EFFECT OF ASSET ALLOCATION STRATEGIES ON FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA

BY

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this dissertation contains no material written or published by other people except where due reference is made and author duly acknowledged.

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Sign…………………… Date……………….

I do hereby confirm that I have examined the masters dissertation of

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And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

Signed………………………… Date………………………

Dr. Brigitte Okonga-Wabuyabo

Dissertation Supervisor

DEDICATION

This research project is dedicated to my friends and family members for the great and many sacrifices they made during the process of completing this research project. Their support, encouragement, concern, enthusiasm and love motivated me to put more effort in completing this research project. Thank you all indeed and may the Almighty God richly bless you.

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ABSTRACT

Asset allocation is an important aspect in financial planning and if ignored it can prove fatal to an investment portfolio. Asset allocation strategies tend to balance returns and risks in an organization by making adjustments in the mix between cash, equities and bonds. In the insurance industry, the process of asset allocation is complicated given that the core business of insurers is settlement of claims to policyholders and yet at the same time, maximization of investment returns is crucial as investment income acts as a buffer from underwriting losses characteristic of the industry. Therefore, this study sought to determine the relationship between asset allocation and financial performance. A descriptive research design was used for the study. The study's target population was all 165 heads of finance, investment and risk departments in the 55 insurance companies in Kenya. Stratified random sampling technique was used to select 50% of the target population. The study's sample therefore was 83 respondents. The research primary data was collected by use of semi-structured questionnaires. Both quantitative and qualitative data was generated from the collected questionnaires. Thematic analysis was used to analyze the quantitative data and the result communicated in prose form. Analysis of quantitative data was based on descriptive and inferential statistics through the help of statistical package known as STATA 12. Descriptive statistics included percentages, frequencies, mean and standard deviation. The results were provided in terms of figures and tables. Inferential statistics entails regression and correlation analysis. The study also used correlation analysis and multiple regression analysis to determine the relationship existing between the independent variables and dependent variable. The study found that integrated asset allocation strategy positively influences the Kenyan insurance companies' financial performance. The study also found that strategic asset allocation strategy has a positive influence on financial performance of Kenyan insurance companies. Further, the study established that tactical asset allocation strategy influences financial performance of insurance companies in Kenya. The study further revealed that dynamic asset allocation strategy influences financial performance of insurance companies. According to the findings, there was a positive relationship between integrated asset allocation strategy and financial performance ($r=0.6492$, $p=0.000$). The results indicated a positive relationship between strategic asset allocation strategy and performance ($r=0.6574$, p-0.000). In addition, there was a positive association between tactical asset allocation strategy and financial performance ($r=0.6455$, $p=0.000$). Further, there was a positive relationship between dynamic asset allocation strategy and financial performance ($r=0.5602$, r-0.000). The F-calculated (26.82) was greater than the F-critical (2.46), which showed that the model can be used in predicting the influence of the independent variables on the dependent variable. This study recommends that insurance companies should only use integrated asset allocation strategy when they have enough resources. In addition, insurance companies should only use strategic allocation strategy in the achievement of long-term goals. Tactical asset allocation strategy should be used in achieving the short-term goals is an organization. It should be avoided in volatile markets as changes in the allocation of assets can underperform the averages of the market.

Keywords: Asset allocation, Financial Performance, Strategic Asset Allocation, Tactical Asset Allocation, Dynamic Asset Allocation, Integrated Asset Allocation

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ACRONYMS AND ABBREVIATIONS

ECOP: Executive Certificate of Proficiency in Insurance

GCR: Global Credit Rating

IMF: International Monetary Fund

IRA: Insurance Regulatory Authority

ROA: Return on Assets

ROE: Return on Equity

SAA: Strategic Asset Allocation

TAA: Tactical Asset Allocation

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Asset allocation is an investment strategy in which investors or portfolio managers attempt to balance the risks compared to the rewards by adjusting the invested amount in the portfolio assets in line with the investors risk tolerance, investment time frame and the investor's objective. One of the most important decisions for investors is their approach towards asset allocation and is a task that can easily become overwhelming where there are a number of different asset classes and sub-classes available (Bausys, 2015).

An effective asset allocation mix is often a crucial component of a company's investment policy and in most cases is ratified at Board level after due consideration by the company's Investment Steering Committee. At the asset allocation level, the Investment Steering Committee sets the allocations and once these have been agreed upon, they are incorporated into the company's portfolio model. Reports will then be prepared usually on a monthly basis by the fund managers and it is from these reports that the portfolio models will usually able to flag any breaches to asset allocation and the Heads of Finance and Risk Managers who are tasked with the responsibility for monitoring these controls for compliance will take appropriate corrective action. Fund Managers should at all times not deviate from the set portfolio model and the company's investment policy statement and exceptions to this would include the need for significant liquidity to fund urgent cash commitments that are of an exceptional nature, examples of which would include property acquisition. In such cases, a strict timeline must be set for which the deviation from the company investment policy statement will be corrected.

