

**THE RELATIONSHIP BETWEEN PORTFOLIO HOLDING  
AND FINANCIAL PERFORMANCE OF INSURANCE  
COMPANIES IN KENYA**

**BY  
MARIAM AUMA**

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**DECLARATION**

This Research project is my original work and has not been submitted in any other University.

Signed..... Date .....

**MARIAM AUMA**

**D61/63961/2011**

This Research project has been submitted for examination with my approval as University Supervisor.

Signed..... Date .....

**Mr. Herrick Ondigo**

**Lecturer**

Department of Finance and Accounting

School of Business, University of Nairobi

## **DEDICATION**

The research project is dedicated to my lovely husband and children.

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Most important of all I extend my gratitude to the Almighty God for providing me with strength, good health and knowledge that helped make this project a reality.

I wish to recognize a number of individuals who contributed to the successful completion of this research project.

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## **ABSTRACT**

The insurance industry is important in an economy. Insurance business has stringent laws regarding investments following its long term nature. As such several organs of Government including Retirement Benefits Authority, Insurance Regulatory Authority, Central Bank, and capital Markets regulate the way in which such investments should be handled. The objective of this study was to establish the relationship between portfolio holding and financial performance of insurance companies in Kenya.

The study adopted a Descriptive research design. All insurance companies operating in Kenya as at 31<sup>st</sup> December, 2012 were included in the study hence a census. The main source of data was secondary data from the Insurance Regulatory Authority, Association of Kenya Insurers, and insurance companies themselves. The researcher conducted a multiple regression analysis in order to determine the relationship between portfolio holding and financial performance of insurance companies in Kenya.

The study found that there is a positive and strong relationship between portfolio and financial performance of the insurance companies. The study further found that there is an inverse relationship between investment in stock and the overall profitability in the insurance industry. The study found that investment in real estate had a direct relationship with the overall profitability of the insurance industry whereby increased investment in government securities lead to increase in profitability of the insurance industry. This study further found that investment in bank deposits are inversely related to the overall profitability of the insurance industry. The study recommends that the policy makers should enact policies that create an environment which facilitates the operations of the industry. This study recommends that the management in the insurance industry should come up with measures to ensure that the investments being made by this industry contribute toward enhancing the overall profitability of the industry.

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## **LIST OF ABBREVIATION**

AKI	Association of Kenya Insurers
ANOVA	Analysis of Variance
CAPM	Capital Asset Pricing Model
CBK	Central Bank of Kenya
GDP	Gross Domestic Product
IRA	Insurance Regulatory Authority
MIPs	Medical Insurance Providers
MPT	Modern Portfolio Theory
NSE	Nairobi Securities Exchange
RBA	Retirement Benefits Authority
US	United States

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

Investment portfolio optimization is one of the important information to the investors before they make an investment because of its direct relationship with financial performance of an organization. The term portfolio refers to the combination of assets having return and risk characteristics of their own, which in combination make up a portfolio (Donald and Ronald, 1993). Portfolios may or may not take on the aggregate characteristics of their individual securities included in the portfolio. A Portfolio is a collection of investments held by an investment company, hedge fund, financial institution or individual for the purpose of diversifying their risks. The purpose of investing in a portfolio is to cushion oneself from the changes in returns among the selected investment options.

Insurance companies are such financial institutions which stand by investors at moments of disaster and try to uphold investors by providing a lump sum amount benefit to the investors in case of an insured against event materializing. The insured investor pays some amount called premium to the insurance company for the purchase of the insurance cover which is the subject of their relationship. Insurance companies have to manage their collections by investing within the regulated framework by the various authorities including the Retirement Benefits Authority, Insurance Regulatory Authority and Association of Kenya insurers. In going about their investments, the insurance companies

have to investment and provide for liquidity requirements to ensure that the companies are able to meet their financial obligations as and when they fall due.

Performance of an organization refers to the outcome of activities of individuals and units of the organization. This can be measured in different ways depending with the purpose for which the information is required. One of the most basic tenets of modern financial theory is that managers should act in a manner consistent with maximizing the value of owners' equity. For the insurance industry, the performance is measured in different ways including profitability, timely claims settlement and liquidity which enable it to meet its financial obligations as and when they fall due. An effective control over the performance requires insurance companies to utilize their resources optimally by diversifying their investments in different asset classes.

Investment earnings made by insurance firms make a valuable contribution to their operating results and enable them to reduce premiums and increase dividends and bonuses, thereby improving their competitiveness (Cummins and Grace, 1994; Citibank, 1994). It's also evident that linking investment earnings to firm-specific factors such as organizational form and size could enable policyholders and shareholders to make better-informed insurance and investment choices (Boose, 1993). Ideally, a portfolio manager should increase the systematic risk of the portfolio in anticipation of a market upturn and decrease the beta prior to a market downturn.

### **1.1.1 Portfolio Holding**

The term portfolio refers to the combination of assets. Securities that have return and risk characteristics of their own, in combination make up a portfolio. Portfolios may or may not take on the aggregate characteristics of their individual parts (Donald and Ronald, 1993). International research indicates that portfolios formed on various stock characteristics produce different returns. These stock characteristics under which portfolios are formed include; past stock returns, size, earnings yield, leverage, and book to market ratios (O'Brien, 2008). Evaluation of portfolio performance according to, Barua, Raghunathan and Varma (1991) refers to how well the portfolio has done.

Measuring portfolio performance has become an essential topic in the financial markets for the portfolio managers and investors as it plays a very important role in the financial market almost all over the world. Institutional investors such as mutual funds and pension funds have grown dramatically in size in developed countries and in some cases their assets have even outgrown the Gross Domestic Product (GDP) of their own country (Davis and Steil, 2001). A Portfolio manager expects to make errors, but expects to be right often enough to achieve an overall good return. Over a reasonable long horizon, his windfall gains and losses cancel each other out and the actual return can be regarded as a reasonable measure of his performance. In the short run, this is not necessarily true hence not representative (Barua, Raghunathan and Varma, 1991).

### **1.1.2 Financial Performance**

Performance outcomes result from success or market position achieved (Hooley, Greenley, Cadogan, and Fahy, 2005). Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals. Organizational performance means attainment of ultimate objectives of the organization as set out in the strategic plan. Performance can be determined in various ways. While there is a range of specific models, major determinants of firm-level profitability include: characteristic of the industry in which the firm competes; the firm's position relative to its competitors; and the quality or quantity of the firm's resources.

Weiner and Mahoney (1981) indicated that numerous measures of corporate performance could be used as dependent variables. However, more important than a specific measure chosen is the use of multiple measures, because different criteria of performance are likely to be differentially affected by the various independent variables (Lieberson and O'Connor, 1972). Financial Performance Ratios is used to measure the financial performance of a business. A financial ratio is an important tool for businesses and managers to measure the progress for achieving the targeted goals. Some of the important financial ratios which a firm would like to analyze include: liquidity ratio, profitability ratios and financial leverage ratios among others.

### **1.1.3 The Relationship between Portfolio Holding and Financial performance**

Portfolio choice is an example of sequential decision making under uncertainty. Investors must consider their attitudes towards risk and reward in face of an unknown future, in

order to make complex financial choices. The purpose of investing in a portfolio is to cushion oneself from the changes in returns among the selected investment options. Ideally, a portfolio manager should increase the systematic risk of the portfolio in anticipation of a market upturn and decrease the beta prior to a market downturn.

Investing in different investments improves a company's chances of earn a good return although not guaranteed because of the uncertainty facing the investments. Construction of an efficient investment portfolio enables the firm to diversify its risks thereby improving the earning ability of the portfolio (Oyatoye & Arileserre, 2012). Oyatoye & Arileserre (2012) states that as it is crucial for insurance industry to survive and develop, the insurance investment enables insurance companies to offset their possible underwriting losses and make a considerable profit. Mukati (2012) states that the risk faced by an insurance fund manager differs from what the typical fund manager faces because of the fact that the risk in insurance investment management must factor in the liability side of its balance sheet that includes benefit amounts for shareholder capital as well as the reserves that are necessary for the insurer future claims.

