	.283	6		.047	4.688	.000 <sup>b</sup>
	Regression						
	Based on	1.799	179		.010		
	Residual						
	Total	2.082	185				

a. Dependent Variable: ROA

b. Predictors: (Constant), Liquidity, Leverage, Investment in Term Deposits, Stocks

Investment, Real Estate Investment, Government Securities Investment

## Table 4.12: Regression Coefficients (With Control variables)

<i>Coefficients</i> <sup>a</sup>					
	Unstandardize	ed Coefficients	Standardized Coefficients		
Model	В	Std. Error	Beta	t	Sig.
(Constant)	32	.00	86	-3.7	.000

Government	.043	.015	.258	2.863	.005
Securities					
Investment					
Stocks Investment	.006	.002	.126	2.346	.018
Term Deposits	.011	.005	.100	2.367	.017
Investment					
Real Estate	001	.003	021	251	.802
Investment					
Leverage	002	.003	037	522	.602
Liquidity	.001	.002	.037	.502	.616
a. Dependent Variable: R	OA				

General insurance entities' performance financially in Kenya was significantly impacted by investments in government securities, equities, term deposits, and real estate, as well as by leverage and liquidity, according to the Analysis of Variances (ANOVA) on Table 4.11 (F= 4.688, p=.000<.05). The regression coefficients of investments in government securities and real estate have improved from.041 and -.001 to.043 and -.002 respectively after including control variables (liquidity and leverage) to the model in equation (2) below, indicating that the addition of the control variables has improved the impact of portfolio framework on the financial performance of general insurance organizations. The inclusion of the control variables (leverage and liquidity in model (2) increases the explanatory power of the model by 10.3%, as indicated by the change in the coefficient of determination ( $\Delta R^2$ ) from 43.3% in the model without incorporating control variables to 53.6% in the model with control variables. The financial performance of Kenyan general insurance enterprises was positively and significantly impacted by investment in government securities ( $\beta$ 1=.043, t= 2.863, p=.05). The financial performance of Kenyan general insurance enterprises was positively and significantly impacted by stock investment ( $\beta 2=.006$ , t= 2.346, p=.018<.05). The financial performance of Kenyan general insurance organizations was positively and significantly impacted by term deposit investments ( $\beta$ 3=.011, t= 2.367, p=.017<.05). The financial performance of Kenyan general insurance businesses was negatively and insignificantly impacted by real estate investment ( $\beta$ 4= -.001, t= -.251, p=.802>.05). Leverage had a terrible financial impact on

Kenyan general insurance companies, although it was statistically insignificant ( $\beta$ 5= -.002, t= -.522, p=.602>.05). The financial performance of Kenyan general insurance enterprises was positively impacted by liquidity, though statistically insignificantly ( $\beta$ 6=.001, t=.502, p=.616>.05). When investments in government securities, stocks, term deposits, real estate, leverage, and liquidity were held constant at zero (0), the intercept term (a) reveals that financial performance was -.322. When insurers' performance financially is regressed against variables that are independent (investment in government securities, stocks, term deposits, stocks, term deposits, node against variables that are independent (investment in government securities, stocks, term deposits, stocks, term deposits, and real estate) and control variables (liquidity and leverage), the fitted model equation (2) displays the parameter estimates.

Y = -.322 + .043X1 + .006X2 + .0011X3 - .001X4 - .002X5 + .001X6 .....(2)

#### 4.6 Findings' Discussion

Examination of how investing in government securities, stocks, term deposits, and real estate, leverage, and liquidity affects general insurance entities' performance in a financial manner located in Kenya was performed. Correlating the variables and conducting of regression helped to investigate the impact of investments in government securities, stocks, term deposits, and real estate, as well as leverage and liquidity, on the performance of general insurance businesses in Kenya financially.

# **4.6.1 Government Securities' Investment Impact on Performance Financially**

After performing the Pearson correlation computation, a correlation that was positive was established between the purchase of government securities and performance from a financial viewpoint, indicating that purchasing these securities was associated with rising performance financially (r=.336, p=.000<.05). After performing regression, the derived coefficient showed that buying government securities had a positive and considerable impact on the performance of Kenyan general insurance enterprises from a financial perspective, in the absence of control factors (Leverage and Liquidity) (b1=.041, t= 2.866, p=.005<.05). The model coefficients showed that the financial performance of Kenyan general insurance enterprises was positively and significantly impacted by investment in government securities in the presence of control factors (b1=.043, t= 2.863,

p=.005<.05).