The procedure of allocation of assets for insurance companies is set out in the Insurance Act under Cap.487 of the Laws of Kenya (Insurance Act, Section 48). The Insurance Regulatory Authority (IRA) is the body that has been given the mandate of prescribing the method of determination of an insurer's level of admitted assets and liabilities for purposes of measurement of the solvency margins of the insurer. An insurer that is deemed unable to maintain the required margins of solvency as stipulated by IRA is declared insolvent or unable to meet its obligations and procedures for placing the company under receivership are constituted.

Further to this, the Insurance Act requires that insurance companies invest their assets in accordance with the investment guidelines set out under Section 48 of the Act and in addition submit their investment policies to the IRA in such manner, form and for a period not less than three years or such longer period as the Authority may determine from time to time. The investment assets allocation strategies adopted by companies of insurance should therefore conform to the IRA stipulated guidelines. In addition, the performance of the insurance sector is largely determined by the asset allocation strategies that have been put in place by the respective insurers to ensure that the company is able to achieve in a timely manner its financial responsibility of claim settlements as and when they fall due. Investment income acts as a cushion to most insurance companies in terms of profitability especially during periods of a downward performance in the insurance sector as a result of various economic conditions.

An insurance company that is able to strike a balance between maximization of shareholders' wealth through achievement of the set investment profile mix, and as well as having adequate cash reserves to meet its financial obligations in a timely and efficient manner, while also providing for the payment of competitive dividends to its shareholders without sacrificing the safety and soundness of the company is regarded as stable and will be rated highly in the industry hence obtaining significant market share in the long-run.

1.1.1 Insurance Companies in Kenya

The Kenyan sector of insurance comprised of 55 licensed insurers operating in Kenya during the year 2016, out of which 26 companies underwrote general insurance business, 16 were life insurers, and 13 were composite insurers (underwrote both general and life insurance). The number of licensed insurance brokers and agents stood at 186 and 6,481 respectively (IRA 4th Quarter Release, 2016).

The insurance penetration (total premium ratio underwritten to the Gross Domestic Product of the country in a particular year) has worsened in the local market in a row for the third year, going down to 2.79 percent in 2015 from 2.94 recorded in 2014 (Association of Kenya Insurers, 2015). In view of this, concerted efforts and initiatives have been undertaken by the Insurance Regulatory Authority in a bid to develop the insurance sector and these include the Executive Certificate of Proficiency in Insurance (ECOP) provided to insurance agents at the counties, trainings and stakeholder workshops, and approval of new and re-packaged insurance products (IRA 4th Quarter Release, 2016). An effective asset allocation mix forms a crucial component in the development of an insurance company's investment policy statement, which is the tool that is meant to assist the Board of Directors of a particular organization to effectively supervise, monitor and evaluate the performance of the company's investment assets. The IRA further directs that insurance companies should take into consideration when developing an investment strategy details of the asset allocation mix across investment categories. Many insurance companies' investment policies are designed to maintain compliance with all insurance legislation and regulations applicable to the particular company.

In the year 2014, Heritage Insurance Company Ltd, another strong player in the Kenyan insurance industry, received the paying ability of national scale claims rating of A+ from Global Credit Ratings (GCR) with the outlook accorded as stable (Global Credit Rating Co (Pty) Ltd, 2014). Among the variables that were considered in arriving at this rating, include the asset allocation model that the company had in place during the period. It was noted that the company's size and conservative asset allocation of the investment portfolio was supportive of robust, above average liquidity metrics, which had an overall impact on the company's balance sheet, which displayed a low capital risk position. The impact of asset allocation in the context of specific insurance companies can also be examined using the example of First Assurance Company Ltd whose rating also went up to A from A- accorded in 2014 following its acquisition by Barclays Africa in June 2015 (Global Credit Rating Co (Pty) Ltd, 2014). However, GCR noted with concern the company's high asset allocation to property, which was cited as an investment risk exposure. Another insurer, Liberty Kenya, from its 2014 audited financial statements alludes to the notion that an asset allocation that is well diversified is the safest way of achieving profile of return /good risk even under economic circumstances that are challenging.

During the year 2015, the Kenyan equities and bonds markets experienced significant volatility in their returns and which was attributed to changing macro-economic factors across the East African region. Asset allocation played a key obligation in terms of the overall financial performance of insurance companies, where an asset allocation strategy that was oriented towards the real estate sector was viewed by industry experts as outperforming their peers as the property boom continued to generate capital gains in terms of revaluation surpluses.