#### **1.1.4 Insurance Industry in Kenya**

The insurance industry falls under the Ministry of Finance and they are registered under the Insurance Act, Cap 487, Laws of Kenya, and are therefore required to comply with the requirements therein. The Chief Executive Officer of Insurance Regulatory Authority, who is also a creation of the Act (as amended), regulates the industry. Besides, insurance companies operate under the ambit of other laws governing companies, contracts, trusts,

and agency. The main players in the Kenyan insurance industry are insurance companies, reinsurance companies, intermediaries such as insurance brokers and insurance agents, risk managers, loss adjusters and other service providers (Insurance Regulatory Authority, 2010). There were 46 insurance companies operating in Kenya as at the end of 2011. 22 companies wrote non-life insurance business only, 10 wrote life insurance business only, while 14 were composite (both life and non-life). There are 141 licensed insurance brokers, 14 medical insurance providers (MIPs) and 3,668 insurance agents. Other licensed players included 105 investigators, 75 motor assessors, and 21 loss adjusters, 2 claims settling agents, 8 risk managers and 23 insurance surveyors. The insurance companies in Kenya have an umbrella body known as the Association of Kenya Insurers (AKI), which lobbies on behalf of the insurance industry. According to AKI, the penetration of insurance in Kenya is estimated at 3.02%.

Insurance business can broadly be classified into general and life/long term insurance. Despite this classification, the different classes of insurance businesses can be viewed as lines of business along the profit centre concept. According to the Kenya Insurance Survey (2004), the following lines of business drive the general insurance industry business in Kenya: Motor Insurance, Fire Insurance, Aviation, Engineering, Theft, Workmen's Compensation, Personal Accident Insurance, Liability Insurance, Marine, and miscellaneous. The life insurance industry is mainly driven by the following lines of business: Ordinary Life and Superannuation, which includes Group Life Insurance and Deposit Administration, i.e. Industrial Life and Bond Investment (Kenya Insurance Survey, 2004).

## **1.2 Research Problem**

The insurance industry is important in an economy. In Kenya, the contribution of the life insurance sector to the GDP grew by 11.7% to 1.05% in 2010 compared to 0.94% in 2009 (AKI report, 2011). Insurance business has stringent laws regarding investments following its long term nature. As such several organs of Government including Retirement Benefits Authority, Insurance Regulatory Authority, Central Bank, and capital Markets regulate the way in which such investments should be handled. As a result, insurance companies have to adhere by these rules and guidelines hence investing with caution which may affect their profitability.

Several studies have been done on the relationship between portfolio holding and financial performance. For instance, Hifza (2011) examined the determinants of insurance companies' profitability by conducting an analysis of insurance sector of Pakistan and established that key determinants included market base which determined how much premium was collected and claims paid out. Kaaria (2003) evaluated property portfolio construction and performance analysis in Kenya using a case study of registered pension schemes. The study revealed that while there are procedures for the assessment of long term investments, these were not applied to property on a continuous basis like in securities or equities but only during acquisitions or disposals. Kagunga (2010) did a comparison of performance between unit trusts and a market portfolio of shares at Nairobi stock Exchange and established that both the Jensen alpha and adjusted alpha confirmed the positive returns from unit trust in the four out of five years under study. Mwatuwano (2012) evaluated the performance of islamically screened portfolios at the

Nairobi Stock Exchange where weekly risk and returns were calculated for the two portfolios.

Sharpe, Treynor and Jensen measures were also used to measure their performance. The results for risk adjusted returns were mixed; the Sharpe measure was in favour of the Islamic portfolio while the Treynor ratio was in favour of the conventional portfolio, both with significant differences. Abdalla (2012) examined the validity of modern portfolio theory using evidence from the Nairobi Securities Exchange and established that the Sharpe measure was in favor of the optimal portfolio. From the above discussion, the studies have focused on portfolio management in other field and not the insurance industry. For Kagunga (2010), the study focused on unit trusts and a market portfolio of shares at Nairobi stock Exchange. There is no study that has reviewed the relationship between portfolio holding and financial performance of insurance companies in Kenya. This study therefore sought to fill this research gap by answering one research question: What is the relationship between portfolio holding and financial performance of insurance companies in Kenya?

### **1.3 Research Objective**

To establish the relationship between portfolio holding and financial performance of insurance companies in Kenya.

#### **1.4 Value of the Study**

This study would of value to different stakeholders including:

First, the study would be valuable to future researchers and academicians in the area of finance and especial portfolio management. The findings of this study would act as a source of reference for future scholars besides suggesting areas for further research where they can extent knowledge on.

The findings of this study would also be valuable to policy makers on the management of investment behavior and portfolio management in the insurance industry in Kenya. Through the findings of this study, key regulators in the insurance industry including the Retirement Benefits Authority and Central bank of Kenya would learn on the ways on how to develop rules and regulations governing the investment behavior of the Insurance industry.

The findings of this study would also be valuable to investment managers in the insurance industry as it would inform them of the different ways of forming a portfolio and how it can affect financial performance.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews the literature on portfolio holding and firm performance. From this review broad categories will be derived which will help easily identify the critical relationship between portfolio holding and financial performance of insurance companies. Specifically, the chapter addresses the theoretical framework guiding the study, Portfolio management, empirical literature and summary of the literature review.

#### **2.2 Theoretical Review**

##### **2.2.1 Modern portfolio theory**

Modern portfolio theory, relying on the work of Markowitz (1952) and the principals of the Capital Asset Pricing Model (CAPM), suggests that investors can improve the performance of their portfolios by allocating their investments into different classes of financial securities and industrial sectors that are not expected to react similarly if new information emerges. Solnik (1974) extends this theory to an international context and suggests that diversifying globally, as opposed to a strictly domestic portfolio, will lead to optimization of the risk-return tradeoff. Therefore, investors should allocate their money into assets exhibiting low return correlation. A paper written by Riadh Aloui, Mohamed Safouane Ben Aissa, and Duc Khung in 2011 at the Paris School of Management, France, examines the extreme correlations between the BRIC economies and the US, especially over 2007-2009. Empirical evidence indicates that although BRIC

markets have many features in common, they do not behave similarly in regard to their financial linkages to the US.

In his paper, Markowitz formally presented his view that although investors want to maximize returns on securities they also want to minimize uncertainty, or risk. These are conflicting objectives which must be balanced against each other when the investor makes his or her decision. Markowitz asserts that investors should base their portfolio decisions only on expected returns, i.e. the measure of potential rewards in any portfolio, and standard deviation, the measure of risk. The investor should estimate the expected returns and standard deviation of each portfolio and then choose the best one on the grounds of the relative magnitudes of these two parameters (Sharpe, Alexander, & Bailey, 1999).

As previously mentioned, Markowitz rejected the expected returns rule on the grounds that it neither acknowledged nor accounted for the need for diversification, contrary to his “expected return-variance of return” rule. In addition, he concluded that the expected return-variance of return rule not only revealed the benefits of diversification but that it pointed towards the right type of diversification for the right reason (Mandelbrot, 2004). It is not enough to diversify by simply increasing the number of securities held. If, for example, most of the firms in the portfolio are within the same industry they are more likely to do poorly at the same time than firms in separate industries. In the same way it is not enough to make variance small to invest in large number of securities. It should be avoided to invest in securities with high covariance among themselves and it is obvious

that firms in different industries have lower covariance than firms within the same industry (Markowitz, 1952).

Simply put, Markowitz concluded that by mixing stocks that flip tail and those that flip heads you can lower the risk of your overall portfolio. If you spread your investments across unrelated stocks you will maximize your potential profit whether the economy is slowing down or growing. If you then add more and more stock in different combinations you have what Markowitz called an 'efficient' portfolio. An efficient portfolio is the portfolio which gives the highest profit with the least risk. The aim of Markowitz's methods is to construct that kind of portfolio (Mandelbrot, 2004)

### **2.2.2 The Capital Asset Pricing Model**

The background of CAPM was the study of the influence of investor behavior on asset prices. The result of that study was a theory of asset valuation in an equilibrium situation, drawing together risk and return, which is the CAPM (Lintner, 1966) Several authors have contributed to the model, first and foremost Sharpe (1964), but also Treynor, Mossin, Litner and Black (19656). The CAPM is the first model to introduce the notion of risk into the valuation of assets. It evaluates both asset returns in connection to market returns and the sensitivity of the security to the market (Amenc & Le Sourd, 2003).