Equations (1) and (2) of the model indicate that investing more funds into government securities results in increased and thus better performance financially of general insurance enterprises. According to model equations (1) and (2), increasing investment in government securities by a single unit brings about in an increase in general insurers' performance financially by .041 units and.043 units, respectively. The estimate model's ability to account for control variables (such as leverage and liquidity) enhances the impact of investing in government securities on performance from a financial viewpoint, by.002 units. The favorable outcome can be attributed to Markowitz's Modern Portfolio Theory (MPT), which proposes that an investing entity can maximize the pros of diversifying by implementing a right asset mix in their portfolio structure. By investing in many asset classes, diversification causes the risk associated with one asset to be distributed over the portfolio selected containing other assets,hence lowering the average risk linked with the portfolio relative to the sum of the individual assets' risks. Because the portfolio's risk on average is decreasing and its performance is improving, the portfolio is becomes more desirable.

There is empirical support for the study's results that purchasing government securities improved general insurance companies' financial performance in Kenya. The results concur with those of Hailu and Aassew (2018), who arrived at a significant conclusion that buying government securities had a beneficial outcome on Ethiopian commercial banks' financial performance. The results also supported Theuri's findings from 2021, which demonstrated a direct causal effect association between buying securities issued by the government and performance financially of Kenyan insurers.

# **4.6.2 Stocks' Investment Impact on Performance Financially**

After performing the Pearson correlation computation, a positive connection was established between stock investment and financial performance, indicating that stock investment was associated with rising financial performance (r=.237, p=.001<.05). After performing regression, the derived coefficient showed that stock investment had a considerable impact on the performance of Kenyan general insurance enterprises financially in the absence of control factors (Leverage and Liquidity) and affected the performance positively (b2=.006, t= 2.421, p=.018<.05). The coefficients of the model

revealed a positive and substantial impact on the performance financially when Kenyan general insurance enterprises invest in stocks, in the presence of control variables (b2=.006, t= 2.346, p=.016<.05).

According to model equations (1) and (2), investing more money in stocks improves financial performance, bringing about suitable performance of general insurance firms financially. In model equations (1) and (2), increasing stock investment by one unit results in increased performance from a financial viewpoint by .006 units. The favorable outcome can be attributed to Markowitz's Modern Portfolio Theory (MPT), which proposes that an investor can maximize what one benefits from diversifying by using an appropriate asset mix in their portfolio structure. By investing in many asset classes, diversification spreads the risk associated with one asset throughout a portfolio of assets, resulting in a manageable overall portfolio risk in the framework. Financial performance is increased as the portfolio performs better by producing better returns.

The results concur with those of Theuri (2021), who arrived at a significant conclusion that buying listed shares had a vital outcome on how Kenyan insurance businesses performed financially. Additionally, the outcome supported those of Ombima and Njiru (2018), who demonstrated a clear causal effect association between equity investments and the financial performance of Kenyan life insurance enterprises.

#### 4.6.3 Term Deposits' Investment Impact on Performance Financially

After performing the Pearson correlation computation, a positive connection was established between term deposit investment and performance from a financial viewpoint, indicating that increased purchase of term deposits was associated with improving financial performance (r=.182, p=.013<.05). The regression coefficient showed that enhanced purchase of term deposits affected Kenyan general insurance enterprises' performance financially in a positive manner and was substantial, even in the absence of control factors (Leverage and Liquidity) (b3=.011, t= 2.482, p=.014<.05). The model coefficients showed that term deposit investments had a positive and substantial impact on the performance financially of Kenyan general insurance enterprises when control variables were present (b3=.011, t= 2.367, p=.017<.05).

The positive relationship between term deposit investments and financial performance in

model equations (1) and (2) suggests that increasing term deposit investments will boost the general insurance enterprises financially. In model equations (1) and (2), increasing term deposit investment by one unit results in an increase in performance of.011 units financially. The beneficial effect can be explained by CAPM, which makes the assumption that an investor has access to a wide variety of assets and can therefore diversify their portfolio to lower unsystematic risk. Maximizing diversification improves portfolio performance by producing higher returns. The returns eventually lead to improved financial performance. The results concur with those of Hailu and Aassew (2018), who came to the conclusion that financial asset investments, such as term deposits, have an important impact on the performance of Ethiopia's commercial banks financially, which was also positive. The results also supported Oleiwi's (2020) assertion that there is a link between term deposits and commercial banks' profitability, particularly Jordan Commercial Bank.