1.1.2 Asset Allocation Strategies

The allocation of assets can be said to be the allocation of the investor`s portfolio across different classes of assets which can include bonds, fixed deposits, equities and real estate. In a case where there is an asset allocation challenge, the investor who can be a private investor, trader or a fund manager looks for a combination of securities that are in line with the needs in an uncertain environment (Meucci, 2007). Securities in this context can refer to money market instruments (fixed deposits, commercial paper and corporate bonds), government securities (Treasury Bills and Bonds), equities and investment property. During this process, the fund manager should not deviate from the set house model and the client’s investment policy statement. The Kenya insurance regulator’s investment guidelines 2017 stipulate that for the purpose of calculating the capital adequacy, an insurer shall apply the following concentration factors in the case of a general insurer:

i) deposits in any one financial institution or group of related companies shall be ten percent of total assets;

ii) shares of any one institution or group of related companies shall be ten percent of total assets;

iii) property shall be thirty percent of total assets; and

iv) investment in related parties shall be ten percent of total assets.

Asset allocations which are strategic are adjusted to consider perspectives of long-term and/or medium-term perspectives (BNP Paribas Investment Partners, 2012). To prevent great losses which can take place on a specific strategic allocation of assets, an insurer can finally opt for an allocation that is less risky. The resulting effect of this is that it can play a role in limitation of any great losses, yet the whole performance has a likelihood of being below the expectation of shareholders and objectives that are commercial (BNP Paribas Investment Partners, 2012). Investors therefore need to make decisions on how to re-balance their portfolios in response to such outcomes. Two protection strategies that BNP Paribas Investment Partners have identified which can bring real solvency protection and hence have an impact on financial performance are as outlined hereunder. Strategic allocation of assets adheres and creates a "base policy mix" – it is assets proportional mix that is based on return rates expected for every class of asset (Van Bergen, 2017). For instance, if stocks are known to give a 10% return per annum and bonds 5% return per annum, 50% bonds mix as well as 50% stocks will be expected to give a return of 7.5% per annum.

Strategies of buy-and -hold, or “do nothing” result in performance that is related linearly to the performance of equity markets. Particular examples of these strategies include insurance portfolio of constant-proportion and insurance portfolio that is option-based. The plans are deemed to have upside and downside potential compared to buy-hold strategies and perform worse in markets that are relatively volatile.

Tactical asset allocation is yet another asset allocation strategy which is a dynamic strategy that adjusts the assets allocation considering market forecasts that are short-term (Vanguard Investment Consulting and Research, 2006). The tactical asset allocation strategy is a strategy that is moderately active because the assets combination is taken back to the time of meeting short-term profits. The strategy needs discipline since you have to be quick to accept when the short-term chances run their course as well as balance the portfolio's long-term asset position.

Integrated asset allocation strategy is another strategy whereby in order to come up with an asset mix, the risk and economic expectations are considered. All strategic aspects are included in the integrated asset allocation and accounting is made for both actual and expected market changes and the risk tolerance of the investor. Integrated asset allocation is an asset allocation strategy that is broader and only allows either the constant weighing or dynamic allocation.

The portfolio management strategy termed as dynamic asset allocation re-balances the portfolio so as to achieve the long-term goal of the asset mix. The re-balancing usually involves reduction of the best performing asset class positions and the addition of positions in those assets that are under-performing (Bollen, 2014). It is basically the process of buying and selling portions of the portfolio, in order to reset each asset class back to its original asset allocation target and/or within the tactical ranges. The main purpose of dynamic asset allocation is the reduction of fluctuation risks and the achievement of returns which are more than the target goal. The process of re-aligning the portfolio assets weighting is termed as rebalancing. This process consists of the periodic sale or purchase of assets in a portfolio so as to keep the former wanted level of asset allocation (Cardinale, Navone & Pioch, 2014). For example, in a case where asset allocation was originally 50% bonds and 50% stocks, in case the bonds performed better in this period the stock weighing of the portfolio can be increased to 70%. The one investing can then opt to sell several bonds and return of the portfolio to the target allocation of 50/50 (Bertsimas, Gupta & Paschalidis, 2012).

1.1.3 Financial Performance

The insurance industry contributes to national social economic growth and its contribution to National Development has continued to grow (IRA statistics). Furthermore, according to statistics from the International Monetary Fund (IMF), insurance companies and pension funds contribute approximately 25% of Central Bank data required for monetary policy formulation. This outlines the relative importance of the insurance sector to the provision of macro-economic data which contributes to economic stability.

The financial performance of the insurance sector is quantified by the key industry operating ratios for both general and life insurance businesses that provide information on the stability and general company`s capability to achieve its responsibility to policyholders. These ratios include retention ratio, net incurred claims ratio, shareholders’ funds to total assets, ratio of net commission, ratio of expense management, combined ratio, Return on Equity (ROE) and Return on Assets (ROA).