CAPM is in principle a method to calculate the rate of return which it is normal to demand of an asset of a certain nature. The search for the normal rate of return is divided into two parts according to CAPM. On the one hand, a risk-free rate is found. On the other hand, the rate of return on a risky asset is found, constituting the risk premium. In CAPM the standard deviation of a single asset does not matter greatly, rather the effect of

the asset on the systematic risk of the portfolio to which the asset is added. The main concern is the conjunction between the rate of return of the efficient portfolio and a single asset. If the conclusion of the CAPM is that the correlation between the rate of return of the portfolio and an asset is high, then it is appropriate to demand a high risk premium of that asset. If the correlation is low, on the other hand, only a low risk premium should be demanded (Sciubba, 2006).

### **2.2.2 Arbitrage Pricing Theory (APT)**

Arbitrage pricing theory (APT) holds that the expected return of a financial asset is largely based on its "beta". Beta is the measure of the relationship between company related factors which influence financial performance and the overall market in which the latter competes. Typically a company which has a beta of one will reflect the market whereas a beta score of 0.75 means that a company will move up or down to the extent of 75 per cent of the corresponding market movement. The Arbitrage Pricing Theory (APT) was developed primarily by Ross (1976a, 1976b). Ross' (1976a) heuristic argument for the theory is based on the preclusion of arbitrage. The APT is a substitute for the Capital Asset Pricing Model (CAPM) in that both assert a linear relation between assets' expected returns and their covariance with other random variables. (In the CAPM, the covariance is with the market portfolio's return.) The covariance is interpreted as a measure of risk that investors cannot avoid by diversification. The slope coefficient in the linear relation between the expected returns and the covariance is interpreted as a risk premium. Such a relation is closely tied to mean-variance efficiency.

Arbitrage Pricing Theory can be useful if one is investing in a company and wanted to measure the historical share price sensitivity to huge market fluctuations typical during the onset of bull and bear markets. Based on an investor's long-term and short-term goals different investment strategies could be planned using APT as an exhibit. For example, if a company had a beta of one thereby likely to follow the market an investor anticipating a recession would hold off purchasing that stock if their goal was to invest their money for no longer than a few years and vice versa.

There have been a considerable number of studies, which attempt to justify the empirical applicability of the Arbitrage Pricing Theory (APT) as compared to the Capital Asset Pricing Model (CAPM). APT differs from the CAPM in hypothesizing that actual and expected security returns are sensitive, not just to one type of non-diversifiable risk (i.e. beta or market risk) but to a variety of different types of risks. Many studies have also endeavored to identify the macroeconomic factors underlying the APT.

### **2.3 Components of Portfolio Management**

Portfolio diversification is a widely embraced investment strategy that helps mitigate the unpredictability of markets for investors. It has the key benefits of reducing portfolio loss and volatility and is especially important during times of increased uncertainty (Errunza and Padmanabhan, 1988). A single stock is not the same as the stock market, or even a portfolio of stocks. A single stock might go up in a down market, or drop like a rock in a rising market. The Securities and Exchange Commission recommends adopting a strategy of equity portfolio diversification (Dimitriou and Kenourgios, 2012). Diversifying equity investments means buying the stocks of different companies in different economic

sectors at different times, in the hope that if one stock drops, another will rise to offset the loss. The biggest benefit of portfolio investment is that it spreads investment across different types of financial instrument, each with a different risk-return potential. The main reason for this type of diversification is to reduce overall risk that comes from putting all resources in just one type of investment. Many people rely on professional portfolio management services to maximize gains on their investments (Syriopoulos, 2005).

Modern Portfolio Theory, for which Harry Markowitz was jointly awarded the Nobel Prize in 1990, provides the academic bedrock for diversifying portfolios (Dimitriou and Kenourgios, 2012). Simply stated, by combining assets that are not perfectly correlated, that is, do not move in perfect lock-step together, the risks embedded in a portfolio are lowered and higher risk-adjusted returns can be achieved (Kenourgios and Samitas, 2009). The lower the correlation between assets, the greater the reduction in risk that can be derived. Modern Portfolio Theory was first developed with individual securities in mind but can also be applied to combinations of asset classes. Successful diversification depends upon combining asset classes that are not perfectly correlated.

### **2.3.1 Portfolio management**

Portfolio management deals with the analysis of individual securities as well as with the theory and practice of optimally combining securities into portfolios (Blake, 1998). A portfolio refers to the totality of an organization's investment in the changes required to achieve its strategic objectives. Portfolio management plays a critical role in facilitating the attainment of organizational goals and objectives (Del Guercio and Tkac, 2002). It is

a coordinated collection of strategic processes and decisions that together enable the most effective balance of organizational change and ‘business as usual’. During the accumulation phase, the pension funds tend to increase in value because of additional contributions made into the fund and also due to the investment returns generated by the assets in the fund. The return earned by assets in the pension fund depends upon the investment strategy and asset allocation decisions of the pension fund (Tonks, 2002). These investment decisions can be made by individual pension contributors, or delegated to professional fund managers.

### **2.3.2 Portfolio Performance Measures**

With the development of Modern Portfolio Theory (MPT) and asset pricing theory, in particular the Capital Asset Pricing Model (CAPM), it was immediately obvious that the analysis provided a theoretical framework that could be applied to meet the challenges of performance measurement. Treynor (1965), Sharpe (1966), and Jensen (1968) were the first to realize the potential applications of MPT and CAPM for investment performance evaluation.

#### **2.3.2.1 Standard Deviation**

Markowitz (1952) suggested the use of standard deviation as a measure of risk. This metric measures the dispersion of returns from a central average value. The metric has distributional properties that allow inferences to be drawn. For instance, if the returns produced by a fund follow a bell-shaped normal distribution, then 95 times out of a hundred the return should be within plus or minus two standard deviations of the long term average. The greater the standard deviation, the greater the fund's volatility.

When analyzing risk of a portfolio the two most common terms investors confront are variance and standard deviation. The importance of variance of a random variable is in characterizing the scale of measurement and the spread of the probability distribution.

Standard deviation is the square root of the variance of the random variable. Likewise variance, it measures the spread or dispersion of a distribution and it has the advantage of being in the same units of measure as the random variable (Hill *et al*, 2001). Standard deviation is usually used to refer to risk.

#### **2.3.2.2 The Sharpe Index**

The Sharpe ratio is a risk-adjusted measure developed by the Nobel Laureate William Sharpe. Markowitz (1952), the founder of Modern Portfolio Theory (MPT), suggested that investors choose optimum portfolios on the basis of their expected return and risk characteristics. As noted above, the overall risk of a portfolio is measured by the standard deviation of its returns. Sharpe used this concept to build a "reward to variability" ratio which has become known as the Sharpe Index. The metric is calculated using standard deviation and excess return (i.e. return above a risk free investment) to determine reward per unit of risk. The higher the Sharpe ratio, the better the fund's historical risk-adjusted performance. In theory, any portfolio with a Sharpe index greater than one is performing better than the market benchmark.

The excess return is defined as the rate of return on an asset minus the return available on a baseline asset. The baseline asset is typically a short-term risk-free asset such as the

three-month U.S. Treasury Bill (Choey and Weigend, 1997) SR expresses the excess return in units of its standard deviation as

$$\text{Sharpe Ratio} = (R_p - R_f) / \sigma_p$$

$R_p$  = Return of p portfolio,

One important implication of using only the first and second moments of the excess returns is that positive returns and negative returns are treated identically and large positive and negative returns of the same magnitude have the same effect on the risk measure (Choey and Weigend, 1997).

### **2.3.2.3 Jensen's Alpha**

Jensen's Alpha is also a reward to risk measure. However, it uses a different concept of risk. To explain, we first need to realize that this measure's framework is taken from the capital asset pricing model (CAPM) (Hendrick and Marco, 2005). In this model, among the assumptions, it is taken that every investor holds a diversified portfolio. This allows investors to diversify away some of their investment risk, leaving them exposed only 'systematic' or non-diversifiable market-related risk. Jensen's Alpha uses only systematic risk for scaling a portfolio's return. Alpha measures the deviation of a portfolio's return from its equilibrium level, defined as the deviation of return from the risk-adjusted expectation for that portfolio's return. For ranking purposes, the higher the alpha, the better the performance. The fund beats the market, on a systematic risk adjusted basis, if Jensen's Alpha is greater than zero, and vice versa (Choey and Weigend, 1997).