#### 4.6.4 Real Estate Investment Impact on Performance Financially

After conducting the Pearson correlation calculation, a negative connection was derived between purchase of real estate and performance financially, indicating that real estate investment was associated with declining financial performance (r=-.003, p=.971>.05). T After performing regression, the derived coefficient revealed that real estate investment had a negative and minor impact on the performance of Kenyan general insurance enterprises financially, in the absence of control factors, that is, Leverage and Liquidity (b4= -.001, t= -.251, p=.802>.05).

When control factors were available, the financial performance of Kenyan general insurance enterprises was negatively and barely impacted by real estate investment, according to the regression coefficients (b4=-.001, t=-.251, p=.802>.05). The model equations (1) and (2)'s indicated relationship between real estate investment and financial performance implied that increased real estate investment results in declining financial performance for general insurance firms. In model equations (1) and (2), increasing real estate investment by one unit causes a reduction in financial performance of -0.01 units. The detrimental outcome can be expounded based on the MPT theory, which proposes that investors should exercise caution when adding assets to a portfolio in order to maximize returns because some assets may have a negative impact on the benefits of

diversification and may even result in losses.

The results concur with Lamichhane's (2021) conclusion that real estate investment has a detrimental effect on Nepalese commercial banks' performance from a financial point of view. Theuri (2021) shown, in contrary to the findings, that real estate investment had a favorable and noteworthy link with performance of Kenyan insurance businesses financially.

#### **4.6.5** Leverage Impact on Performance Financially

Based on the outcome of the correlation computations, there was a negative connection between leverage and performance financially of general insurers (r=-.036, p=.624>.05), indicating that lower leverage was linked to higher financial success. Leverage had a detrimental and minor impact on the Kenyan general insurers' performance financially, according to the regressed data and results (b5=-.002, t=-.522, p=.602>.05). The adverse effect suggests that raising leverage in terms of total debt causes general insurance entities' financial performance to decline. The analysis also shows that increasing leverage by one unit results in a -.002 unit decline in financial performance. The riskiness of having a very high ratio can be used to explain why leverage has a negative impact on performance from a financial viewpoint since the company might not be able to pay its debts in the event of significant losses.

The results confirmed Derbali and Jamel's (2018) conclusions that leverage had little effect on the success of Tunisian insurance entities financially. Leverage had a detrimental effect on the performance of Saudi insurance entities from a financial viewpoint, according to Dhiab (2021). According to Ngunguni, Misango, and Onsiro (2020), the leverage of general insurance organizations in Kenya negatively impacted the return based on assets. In contrast, leverage was found to be a significant factor in determining the performance of Ethiopian insurance bodies financially by Abebe and Abera (2019).

#### 4.6.6 Liquidity Impact on Performance Financially

Based on the study variables, there was a need to verify how Kenyan general insurance businesses fared financially in terms of liquidity. The correlation study revealed a positive association between liquidity and performance from a financial point of view (r=.010, p=.888>.05), indicating that enhancing liquidity was linked to better financial success. Additionally, the financial performance of general insurance enterprises in Kenya was positively impacted by liquidity but statistically insignificantly so (b6=.001, t= 0.502, p=.616>.05). The beneficial result demonstrates that increasing liquidity by one unit results in an increase in financial performance of.001 units. The favorable relationship can be related with the notion that entities with sufficient liquidity can pay off maturing debt without delay; as a result, they have excellent relationships with their suppliers, lenders, and regulatory bodies. Such businesses may be able to take advantage of discounts due to enhanced connection, which would cut their operating expenses and get enhanced profitability. Additionally, the extra cash can be used to buy short-term investments like Treasury Bills, which provide interest income for the business and boost its success financially.

According to certain empirical literature, liquidity has a favorable impact on the general insurance firms in Kenya from a financial perspective. Liquidity was a key factor in determining the Ethiopian insurance bodies' performance financially, according to Abebe and Abera (2019). According to Osewe (2020), there exists a direct relationship between liquidity level and performance financially. According to Ngunguni, Misango, and Onsiro (2020), the liquidity of general insurance organizations in Kenya had a beneficial impact on return on assets.

# CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

#### **5.1 Introduction**

The chapter provides an overview of the research's findings, conclusions, and recommendations as well as its limitations and potential research fields.

## **5.2 Findings' Summary**

The study looked at the impact of leverage, liquidity, and portfolio framework on the

performance of Kenyan general insurance carriers financially. Subsections that follow offer the summary of the results.