Liquidity is another component that affects the performance of insurance companies and Wabita (2013) in his study on the determinants of financial performance of insurance companies in Kenya, demonstrated that liquidity affects the performance of insurance companies where moderate liquidity is appropriate but too high liquidity implies that funds are invested in assets that are short-term for the purpose of meeting short-term obligations as they mature and become due. This therefore implied a negative relationship between financial performance and insurance industry leverage. This underpins the paramount importance of investment of surplus funds in a timely manner and in viable investment options by insurance companies to ensure sustainable performance.

In insurance, measures of performance may be categorized as measures of profit performance and measures of investment performance (Mwangi, 2015). Performance of investment measures can be grouped in two forms, which include return on assets employed in the business other than cash, and the return on the investment operations of several levels surplus cash that is earned on operations (Chen and Wong, 2004; and Asimakopoulos, Samitas, and Papadogonas, 2009). Profitability is a requisite component in insurance companies not only for the solvency reasons as earlier mentioned but also for purposes of attracting and retaining new and existing policyholders respectively. Therefore, a notable objective of an insurance company's management is to achieve profit and which is a fundamental need for any company undertaking insurance business to exist (Chen and Wong, 2004).

The profitability of a general insurer is affected by external and internal factors (Mwangi, 2015). This study further classified these factors to include leverage (measured by the debt/equity ratio); level of liquidity (denoted by the insurer's ability to fulfill their commitments to policyholders without the increment of profits or liquidation of financial assets on investment and underwriting activities); the size of the firm; the age of the company; underwriting risk (this shows the adequacy or otherwise of the performance of the underwriting); and the ownership structure.

1.2 Statement of the Problem

Determination of the right or "proper" mix of investment asset allocation is often not a simple process and will vary from one investor to another. This is on the premise that different investors have different risk appetites and investment profiles (Christopher, 2017). In the context of insurance companies, the process becomes more complicated given that the core business of insurers is settlement of claims to policyholders and yet at the same time, maximization of investment returns is crucial as investment income acts as a buffer from underwriting losses that are characteristic of the industry (Lin & Mulvey, 2016).

In a study conducted by Flynn (2014), an assertion was made that determination of an appropriate strategy of asset allocation needs to take cognizance of an insurer's cash flow requirements in terms of outstanding liabilities, its exposure in terms of how much they have exceeded or are below the regulator's prescribed mix, the achievement of expected returns, and the overall investment strategy of the company (Geambaşu et al., 2013; Ranson, 2016). The problem arises in determining the right mix of investment asset allocation in a bid to strike a balance between the needs of policyholders who expect prompt settlement of outstanding claims, and achievement of the company's goals in terms of profitability. This results in an asset allocation policy that is skewed towards maximization of investment returns as the primary objective (Giamouridis, Sakkas & Tessaromatis, 2017; Louton et al. 2015).

Previously, research had been done on the area of asset allocation and investment returns of insurance companies where it was noted that investment returns is a major determinant in the failure or success of any given insurance company (Shikwe, 2016). The study aimed at explaining the nature of the relationship between asset allocation and investment returns of quoted insurance companies where it was concluded that there was a linear correlation between performance and the returns of the various asset classes with the strongest correlation being between fund performance and returns in quoted equity and government securities. Njeru and Kasomi (2015) also covered asset allocation strategies and their impact on financial performance where the emphasis was on evaluation of Kenyan pension funds' portfolio holdings financial performance. The conclusion from this study was that allocation of asset needs a sophisticated method in balancing between the reporting period of the assets returns and the liabilities of the pension fund. This further emphasizes the gap that exists in terms of determining the appropriate mix of investment asset allocation that will result in optimal performance of insurance companies.

Whereas a vast number of studies have focused on the effect of the policy of allocation of assets on pension funds and unit trusts performance, there has been minimal research on the effect of asset allocation decisions on Kenyan insurance companies` performance. This study shall focus purely on the direct relationship between asset allocation and companies of insurance financial performance without a specific bias towards investment returns. The study aim was to examine how the various performance measures for insurance companies are impacted by the mix of various asset classes.

1.3 Research Objective

This study's general objective was to determine the impact of asset allocation strategies on financial performance. The following are the specific objectives;

i. To establish the effect of integrated asset allocation on the overall financial performance of insurance companies.

ii. To establish the effect of strategic asset allocation on the overall financial performance of insurance companies.

iii. To determine the effect of tactical asset allocation on the overall financial performance of insurance companies.

iv. To establish the effect of dynamic asset allocation on overall financial performance of insurance companies.

1.4 Research Questions

i. What is the effect of integrated asset allocation on the overall financial performance of insurance companies?

ii. What is the effect of strategic asset allocation on the overall financial performance of insurance companies?

iii. What is the effect of tactical asset allocation on the overall financial performance of insurance companies?

iv. What is the effect of dynamic asset allocation on the overall financial performance of insurance companies?