Jensen's alpha is used to evaluate historical performance of a portfolio. This method measures the difference between realized return and expected return for a period of time.

The measurement of Jensen's alpha coefficient is differentiated from the estimation parameters of Capital Asset Pricing Model (CAPM), from finding the alpha and beta coefficient of a stock. The procedure to estimate beta is to regress between individual return ( $R_i$ ) and market return ( $R_m$ ) (Dali at, 2010):

$$R_i = \alpha + \beta R_m$$

## **2.4 Empirical Review**

Several scholars and researchers have studied the concept of portfolio holding and firm performance. Hart (1965) expressed the view that insurance companies are by nature predominantly long-term, fixed-income investors. As such, they would not have invested greater amounts in equities even if permitted to do so by state laws. Hart's position reaffirmed the philosophy expressed by Bailey in his famous 1862 paper— that is, that an insurer's primary responsibility is to safety and soundness rather than investment return.

Quirin & Waters (1975) and Foster (1975) report that the inflow of investment-generated cash flows could be influenced by the asset structure of assurance firms as well as being sensitive to external factors such as changes in interest rates and industry regulation. For example, investment in precautionary non-financial assets such as property and mortgages could generate low earnings in the short-term, but achieve stable capital growth over the long-term. In contrast, more speculative (& liquid) financial assets (eg, equities) could generate high earnings in the short-term, but with correspondingly greater uncertainty as to their value in the long-run.

Rennie (1977) analyzed insurance company investment strategies between 1952 and 1975 and concluded that changes in portfolio choices were shaped by both internal and external factors. Although no statistical analysis was performed, comparisons were made of the portfolio mix of the industry as a whole during the 1952–1975 periods. He further concluded that strategic investment decisions of individual companies were conditioned upon their relative financial strength, top management's attitude towards risk and risk taking, and unique considerations involved in forward commitments.

Hershman (1977) analyzed the impact of regulation on life insurer investment activities by concentrating on the New York laws, which historically had been the most restrictive. He examined the impact of regulation on levels of investment in corporate debt, mortgages, real estate, and preferred and common stock. Hershman concluded, from the industry's attempts to liberalize the quality restrictions on corporate debt, that these restrictions may have had some limiting effect on investments in lower-grade bond issues.

Mwatuwano (2012) evaluated the performance of islamically screened portfolios at the Nairobi Stock Exchange. The study sought to form an Islamic portfolio from the NSE and determine whether there existed any significant difference between the risk and returns of an Islamic portfolio and a conventional portfolio at the NSE. Weekly risk and returns were calculated for the two portfolios. Sharpe, Treynor and Jensen measures were also used to measure their performance. Z tests were then conducted to check whether there was significant difference between the risk and returns of the Islamic portfolio and the conventional portfolio.

Results showed that there was no significant difference between the risk and raw returns of the conventional portfolio and Islamic portfolio. The results for risk adjusted returns were mixed; the Sharpe measure was in favour of the Islamic portfolio while the Treynor ratio was in favour of the conventional portfolio, both with significant differences. The Jensen measure was however indifferent. With more investors seeking to participate in the growing field of Islamic investments, this study will provide important information to investors that can be used to provide an additional tool on which investors can base their investment decisions and design a portfolio that suits their respective objectives.

Abdalla (2012) examined the validity of modern portfolio theory: evidence from the Nairobi Securities Exchange. The study sought to form an optimal portfolio from the NSE 20 Share Index to investigate if an investor could apply MPT in order to achieve a higher return than investing in an index portfolio( market portfolio). Combining a strong portfolio that beat the market in the long run would be the ultimate goal for most investors. The theories that were used to analyze the problem and the empirical findings provide the essential concepts such as the standard deviation and returns of the portfolio. Further Sharpe ratio was used to achieve the optimal portfolio. The study made use of the descriptive research design.

From a population of 20 companies from the NSE 20 share index, an optimal portfolio of eight companies from each sector of the index was constructed. Monthly returns were calculated for the two portfolios and Sharpe measure was also used to measure their performance. The benchmark that was used to compare the result from the portfolio is the NSE -20 Share Index. This Index reflected the market as a whole. The findings from the

study indicated that the optimal portfolio outperform the market portfolio (NSE 20 Share Index Benchmark) during the selected timeframe. The Sharpe measure was in favor of the optimal portfolio. Finally it was concluded that optimal portfolio with the guidance of the MPT can surpass the NSE 20 Share Index within the selected timeframe and it has been recommended that creation of new market portfolio to be compared with different efficient portfolios would give a better result.

Ngunjiri (2000) studied the Selection of public investment projects using a multi-criteria approach. The study examined the process of project selection to determine the priority public investment project portfolio in any given year since resources are limited and different stakeholders tend to have different, often conflicting objectives, an efficient and effective approach is necessary. The result of the study indicated that the then approach to the selection of public investment projects lacked objectivity and consequently, may not be sensitive to the needs of various stakeholders. It was demonstrated that the use of multi-criteria approach to project selection helped to assess projects from a "wholistic thinking" perspective, which was achieved through the adoption of a systems approach to the selection process. Decision makers could be aided by installing and running a Decision support system.

Kaaria (2003) examined property portfolio construction and performance analysis in kenya using a case study of registered pension schemes. The issues of concern were the factors considered during the construction of property portfolios and after portfolio construction, the presence or absence of procedures for the assessment of the performance of these portfolios in order to obtain a rational basis for portfolio revision.

The study further looks into the challenges faced in the construction and the assessment of the performance of property portfolios. Finally, the researcher makes recommendations that would enable the performance of property portfolios to be continually assessed and analyzed in a similar manner as is done for other long-term investments such as securities and equities. Data for this study was collected through interviews and administration of questionnaires to registered investment managers and to a randomly selected sample of in-house fund managers.

The findings revealed that contrary to the common belief that many pension schemes had over invested in immovable property, this was not the case in practice. Over investment in immovable property was only experienced where the schemes were run as public corporations or parastatals and were therefore susceptible to political influence. The study also determined that investment managers had procedures which they followed when assessing alternative investments prior to portfolio construction. The managers also had procedures for assessing the performance of long-term investments although this was not usually applied to property. The study revealed that while there are procedures for the assessment of long term investments, these were not applied to property on a continuous basis like in securities or equities but only during acquisitions or disposals. The study established that property portfolio performance assessment could be out-sourced to property management firms since they are in constant touch with the property market.

Kagunga (2010) did a comparison of performance between unit trusts and a market portfolio of shares at Nairobi stock Exchange. The objective of the study was to investigate whether unit trusts in Kenya have better performance compared to that of

market portfolio, given their systematic risk. If unit trusts had superior performance, then investment managers would have superior share price forecasting abilities and thus that active management (switching in and out of shares) does influence performance. The population of study consisted of all the Unit Trusts in Kenya. The Nairobi 20 share index was used in estimating the performance of a market portfolio.

Data on net asset value and dividend paid by unit trusts was collected from offices of respective unit trusts schemes. Data on estimate of dividend received on the market portfolio, and the 20 share index was collected from the Nairobi Stock Exchange. Data on market interest rates, interbank lending rates and free rates was collected from the Central Bank of Kenya. In this study, the researcher used Jensen's standard performance measure. Carrying out t-test statistic our null hypothesis was accepted since even though, unit trust recorded a better performance than the stock market we could be able to see that the results were not statistically significant given the low levels of significance for both one tailed and two tailed tests. By carrying out regression tests, it was possible to confirm the relationship between unit trust return and that of the market where it was found out that the two have a strong relationship. Jensen index was carried out to confirm the returns of the stock market by removing fluctuations that might distort the data used. Both the Jensen alpha and adjusted alpha confirmed the positive returns from unit trust in the four out of five years under study.