#### **5.2.1 Investment in Government Securities**

Government securities investment is positively correlated with financial performance, according to the Pearson correlation analysis. Analysis of variances (ANOVA) revealed that investments in government securities significantly impacted the performance of general insurance organizations in Kenya without incorporating control variables (leverage and liquidity) financially. Regression coefficient also showed that the performance of general insurance organizations financially was significantly and favorably impacted by investments in government securities. The regression coefficients showed that buying government securities had a favorable and vital impact on the performance of general insurance organizations in Kenya financially when there were control variables present. The coefficient of investment in government securities has been improved by the adding control variables (leverage and liquidity) to the model in equation (2).

#### 5.2.2 Investment in Stocks

The results of the Pearson correlation study revealed a positive link between stock investment and performance financially. Analysis of variances revealed that stock pruchase had a substantial impact on the performance of general insurance firms in Kenya financially, in the absence of the control variables (leverage and liquidity). Moreover, the regression output showed that stock investments had a positive and significant impact on the financial success of Kenyan general insurance businesses. The model coefficients showed that the performance from a financial perspective of general insurance organizations in Kenya was positively and significantly impacted by stock investment in the presence of control variables.

#### **5.2.3 Investment in Term Deposits**

Investment in term deposits and financial performance are positively correlated, according to the Pearson correlation study. Analysis of variances computation revealed that term deposit investments had a substantial impact on the performance of general insurance firms in Kenya financially, even without incorporating control factors (leverage

and liquidity). The regression coefficient also showed that investments in term deposits had a favorable and considerable effect on the financial success of Kenyan general insurance firms. The regression coefficients showed that the performance of general insurance companies in Kenya was positively and significantly impacted by term deposit investments financially in the presence of control variables.

#### **5.2.4 Investment in Real Estate**

The Pearson correlation study showed a negative association between real estate investment and financial performance, indicating that real estate investment was associated with declining performance financially. The regression coefficient showed that real estate investment had a negative and minor impact on the performance of Kenya's general insurance firms financially, in the absence of control factors (Leverage and Liquidity). The model coefficients showed that real estate investment had a small but unfavorable effect on the performance of Kenya's general insurance businesses financially when control variables were present.

#### 5.2.4 Leverage

The results of the correlation analysis showed that there was a negative association between leverage and the performance from a financial viewpoint, indicating that reducing leverage was linked to improving financial performance. Leverage had a negative and negligible impact on the performance of general insurance businesses financially in Kenya, according to the regression study. The negative impact suggests that raising total debt leverage results in a decline in the financial performance of general insurance firms. According to the study, increasing leverage by one unit results in a decline in financial performance. The riskiness of having a very high ratio can be used to explain why leverage has a negative impact on performance from a financial viewpoint since the company might not be able to pay off its debt in the event of significant losses.

#### **5.2.4** Liquidity

Output obtained from the correlation calculation indicated a positive association between liquidity and financial performance, suggesting that raising liquidity was related to raising performance in a financial manner. Moreover, liquidity had a favorable but statistically negligible impact on the financial success of Kenyan general insurance companies. The beneficial effect demonstrates that increasing liquidity by a single unit enhances performance financially.

## 5.3 Concluded Outcome from The Study

The purpose of the study was to determine how the portfolio structure affected the financial success of Kenyan general insurance companies. The study finds a substantial and favorable correlation between portfolio structure and general insurance businesses' financial success. The study comes to the conclusion that the choice of the assets invested in accordance with the portfolio framework affects financial performance. The study comes to the conclusion that purchasing securities from the government has a favorable effect on the performance of general insurance enterprises in Kenya from a financial perspective. Kenyan general insurance companies' performance improves financially as a result of investments in government securities. Since the study found a positive correlation between stock investment and performance of Kenyan general insurance firms financially, it can be inferred from the results that stock investment had a beneficial impact on the performance of the Kenyan general insurance companies financially. The study also discovered that the performance of Kenyan general insurance businesses will improve financially with a unit rise in stock investment. The study's conclusion about term deposit investments is that they have a favorable effect on the financial performance of general insurance enterprises in Kenya. The performance of general insurance enterprises in Kenya is improved financially by term deposit investments.

The study comes to the conclusion that real estate investment and general insurance company financial performance in Kenya are inversely related, with higher real estate investment resulting in lower financial performance. The study comes to the conclusion that greater leverage results in lower financial performance, which has a detrimental impact on the general insurance businesses in Kenya.