1.5 Justification of the Study

The study assisted insurance companies and their fund managers to assess their asset allocation mix in line with the IRA guidelines in order to optimize on portfolio returns and maximize shareholder wealth. Portfolio reviews shall ensure that the appropriate asset allocation mix is selected taking into cognizance the inherent risks. The industry regulator, IRA also would be in a position to supervise the industry effectively and apply the necessary measures to protect policyholders' interests. The study further added knowledge to the existing research on key sectors that shape the economy by providing insights on the asset allocation strategies for the insurance sector.

1.6 Significance of the Study

The study was vital to various Kenyan insurance industries including insurance companies` management, policy makers and regulatory authorities as well as investors.

To the management of insurance companies in Kenya, this study provided information on how different asset allocation strategies influence financial performance and that can be used to develop strategies based on these asset allocation strategies in an effort to improve financial performance. In addition, the study enlightened the management of insurance companies on the most significant strategies of asset allocation that may be used in management of portfolios.

The sector of insurance plays a key part in the economy of Kenya and hence its financial performance is of paramount importance. Therefore, to the policy makers and the Kenyan government, this study provided asset allocation strategies information and financial performance which may be used in the policies formulation to upgrade the financial performance of insurance firms.

Information on asset allocation strategies and portfolio management was important in investment decision making. This study therefore provided information to investors in Kenya and potential investors on how different asset allocation strategies influence financial performance in insurance firms that they can use in making decisions on which firms to invest.

1.7 Scope of the Study

This study paid focus on four strategies of asset allocation, which included strategy of integrated allocation of assets, strategy of strategic allocation of assets, strategy of tactical allocation of assets and strategy of dynamic allocation of assets. This study was conducted in the 55 insurance companies in Kenya, whose headquarters are in Nairobi County. The target population was all the 165 heads of three departments (finance, investment and risk) in the 55 insurance companies. The study was conducted between August 2017 and September 2017.

1.8 Limitation of the Study

Limitation of the study is defined as factors that affect interpretation of findings or challenges which the researcher encountered during the process of data collection. The study used a questionnaire as a tool of data collection. However, the limitation of using the questionnaire was that the researcher was unable to determine whether the participants provided correct or precise information. Nonetheless, the researcher conducted a pre-test to so as to enhance validity and reliability of the data collection instrument. Moreover, some of the participants shun away from filling the questionnaire for fear of victimization by their management. To overcome this challenge, the researcher encouraged the participants to fill the questionnaires as any information which they provided was used for learning purposes. Another challenge encountered during the study was that the management in insurance firms was complacent in issuing data collection permit. Nonetheless, the researcher attached a permit from NACOSTI so as to prove to the management that the study was basically for learning purposes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of literature on the connection between asset allocation and financial performance. The chapter starts with a review of theories and later provides the empirical review of literature, conceptual framework and operationalization of variables.

2.2 Theoretical Review

Financial systems around the world offer investors with an array of assets they can choose from and available asset allocation strategies have their advantages and disadvantages in relation to risk, tax considerations, interest rates and liquidity (Geambaşu et al., 2013). As a result, various theories have been developed to explain various asset allocation strategies. This study will be anchored on three theories: modern portfolio theory, the Black-Litterman model and Barbell theory.

2.2.1 Modern Portfolio Theory

The theory of modern portfolio was developed by Harry Markowitz in 1950's. Markowitz (1952) looked at the positive effects of asset diversification as a way of minimizing or reducing risk portfolio. The modern portfolio theory basically shows how risk-averse investors may come up with portfolios to maximize or optimize returns expected depending on the risk level, stressing that risk is part and parcel of a greater reward (Santacruz, 2016). Markowitz found out that blending together non-correlated assets, which would perform differently in different economic conditions, a portfolio's potential would be optimized. As such, he developed an efficient frontier for investment idea, which refers to an optimal point where no assets can be removed or added to improve performance (Geambaşu et al., 2013).

Harry Markowitz established the foundation of the Theory of Modern Portfolio, which is one of the greatest contributions in formal risk-return framework establishment for decision making of investment (Grubisic, Kamenkovic & Duran, 2013). Through the definition of investment risk quantitatively, Markowitz provided to the investors a mathematical approach to portfolio management and asset allocation. However, modern portfolio theory is limited by return and risk measures which always symbolizes not the markets of investment realities.

The assumption of elliptical distribution is a key limitation that is practical as it is considered symmetrical. The use of standard deviation of variance means that better-than-expected uncertainty returns is not liked in the same way the worse than expected uncertainty returns is disliked (Grasse, Whaley & Ihrke, 2016). In addition, the use of less downside than upside returns look riskier than they really are and returns opposite with a downside predominance returns. This implies that the use of the traditional modern portfolio theory in the measurement of investment portfolio evaluation and construction frequently distorts investment reality.

Before the work of Markowitz, investors and investment companies mainly focused on the assessment of risks and rewards of each security by constructing their portfolios. The standard of basic investment advice by then was identification of those securities which were offering the best chances to get returns with the lowest risk and then develop portfolios from them. However, the modern portfolio theory contributes to investment managers can achieve an efficient frontier by ensuring that the assets selected have unsystematic risk and can offset each other risks and hence maximize the returns of a portfolio.