Kimali (2012) examined commercial bank's portfolio selection and the crowding out effect in Kenya. The crowding out effect was understood in terms of how the banking systems' portfolio selection crowds out the private sector. the expected returns variable

was proxied by the ratio of interest rate on loans advanced to the interest rate on treasury bills while the perceived risk is proxied by non-performing loans (assuming that they are held by the private sector) whereas the available information on the alternative investment is proxied by the information available to the banking sector on the level of government deficit (and the governments' inability to finance it given the stand-off between the Kenya government and the Brettonwoods institutions). Loans portfolio (risk) was expected to be negatively related to banking systems lending to private sector just as the information available level of the budget deficit financial and resources crowding out existed with the private sector completely

## **2.5 Summary of the Literature Review.**

This chapter reviewed the literature on the relationship portfolio holding and financial performance of insurance companies in Kenya. Mwatwano (2012) evaluated of the performance of islamically screened portfolios at the Nairobi Stock Exchange. Abdalla (2012) examined the validity of modern portfolio theory: evidence from the Nairobi Securities Exchange. Ngunjiri (2000) studied the Selection of public investment projects using a multi-criteria approach. Kaaria (2003) examined property portfolio construction and performance analysis in kenya using a case study of registered pension schemes. Kagunga (2010) did a comparison of performance between unit trusts and a market portfolio of shares at Nairobi stock Exchange. Kimali (2012) examined commercial bank's portfolio selection and the crowding out effect in Kenya. There is no study that has examined the relationship between portfolio holding and financial performance of insurance companies in Kenya. This study will therefore seek to fill this research gap.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter sets out various stages and phases that were followed in completing the study. The specific areas covered in this chapter include: research design, target population, data collection and data analysis.

#### **3.2 Research Design**

The study adopted a Descriptive research design. A descriptive study attempts to describe or define a subject, often by creating a profile of a group of problems, people, or events, through the collection of data and tabulation of the frequencies on research variables or their interaction as indicated by Cooper and Schindler (2003).

Descriptive research is more rigid than an exploratory research and seeks to describe the uses of a product, determine the proportion of the population that uses a product, or predict future demand for a product. Orodho (2004) notes that the choice of the descriptive survey research design is made based on the fact that in the study, the research is interested on the state of affairs already existing in the field and no variable would be manipulated.

#### **3.3 Population of the Study**

The population comprised of 46 insurance companies that were in operations in Kenya as at 31<sup>st</sup> December, 2012. These companies were chosen because of their key role in the provision of insurance services in Kenya. Since the population of the study is small, the

study included all the 46 companies in the study hence, a census. The study covered a period of 11 years starting from 2003 to 2012.

### **3.4 Data Collection**

The main source of data was secondary data from the Insurance Regulatory Authority, Association of Kenya Insurers, and insurance companies themselves. Information and data was collected from the official website of the insurance companies. The study collected data necessary for completion of the study.

### **3.5 Data Analysis**

The researcher conducted a multiple regression analysis in order to determine the relationship between portfolio holding and financial performance of insurance companies in Kenya. The general expression will be;  $Y=f(x_1, X_2, X_3, X_4)$ ,

#### **3.5.1 Analytical Model**

The researcher used the following multiple regression model:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2+ \beta_3X_3+ \beta_4X_4+\epsilon$$

Where: Y = Overall profitability of the Insurance industry (Return on Assets)

$\beta_0$  = Constant

$X_1$ = Investments in Stock (as a percentage to total assets)

$X_2$ = Investments in government securities (as a percentage to total assets)

$X_3$ = Investments in real estate (as a percentage to total assets)

$X_4$ = Investments in Bank Deposits (as a percentage to total assets)

$\epsilon$ =Error Term

The data on above variables was collected from secondary data contained in Insurance Regulatory Authority and the Kenya Association of Insurers.

To test for the strength of the model and the relationship portfolio holding and financial performance of insurance companies in Kenya, the researcher conducted an Analysis of Variance (ANOVA). On extracting the ANOVA statistics, the researcher looked at the significance value. The study was tested at 95% confidence level and 5% significant levels. If the significance number obtained was less than the critical value ( $\alpha$ ) set 2.4, then the conclusion was that the model was significant in explaining the relationship.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

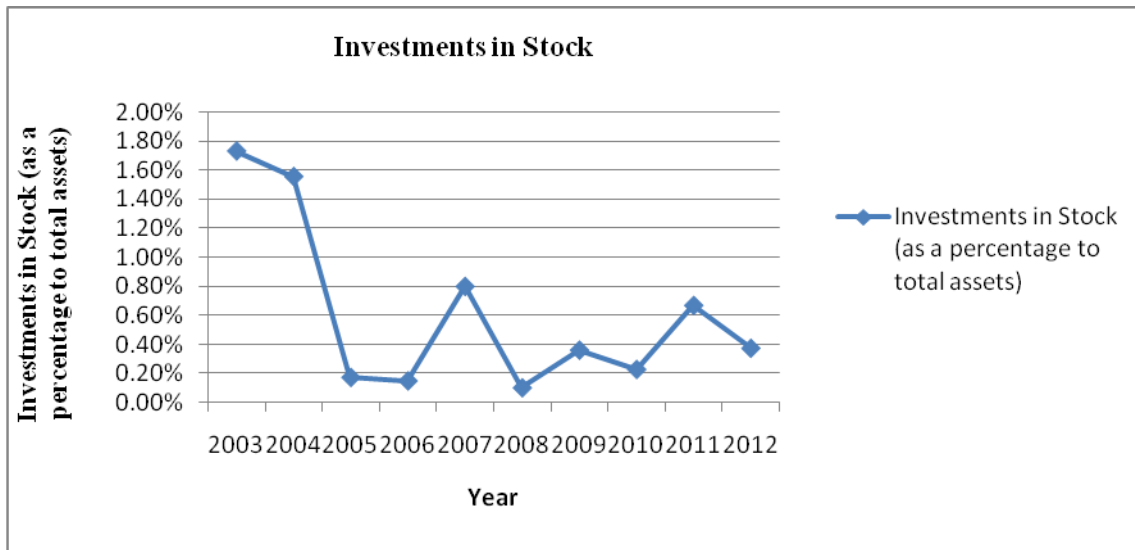
This chapter presents analysis and findings of the study as set out in the research objectives and methodology. The study findings are presented on the relationship between portfolio holding and financial performance of insurance companies in Kenya. The data was gathered exclusively from the secondary source which included the Insurance Regulatory Authority, Association of Kenya Insurers, and insurance companies themselves.

#### **4.2 Findings**

##### **4.2.1 Investments in Stock (as a percentage to total assets)**

The study sought to find out the trend of insurance industry investment in stock over the study period. In analyzing the trend, the investments were expressed as a percentage to the total assets. The results are illustrated by the figure 4.1 below and appendix II.

**Figure 4.1: Investments in Stock**



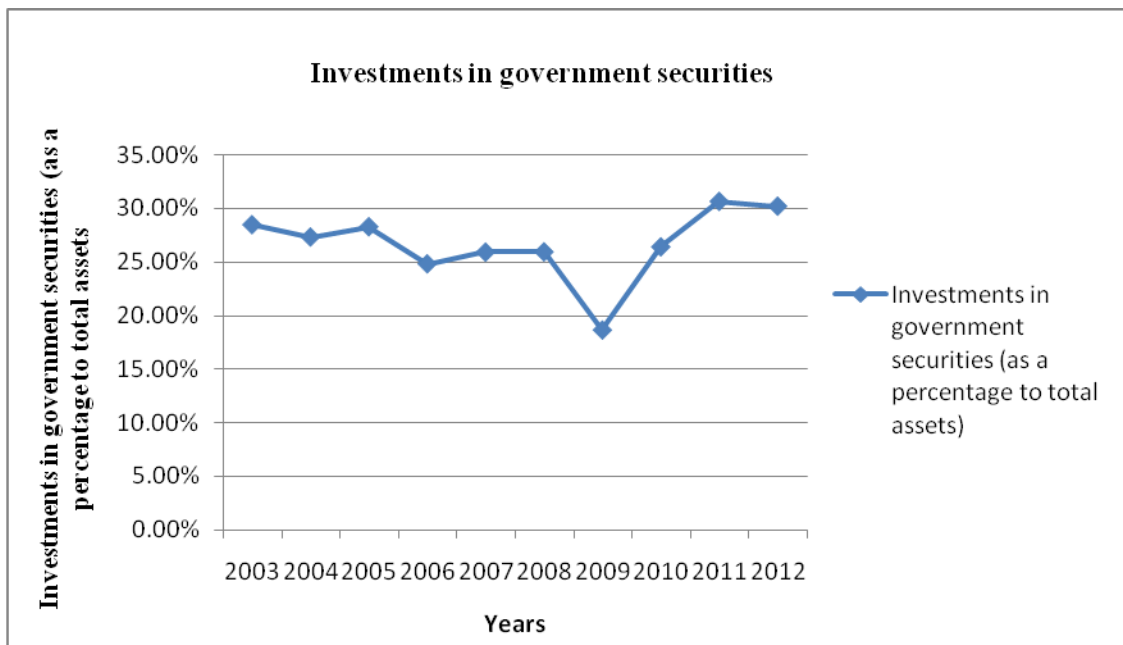
**Source: Research Findings**

From the findings, in the figure above, investment in stock had been decreasing over the study period. The study established that in 2003, the insurance industry invested 1.73% of total assets in stocks. This decreased slightly to 1.56% in 2004 before a further decrease to 0.17% in 2005. In 2006, the percentage of total assets invested on stock was 0.15% which was a slight decrease from the previous years. The insurance industry however increased the percentage of total assets being invested in stocks to 0.80% in 2007. This however decreased to 0.10% in 2008 before increasing to 0.36% by the end of 2009 after which it reduced to 0.23% in 2010. In 2011, the insurance industry invested 0.67% of the total assets in stock which was an increase compared to the previous year after. These investments however decreased 0.37% in 2012.