The research found that the Kenyan general insurers' performance is positively impacted financially by liquidity. The study also discovered a marginally positive association between liquidity and Kenyan general insurance companies' financial performance. The research comes to the conclusion that the financial performance of general insurance enterprises in Kenya is marginally positively impacted by liquidity.

#### 5.4 Recommended Information from The Study

The study offers suggestions for theory, practice, and policy. The major study goal was to establish whether the portfolio structure had a noticeable impact on the financial performance of Kenyan general insurance carriers.

The study advises management of general insurance firms to include more asset classes in their portfolio framework in light of the demonstrated favorable and significant effect of portfolio framework on financial performance. The study posed the question of whether there was an association between individual investments that make up a portfolio structure and financial performance. Financial performance was found to have a positive and substantial relationship with investments in stocks, term deposits, and government securities but a negative and significant relationship with real estate investments. Because real estate has an adverse link to financial success, these companies should be cautious when investing in it. Instead, they should increase their investments in equities, term deposits, and government securities. The report also suggests that the Insurance Regulatory Authority regulate general insurance firms' investments and promote asset class diversification in their portfolio framework. The COVID-19 epidemic had a severe effect on the regulator's daily operations, thus they should increase their financial gains.

The study explored the possibility that leverage and financial success might have a positive and a relationship that was significant. Leverage and financial performance were found to have a small but detrimental impact. The report advises the Insurance Regulatory Authority to reassess the leverage restrictions of insurance firms in light of the inverse relationship to reduce cases of excessive borrowing and the inability to repay debt. Furthermore, given how severely COVID-19 affected the financial performance of general insurance enterprises between 2020 and 2021, the National Treasury should modify the minimum capital requirements.

The research investigated whether there was a significant and favorable relationship between liquidity and how the firms performed financially. Because general insurance companies' financial success and liquidity are positively correlated, the study advises managers to implement creative and adaptable cash and cash equivalent management strategies to prevent a lack of liquidity and the inability to fulfill short-term obligations. To protect against liquidity risk and eventual closure, the Insurance Regulatory Authority should also implement policy measures governing the liquidity positions that all general insurance companies in Kenya must maintain.

# 5.5 Study Limitations

Only four asset classes—government securities, stock, term deposits, and real estate were used as the basis for the analysis. The findings should be used with caution when making decisions because this study's scope is not exhaustive, especially with regard to asset types that were left out. Money market funds, exchange-traded funds, derivatives, precious metals, and other asset types are not tackled in the study.

The scope of the current study was restricted to general insurance providers in Kenya.

Given that general insurance organizations in Kenya operate in a slightly different operating environment from the aforementioned sectors, caution should be taken when applying the findings to decision-making about other industries like manufacturing and agriculture.

#### 5.6 Areas for Additional Studies

The general insurance businesses in Kenya served as the basis for the current investigation. This restricts it from being used in other industries including manufacturing, investment, and agriculture. The report advises that future research be thorough enough to include how the portfolio framework financially influences the performance of other industries. Only four asset classes—government securities, stocks, term deposits, and real estate—were used as the basis for the analysis. The study makes the recommendation that future studies should be sufficiently inclusive by including more asset classes in their purview, particularly those that were outside the current study's purview.

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#### APPENDICES

#### **Appendix I: Kenyan General Insurance Organizations**

- 1. AAR Insurance Kenya
- 2. African Merchant Assurance Company
- 3. Allianz Insurance Company
- 4. AIG Insurance Company
- 5. APA Insurance Company
- 6. Britam General Insurance Company
- 7. CIC General Insurance Company
- 8. Corporate Insurance Company
- 9. Direct line Assurance Company
- 10. Fidelity Shield Insurance Company
- 11. First Assurance Company
- 12. GA Insurance Limited
- 13. Geminia Insurance Company
- 14. Heritage Insurance Company
- 15. ICEA Lion General Insurance Company
- 16. Intra-Africa Assurance Company
- 17. Jubilee Insurance Company Limited
- 18. Kenindia Assurance Company
- 19. Kenya Orient Insurance Company
- 20. Madison Insurance Company
- 21. Mayfair Insurance Company
- 22. Occidental Insurance Company
- 23. Pacis Insurance Company
- 24. Resolution Insurance Company
- 25. Takaful Insurance of Africa
- 26. Tausi Assurance Company
- 27. The Kenyan Alliance Insurance Company
- 28. The Monarch Insurance Company

- 29. Trident Insurance Company
- 30. UAP Insurance Company Limited
- 31. Xplico Insurance Company

Source: Insurance Regulatory Authority (2022)