The modern portfolio is used in this study to explain the use of various strategies in asset allocation while putting into consideration risks and returns (Santacruz, 2016). In modern portfolio theory, portfolios are described by different levels of risks and returns. On the same note, various asset allocation strategies are characterized by different levels of expected risks and returns. Therefore, "optimal" portfolios can be achieved by maximizing returns for a risk level or minimize the risk expected for a return level (Grasse, Whaley & Ihrke, 2016). Within the MPT scope a portfolio is said to be superior to another if it achieves a higher level of expected return for a known level of expected standard deviation or if it achieves a lower standard deviation level for a known return. All the portfolios that minimize the return levels and expected volatility or maximize the expected returns at given volatility levels are seen as "optimal" and lie on the "efficient frontier".

2.2.2 The Black-Litterman Model

The Model of Black-Litterman is an allocation of portfolio mathematical model which was developed in the year 1990 by Robert Litterman and Fischer Black (Black & Litterman, 1990). The model seeks to help institutional investors to overcome problems that they encounter in the application of the modern portfolio theory. The model begins by making an equilibrium assumption that a representatives' allocation of asset ought to be proportional to the values of market of the available assets, then it changes taking into account the 'views' (this is the asset returns specific opinions) of the investor so as to determine the assets allocation (Mankert & Seiler, 2011).

First, there is a bench mark portfolio which is from the expected returns that are at equilibrium and which are able to clear the existing market while assuming a known risk model.

The market implied views or equilibrium expected returns are the returns set and those that can give the market portfolio if they are led to an optimizer with a given risk model. Simply said, the returns arrived from reverse optimization on assumption that there is an efficient market portfolio (Bertsimas, Gupta & Paschalidis, 2012).

The Bayesian mixed-estimation techniques are used to combine the investor private views and the "market-implied" views. The Black-Litterman model accepts the inclusion of both the relative view and the absolute view which is one sector will perform better than others and the affixed expected returns views respectively. The relative weight on the investor shows how much confidence the investor has in the view. Input for portfolio optimization uses the posterior distribution of expected asset returns given the recommendation changes (Mankert & Seiler, 2011).

In this study, the model of Black-Litterman is used in explaining and guide asset allocation decisions by investors. Allocation of assets is a decision faced by insurance companies on daily basis and investment managers must come up with a way of allocating portfolio across a few asset classes. Theoretically, the modern portfolio theory gives us a solution to the challenge that exists when the asset co-variance and expected returns are known (Bertsimas, Gupta & Paschalidis, 2012). However, even though the co-variances of several assets may be adequately estimated, it is hard to estimate the returns expected. The Black–Litterman mode solves this problem by not requiring the investors to estimate the expected returns. The model instead makes an assumption that the initial expected returns are what is needed to make equal the equilibrium asset allocation to what is experienced in the market. The investor is only needed to state how expected returns assumptions differ from these on the market and indicate the alternatives degree of confidence. From this information, the Black–Litterman model calculates the asset allocation that is desired.

2.2.4 Barbell Theory

Barbell Theory was developed by Cohen Marilyn in the year 2005 (Cohen, 2005). The theory involves investment in short and long duration bonds by an investor and failure to invest in immediate duration bonds. This strategy is beneficial when interest rates are increasing. This is because as the short-term maturities rollover, the investors receive a higher interest rates and hence raising the value (Flynn, 2014).

The Barbell strategy is designed to develop a reasonable return on investment that is part of the asset portfolio. Basically, this strategy is developed around the concept of concentrating on the portfolio securities maturities by ensuring that the dates of maturity are at a later or very close date (Powell, 2010). This strategy seeks to use bonds and other securities that mature at a long-term or short-term period (Abuaf, 2013). Even though it is a good idea to incorporate a mist of investments with varied maturity dates, this method concentrates the dates at opposite ends of a spectrum. This implies that a portfolio has two groups rather than have securities maturing consistently from one period to the other. If two ends of the barbell represent two opposite ends of the risk spectrum, an investor will allocate all his money between the very aggressive and very safe end. One of the advantages of the Barbell strategy is that it allows a portfolio to have a quick turnover of large amounts of assets at any one time.

The Barbell theory is used in the current research to explain asset allocation strategies and how they can be used to achieve higher return on assets. The Barbell strategy has in the past been used by different authors to explain the use of theory on achieving higher return on assets.

Christopher (2017), in his study on using a Barbell approach for higher returns indicates that Barbell strategy is one of the portfolio allocation strategies designed to generate a good return on the investments that are coupled with the asset management, which results in higher returns with less volatility.