#### 4.2.2 Investments in Government Securities

The study sought to establish the trend of insurance industry investment in Government securities over the study period. The investments were expressed as a percentage to the total assets and the findings were presented by figure 2 below and appendix II.

**Figure 4.2: Investments in Government Securities**



**Source: Research Findings**

From the figure above, the insurance industry invested 28.49% of the total assets in Government securities. These investments decreased to 27.34% in 2004 but increased to 28.30% in 2005. In 2006, the insurance industry decreased its investments in Government securities to 24.83% of the total assets. This however increased slightly to 25.92% in 2007, then to 25.96% in 2008 before a sharp decline 18.64% in 2009. In 2010, the insurance industry invested 26.42% of its total stock in government securities. The

investments on government securities further increased to 30.67% of the total assets in 2011 before a slight decrease in 2012 whereby investments in government securities amounting to 30.22% of the total assets were made.

#### 4.2.3 Investments in Real Estate (as a percentage to total assets)

The study sought to establish the trend in the investments in real estate by the insurance Industry over the study period. The data findings are presented in Figure 4.3 below and appendix II.

**Figure 4.3: Investments in Real Estate**



**Source: Research Findings**

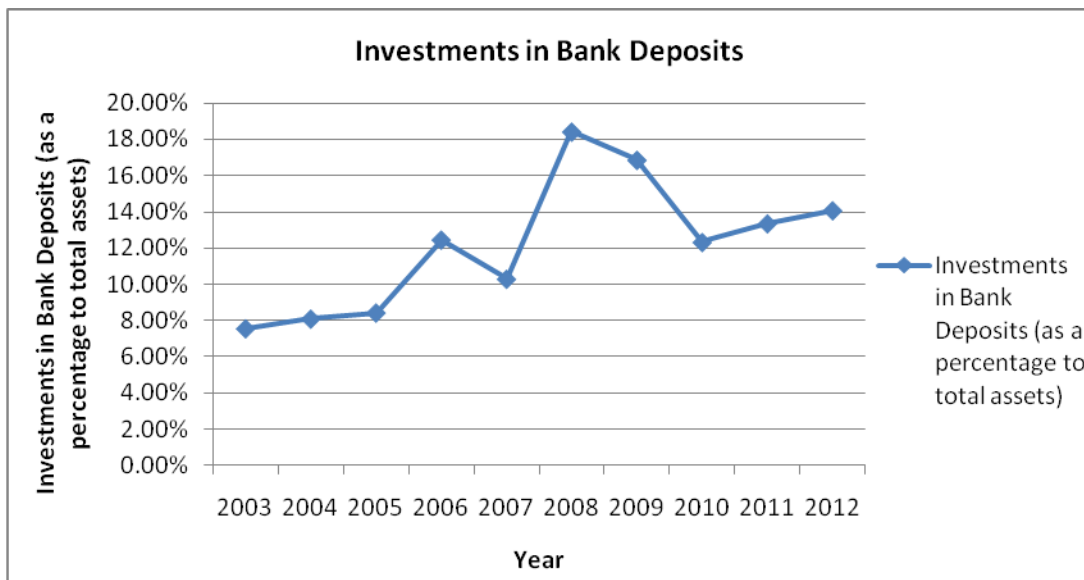
From the findings, in the figure above, investment in real estate had been decreasing over the study period. The study established that in 2003, the insurance industry invested 26.59% of the total assets in real estate. This decreased sharply to 4.73% in 2004 before a further decrease to 4.32% of the total assets in 2005. In 2006, the percentage of total assets invested in real estate was 5.26% which decreased to 3.82% of the total assets in

2007. The insurance industry however increased the percentage of total assets invested in real estate over the following two years whereby the investment amounted to 4.04% of the total assets in 2008 and 5.73% of the total assets in 2009. In 2010, a decrease was observed whereby 4.05% of the total assets were invested in real estates. This decreased further to 3.40% in 2011. In 2012, this investment had declined to amount to 2.70% of the investments.

#### 4.2.4 Investments in Bank Deposits (as a percentage to total assets)

The study sought to establish the trend in the investments in bank deposits by the insurance Industry over the study period. The data findings are presented in Figure 4.4 below and appendix II.

**Figure 4.4: Investments in Bank Deposits**



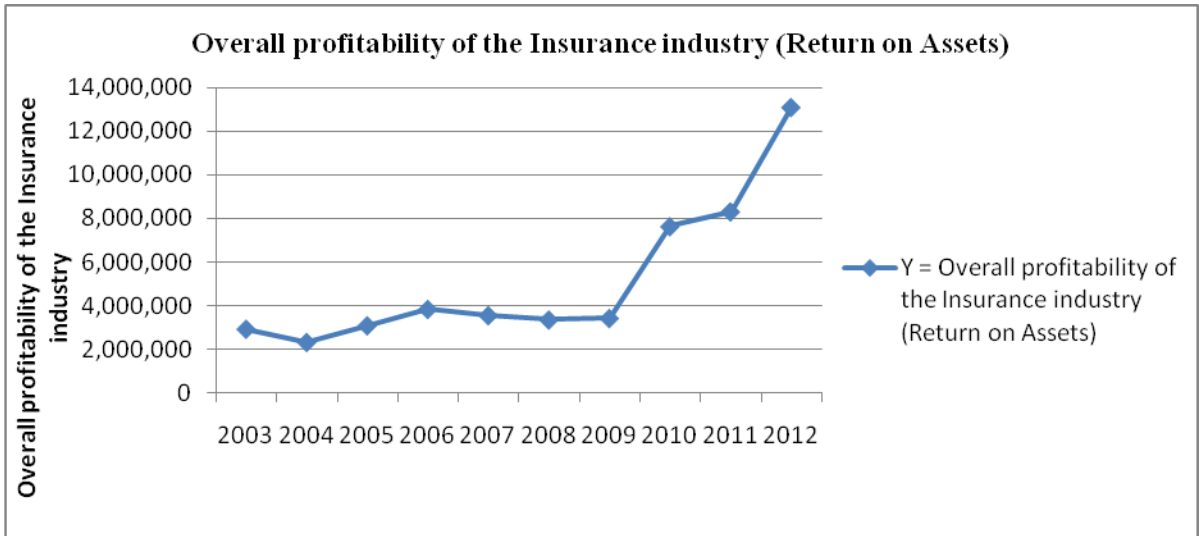
**Source: Research Findings**

From the findings, the insurance industry invested 7.53% of total assets in bank deposits in 2003. This percentage increased slightly to 8.06% in 2004 and further to 8.40% in 2005. In 2006, the percentage of total assets invested in bank deposits increased to 12.44% after which it reduced to slight to 10.27% in 2007. The insurance industry however increased the percentage of total assets being invested in bank deposits to 18.42%. In 2008 which was the highest percentage of total asset invested in the bank deposits over the study period. This however decreased consecutively over the following years whereby it decreased to 16.86% in 2009, then to 12.31% in 2010 and further to 13.34% in 2011. As at the end of the study period, the invested made by the insurance industry in bank deposits was 14.07% of the total assets which was an increase compared to the previous year.