2.3 Empirical Review

A literature review is in this section presented on asset allocation strategies and financial performance. The section specifically presents a literature review on combined strategy of allocation of assets, strategic allocation of assets, strategy of tactical allocation of assets and strategy of dynamic allocation of assets.

2.3.1 Strategy of Integrated Allocation of Asset and Firm Financial Performance

Integrated asset allocation provides a structure for understanding the vital components of asset allocation decisions (Zhang & Ge, 2016). In its general perspective, this strategy includes more traditional asset allocation strategies like tactical, insurance and approaches of strategic allocation of asset. The main aim of the strategy of integrated allocation of assets is to maximize of optimize the net worth of the investors (Sharpe, 2011). As a result, it looks at their expected net worth (assets minus liabilities) and the future worth standard deviation provided with the willingness of the investor to take on an added net worth risk in order to achieved a higher expected net worth. The procedure of asset allocation comprises of a few key steps. The investors' net worth is changed through a function of a risk tolerance to the investors risk tolerance. Simultaneously, the current capital market conditions such as dividends, prices and earnings are changed into risks, correlations and expected returns for different classes of assets. Using these predictions and the risk tolerance of the investor, an optimizer decides on the most appropriate and applicable asset mix. The asset mix, in turn, determines the investor's actual returns over the period (Cousin et al. 2016).

According to Baranoff and Sager (2009), integrated asset allocation deals with the investors net worth optimization and therefore looks at future net worth and its standard deviation provided with the willingness of the investor to embrace risk. Compared to other asset allocation methods this method takes into consideration the risk tolerance and future returns (Baranoff & Sager, 2009). The process commences like that of other strategies or dynamic/ tactical asset allocation and the investment choices are changed to achieve the intended long term and short-term results.

In addition, Mulvey, Simsek and Zhuojuan (2006) assert that using an integrated market mix, an investor takes into consideration his risk and economic expectations so as to come up with an asset mix. While other strategies like insured allocation of assets, tactical allocation of assets, strategic allocation of assets, dynamic allocation of assets and constant weighting allocation of assets consider the returns in the future but they all do not consider risk tolerance. The strategy of integrated asset allocation considers the capital market changes and the expectations, the risk tolerance of the investor and the objectives of the investor. These factors are put together in integrated asset allocation to provide a portfolio mix that offers the most appropriate opportunity to meet the needs of the investor when the forecast of the capital market is known. The portfolio returns are then used as inputs in a process that is iterative and the overtime expectations of capital market changes, objectives and constraints of the investor are noted. Revision of the portfolio is done considering the changes.

According to Roll (2013) in theory when an existing portfolio is combined with a single asset or when looking at the benefits of two combined portfolios, in a multi-factor world the correlation is misleading. Therefore, he advises that it is important to reweigh the portfolios so that the risk profiles mimic each other. The portfolio will have a similar profile risk like the asset undergoing mimicking and similar sensitivities to the macro exception shocks that are frequent that are made of the risk drivers. Under the engineered mimicking profile, the only thing which is important for diversification is the non-explained residue volatility. The limit has no residual; volatility and the benefits of diversification are none. Diversification according to the traditional view is most effective when the assets have a negative or low correlation. The research provides the R-square of the portfolio indexes rather than the correlation, the R-square is a preferred measure for the expected diversification benefits as a high R-square equals reduced gains. The result contains important effects on the asset allocation and asset management. Additionally, one result shows that the degree of integration changes with time, consistent with Pukthuanthong and Roll (2009), and investors do the re-balancement of their portfolio with regard to asset class expected co-movements which are consistent with Piplack and Straetmans (2009).

$H_0$1: Integrated asset allocation has no significant effect on the overall financial performance of insurance companies

2.3.2 Strategic Asset Allocation Strategy and Firm Financial Performance

Strategic allocation of assets is the target allocation that the fund manager of an insurance company is expected to invest in the portfolio. The strategic allocation of assets is applied in a portfolio in determination of asset weights of long-term policy in a portfolio. Risk, co-variances and long-term average assets are used in the estimation of future capital market results.

Historical information of return is applied generating frontiers which are efficient and the investors decide the most appropriate combination of assets in the period of planning. This results to constant asset mix allocation development having periodic re-balancing to modify the specified asset weights portfolio. The strategic allocation of assets is similar to the strategy of integrated allocation of assets but unlike integrated allocation of assets, it does not have feedback looks. After the asset mix is obtained, the manager of investments tries not to change the allocation of assets in line with market temporary changes and the circumstances of the investor. As a result, Umar (2017) asserts that strategic asset allocation denotes the basic nature of a trade-off between safety and opportunity that confront an investor.

Besides defining the return and risk of a portfolio, strategic allocation acts as an ongoing scorecard through which all outcomes are measured (Wu, Ma & Yue, 2017). During the process of asset allocation, benchmarks are normally selected to represent different strategies and classes. These benchmark attributes that include the variability of those returns, co-variability of the returns with the other potential asset classes and historical returns, give a baseline for consideration of different asset mixes. As a result, upon final allocation selection the weighted components as represented by benchmarks can be used in the calculation of what the portfolio should have returned given the underlying changes in the market.