#### **4.2.5 Overall Profitability of the Insurance Industry (Return on Assets)**

The study sought to establish the trend in the Overall Profitability of the Insurance Industry (Return on Assets) over the study period. The data findings are presented in Figure 4.5 below and appendix II.

**Figure 4.5: Overall Profitability of the Insurance Industry**



**Source: Research Findings**

From the data findings obtained in figure on above, the study established that overall profitability of the insurance industry as 2003 was Ksh 2.928999 billion. This decreased to Ksh 2.320364 billion in 2004 after which it increased to Ksh 3.085231 billion 2005 and further to Ksh 3.836587 billion in 2006. The overall profitability of the insurance industry however decreased over the following two years were by it decreased to Ksh3.549898 billion in 2007 and further to Ksh 3.349997 billion in 2008 In 2009 the overall profitability of the insurance industry increased slightly to Ksh 3.420972 billion after which it increased rapidly to Ksh 7.634272 billion in the end of 2010. In 2011 the overall profitability of the insurance industry increased gradually to Ksh 8.316002 after which it further increase to Ksh 1.3104366 by the end of December 2012.

#### 4.2.6 Regression Analysis

In order to establish the relationship between the relationship between overall Profitability of the Insurance Industry and the investments made by the insurances industry in Stock, Government securities, real estate and Bank Deposits expressed as percentage of total assets. The study conducted regression analysis at 95% confidence level. The findings were as shown in the table 4.1 below:

**Table 4.1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 <sup>a</sup>	.959	.927	924644.310
a. Predictors: (Constant), Investments in Bank Deposits , Investments in Stock , Investments in real estate , Investments in government securities				

**Source: Research Findings**

The Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable that is explained by the predictor variables.

The independent variable under study had a strong relationship with predictor variable (investment) as explained by adjusted  $R^2$  of 0.959 hence implying the relationship between overall Profitability of the Insurance Industry and the predictor variables was very strong.

Further, the study conducted an Analysis of Variance to check on the significance of the Model. The findings were as shown in table 4.2 below:

**Table 4.2: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.006	4	2.516	29.424	.001 <sup>a</sup>
	Residual	4.275	5	8.550		
	Total	1.049	9			
a. Predictors: (Constant), Investments in Bank Deposits , Investments in Stock , Investments in real estate , Investments in government securities						
b. Dependent Variable: Overall profitability of the Insurance industry						

**Source: Research Findings**

From the ANOVAs results, the probability value of 0.001 was obtained which less than  $\alpha=0.05$ . Also, the F calculated at 5% level of significance was 29.424 which was greater than F critical = 5.1922. This shows that the overall model was significant at 5% level of significance in predicting the relationship between overall profitability of the insurance industry and the investments made by the insurance industry on Investments in Bank Deposits, Investments in stock, Investments in real estate, and investments in government securities.

**Table 4.3: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1526677.776	872819.178		-1.749	.141
	Investments in Stock	-.524	.681	-.091	-.770	.476
	Investments in government securities	.152	.030	1.048	5.000	.004
	Investments in real estate	.072	.063	.116	1.145	.304
	Investments in Bank Deposits	-.012	.054	-.045	-.226	.830

a. Dependent Variable: Overall profitability of the Insurance industry

**Source: Research Findings**

The researcher conducted a regression analysis so as to determine the relationship between Overall profitability of the Insurance industry (Return on Assets) and Investments. The regression equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) was:

$$Y = -1526677.776 - 0.524X_1 + 0.152X_2 + 0.072X_3 - 0.012X_4 + \epsilon$$

Whereby

Y = Overall profitability of the Insurance industry (Return on Assets)

$\beta_0$  = Constant

$X_1$  = Investments in Stock (as a percentage to total assets)

$X_2$  = Investments in government securities (as a percentage to total assets)

$X_3$  = Investments in real estate (as a percentage to total assets)

$X_4$  = Investments in Bank Deposits (as a percentage to total assets)

$\epsilon$  = Error Term

The regression equation obtained above was implied that there was a direct relationship between overall profitability of the Insurance industry (Return on Assets) and Investments made on government securities and real estate while there was an inverse relationship between Overall profitability of the Insurance industry and investments in Stock and Bank Deposits.

The constant was -1.526677776 was million shillings indicating that in normal circumstances, overall profitability of the Insurance industry Ksh (1.526677.776) which was indeed a loss. A unit change in any of the predictor variables, holding the others predictor variables constant will lead to change in the overall profitability of the Insurance industry by the coefficient of that predictor variable.

#### **4.3 Interpretation of Findings**

Insurance industry is a key sector in the Kenyan economy. The roles played by this sector are so critical and hence this it is necessary to ensure that the industry results to achievement of profit. It is crucial for insurance industry to survive and develop and hence the insurance investment enables insurance companies to offset their possible underwriting losses and make a considerable profit.

The study findings established that the overall profitability of the insurance industry as 2003 was Ksh 2.928999 billion. By 2006, this had increased to Ksh 3.836587 billion in 2006. The overall profitability of the insurance industry however decreased over the following two years were by it decreased to Ksh 3.349997 billion in 2008. Over the rest of the study period, the study finding established that the overall profitability increased to

Ksh 1.3104366 by the end of December 2012. Generally, investment in stock had been decreasing over the study period. In 2003, the insurance industry invested 1.73% of total assets in stocks which decreased to 0.15% in 2006. In 2011, the insurance industry invested 0.67% of the total assets in stock which was an increase compared to the previous year after. These investments however decreased 0.37% in 2012.

The study established that the insurance industry invested 28.49% of the total assets in Government securities. By 2006, the insurance industry had decreased its investments in Government securities to 24.83% of the total assets. This however increased slightly to 25.96% in 2008 before a sharp decline 18.64% in 2009. In 2010, the insurance industry invested 26.42% of its total stock in government securities which further increased to 30.67% of the total assets in 2011 but decreased to 30.22% in 2012.

The study findings established that the percentage of total assets invested in real estate had been decreasing over the study period. The study established that in 2003, the insurance industry invested 26.59% of the total assets in real estate which decreased sharply to 4.73% in 2004 before a further decrease to 4.32% of the total assets in 2005. by the end of the study period this percentage had reduced to amount to 2.70%. with regard to investment in bank deposits, the study findings established that the insurance industry invested 7.53% of total assets in bank deposits in 2003 which increased to 12.44% by 2006. It however reduced slight to slight to 10.27% in 2007 before increasing to 18.42% in 2008. This was the highest percentage of total asset invested in the bank deposits over the study period. This percentage however decreased consecutively over the following

years whereby it 12.31% by December 2010. As at the end of the study period, the invested made by the insurance industry in bank deposits was 14.07% of the total assets.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of key data findings, conclusions drawn from the findings highlighted and policy recommendations that were made on the objective of the study which was to establish the relationship between portfolio holding and financial performance of insurance companies in Kenya.

#### **5.2 Summary**

With regard to investments in stock, the study findings established that investment in stock had been decreasing over the study period. In 2003, the insurance industry invested 1.73% of total assets in stocks which decreased to 0.15% in 2006. The insurance industry however increased the percentage of total assets being invested in stocks to 0.80% in 2007. This however decreased to 0.10% in 2008 before increasing to 0.36% by the end of 2009 after which it reduced to 0.23% in 2010. In 2011, the insurance industry invested 0.67% of the total assets in stock which was an increase compared to the previous year after. These investments however decreased 0.37% in 2012.

On investment in government securities, the study established that the insurance industry invested 28.49% of the total assets in Government securities. By 2006, the insurance industry had decreased its investments in Government securities to 24.83% of the total assets. This however increased slightly to 25.96% in 2008 before a sharp decline to 18.64% in 2009. In 2010, the insurance industry invested 26.42% of its total stock in

government securities which further increased to 30.67% of the total assets in 2011 but decreased to 30.22% in 2012.

Regarding investment in real estates, the study findings established that it had been decreasing over the study period. The study established that in 2003, the insurance industry invested 26.59% of the total assets in real estate which decreased sharply to 4.73% in 2004 before a further decrease to 4.32% of the total assets in 2005. In 2006, the percentage of total assets invested in real estate was 5.26% which decreased to 3.82% of the total assets in 2007. The insurance industry however increased the percentage of total assets invested in real estate over the following two years whereby the investment amounted 5.73% of the total assets by the end of 2009. Over the rest of the study period, this, it reduced to amount to 2.70% in 2012.

The study findings established that the insurance industry invested 7.53% of total assets in bank deposits in 2003 which increased to 12.44% by 2006. It however reduced slight to 10.27% in 2007 before increasing to 18.42% in 2008. This was the highest percentage of total asset invested in the bank deposits over the study period. This percentage however decreased consecutively over the following years whereby it was 12.31% by December 2010. As at the end of the study period, the investment made by the insurance industry in bank deposits was 14.07% of the total assets.

With regard to the overall profitability of the insurance industry, the study findings established that the overall profitability of the insurance industry as at 2003 was Ksh 2.928999 billion which reduced to Ksh 2.320364 billion in 2004. By 2006, this had increased to Ksh 3.836587 billion. The overall profitability of the insurance industry

however decreased over the following two years to Ksh 3.349997 billion in 2008. Over the rest of the study period, the study finding established that the overall profitability increased to Ksh 1.3104366 by the end of December 2012.

### **5.3 Conclusion**

The objective of the study was to establish the relationship between portfolio holding and the financial performance of the insurance companies. The study concludes that there is a positive and strong relationship between portfolio and financial performance of the insurance companies. With regard to the overall profitability of the insurance industry, the study concludes that the overall profitability has been increasing over the study period. The study further concludes that the overall profitability is affected by the choice of portfolio made.

The study concludes that the percentage of total assets invested in stock has decreased to very low percentages. The study further concludes that there is an inverse relationship between investment in stock and the overall profitability in the insurance industry.

Regard to investment in government securities, the study concludes that an investment in government securities has a positive impact on the overall profitability of the insurance industry. An increase in investments in the government securities lead to increased profitability of the insurance industry.

The study concludes that investment in real estate has a direct relationship with the overall profitability of the insurance industry whereby increased investment in government securities lead to increase in profitability of the insurance industry. The study

further concludes that the percentage of total assets invested in insurance industry has reduced drastically.

This study concludes that investment in bank deposits are inversely related to the overall profitability of the insurance industry. This study further concludes that the proportion of total assets invested in bank deposits has been on increase despite.

#### **5.4 Policy Recommendations**

Based on the vitality of this sector in the economy, this study recommends that the policy makers should enact policies that create an environment which facilitates the operations of the industry. The policy makers should come up with policies that support the investment efforts made by the insurance industries. The study further established that the profitability of the insurance industry decreased over 2007, 2008 and 2009. This can be attributed to the political instability. This study therefore recommends that policy makers should come up with policies that ensure establishment of a stable and enduring political environment.

The study further recommends that the Government through its relevant offices promote the insurance industries as it is key to economic development in the country.

The study findings established that there was a direct relationship between overall profitability of the Insurance industry and Investments made on government securities and real estate while there was an inverse relationship between overall profitability of the Insurance industry and investments in Stock and Bank Deposits. This study therefore recommends that the management in the insurance industry should come up with

measures to ensure that the investments being made by this industry contribute toward enhancing the overall profitability of the industry.

### **5.5 Limitations of the Study**

The data used was affected by political instability of the nation and instability in the international economies. As such, political stability plays an important role in determining the performance of any sector.

The study also faced a limitation where the respondents were reluctant to provide data required for the study. They were worried that the information provided may be used for other purposes other than academic purposes. To assure the respondents, the researcher carried with her a data collection letter to assure them that the information.

The study also faced financial limitation where the researcher had limited funds to facilitate comprehensive data collection and analysis. However, the researcher used industry consolidated data to allow generalization of the findings.

### **5.6 Suggestions for Further Studies**

This study recommends that future studies be done on other factors affecting financial performance other than the ones studied above. This will allow generalization of findings to the whole financial performance determination.

This study further recommends further studies be done in establishing the effectiveness of the existing policies governing the insurance industry as it might enable policy makers realign the policies so as to ensure effective performance of the insurance industry.

This study further recommends that future research be done on the effects of Retirement Benefits Authority on administration of pension funds in Kenya. This will help bring out the portfolio investment behaviour of long term insurance companies and how it has affected financial performance.

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## **APPENDICES**

### **Appendix I: List of Insurance Companies in Kenya**

1. A P A Insurance Company Ltd
2. Africa Merchant Assurance Company Ltd
3. Apollo Life Assurance Company Ltd
4. British American Insurance Company Ltd
5. Cannon Assurance Ltd
6. Capex Life Assurance Company Ltd
7. CFC Life Assurance Company Ltd
8. Chartis Kenya Insurance Co. Ltd
9. CIC General Insurance Group Ltd
10. CIC Life Insurance Group Ltd
11. Concord Insurance Co. Ltd
12. Corporate Insurance Co. Ltd
13. Directline Assurance Company Ltd
14. Fidelity Shield Insurance Co. Ltd
15. First Assurance Co. Ltd
16. GA Insurance Ltd
17. Gateway Insurance Co. Ltd
18. Geminia Insurance Co. Ltd
19. ICEA Lion Assurance Company Limited Ltd (Formerly ICEA)
20. ICEA Lion General Insurance Company Ltd (Formerly Lion of Kenya)
21. Intra Africa Assurance Co. Ltd
22. Invesco Insurance Co. Ltd
23. Kenindia Assurance Co. Ltd
24. Kenya Orient Insurance Co. Ltd
25. Madison Insurance Co. Ltd
26. Mayfair Insurance Co. Ltd

27. Mercantile Insurance Co. Ltd
28. Metropolitan Life Assurance Company Ltd
29. Occidental Insurance Co. Ltd
30. Old Mutual Life Assurance Company Ltd
31. Pacis Insurance Co. Ltd
32. Pan Africa Life Assurance Company Limited
33. Phoenix East Africa Assurance Co. Ltd
34. Pioneer Assurance Company Limited
35. Real Insurance Co. Ltd
36. Shield Assurance Company Ltd
37. Takaful Insurance of Africa Ltd
38. Tausi Assurance Co. Ltd
39. The Heritage AII Insurance Company Ltd
40. The Jubilee Insurance Company of Kenya Ltd.
41. The Kenyan Alliance Insurance Company Ltd
42. The Monarch Insurance Company Ltd
43. Trident Insurance Co. Ltd
44. UAP Insurance Co. Ltd
45. Xplico Insurance Co. Ltd

## Appendix II: Dataset

Year	Overall profitability of the Insurance industry (Return on Assets) in '000'	Investments in Stock in '000'	Investments in government securities '000'	Investments in real estate '000'	Investments in Bank Deposits '000'	Total assets '000'
2003	2,928,999	1,508,776	24,833,564	23,177,164	6,558,821	87,157,032
2004	2,320,364	1,432,078	25,175,281	4,358,960	7,421,590	92,065,533
2005	3,085,231	179,984	29,559,893	4,515,656	8,777,473	104,464,873
2006	3,836,587	184,815	30,975,505	6,564,313	15,518,366	124,737,706
2007	3,549,898	1,169,957	37,988,915	5,596,795	15,049,310	146,541,007
2008	3,349,997	154,705	39,958,756	6,226,560	28,362,801	153,952,627
2009	4,263,457	641,067	33,258,662	10,225,145	30,081,118	178,403,820
2010	7,634,272	507,233	59,051,255	9,047,314	27,504,849	223,490,785
2011	8,316,002	1,639,511	75,319,772	8,340,558	32,762,327	245,597,207
2012	13,104,366	1,158,989	94,059,797	8,392,852	43,776,448	311,215,873

Source: Insurance Regulatory Authority, 2013

**Appendix III: Dataset expressed as a percentage to total assets**

Investments in Stock	Investments in government securities	Investments in real estate	Investments in Bank Deposits
1.73%	28.49%	26.59%	7.53%
1.56%	27.34%	4.73%	8.06%
0.17%	28.30%	4.32%	8.40%
0.15%	24.83%	5.26%	12.44%
0.80%	25.92%	3.82%	10.27%
0.10%	25.96%	4.04%	18.42%
0.36%	18.64%	5.73%	16.86%
0.23%	26.42%	4.05%	12.31%
0.67%	30.67%	3.40%	13.34%
0.37%	30.22%	2.70%	14.07%

Source: Insurance Regulatory Authority, 2013