According to Hayes, Primbs and Chiquoine (2015), the allocation of assets is one of the most critical decisions investors make in the determination of the expected outcomes and in explaining the actual outcomes of a portfolio. Therefore, acknowledging the impact of the adoption of strategic asset allocation is crucial during the portfolio design (to correctly anticipate return and risk potential) and in the assessing and measuring future outcomes.

From the perspective of the management, the understanding of potential outcome portion that is likely to be driven by asset mix helps in the definition and in informing efforts that follow the allocation settings. Particularly, by adopting a strategic asset allocation, an institution or investor must make several decisions in relation to the implementation of the allocation. This involves the consideration of various forms of management (passive versus active), making decisions on investment management firms to hire and number of assets to allocate to each investment manager. These decisions are critical and can have a negative or positive impact on the risk and return of the portfolio.

Sa-Aadu, Shilling and Tiwari (2014) carried out a study on strategic allocation of assets over varied portfolio performances and conditions which are economic. The aim of the study was to assess achievement in performance of portfolio as those investing diversify into diverse classes of asset, with specific emphasis on such gains' timelines. The results indicated that even though different asset classes provide notable gains in the performance of portfolios, the timeliness of the gains differed significantly across classes. In addition, precious metals and commodities as well as equity REITs are two main classes of asset which bring about gains of portfolio as growth of consumption is low or volatile.

$H_0$2: Strategic asset allocation has no significant effect on the overall financial performance of insurance companies

2.3.3 Tactical Asset Allocation Strategy and Firm Financial Performance

Tactical Asset Allocation is the minimum and maximum acceptable percentages that permit the fund managers of insurance companies to take advantage of market conditions within these parameters. Tactical Asset Allocation (TAA) involves constantly adjusting the portfolio's asset mix so as to take advantage of the market conditions changes. The adjustments are solely as a result of the expected changes in the different asset classes' values relation; the tolerance of risk of the investor and the constraints of investment are taken to be with time constant. Tactical allocation of assets is normally based on the assumption of the reversion of mean that holds that a return of a security will go back to its mean value despite it past return. This method is a contrarian investment strategy. This implies that an investor using this strategy will always buy an asset that is not in favor and sell the asset in the future with a higher market value. Changes in the portfolio asset class mix rely on the general volatility level in the capital markets, fixed income risk premiums, changes in macro-economic environment and the relative size of the equity.

According to Ranson (2016), the objective of this strategy is to systematically exploit temporary imbalances and inefficiencies existing in equilibrium values among the different classes and sub-classes. With time, the long-term strategic allocations are important in determining the return of the broadly diversified portfolio. The strategy of tactic asset allocation can increase the value at the margin when it is designed with the right accuracy and objectivity so as to do away with obstacles and risk factors that only affect the strategy. Tokat and Stockton (2015) findings show that while some strategies of tactical allocation of assets can add value, averagely tactical asset allocation strategies do not produce statistically excess returns over all time periods.

Chong and Phillips (2014) explored the tactical asset allocation strategy using economic based factor pricing model. By use of a filtering method based on asset responses to the economy, alternative optimization methods considered included low-volatility equally-weighted as well as mean-variance allocations. The results indicated that the economic response filtering with the maximum Sharpe ratio optimization provides the best overall performance in terms of returns while the low-(economic) volatility portfolio had the least volatility. In another study evaluating the tactical asset allocation strategy, Tokat and Stockton (2015) argue that the success with a strategy of tactical asset allocation significantly relies on the construction of a good model.

In their study Uhl, Pedersen and Malitius (2013) indicated that strategy of tactical allocation of assets has various challenges. First, tactical asset allocations in an organization cannot change positions too often are they are required to manage big client bases and assets books on the side of the discretionary. This implies that positions are opened within a horizon of three or six months when the tactic allocators of assets have a monthly or bi-weekly form of investment. Therefore, it is crucial to have in place a tactical asset allocation quantitative strategy that does not keep on changing in the year. As such the allocators of tactical strategy are faced with the challenge of identifying movements in the market regardless of the “noise” in the financial markets.

Louton et al,. (2015) studied on the use of tactical asset allocation by US pension investors. The authors argue that tactical asset allocation strategies aim at adding value through deviation from a policy mix plan based on the views of the manager on the different regions, classes and sectors of assets attractiveness within the set of investment opportunity. Even though, tactical asset allocation strategy has been found to increase value of the portfolio, risk taking and skills of the manager are key in the achievement of risk-adjusted performance. In addition, the magnitude and the timing of changes from the policy mix may affect considerably the portfolios outcomes. As such, it is vital for investors to examine the right obligation of tactical allocation of assets in their process of portfolio management and conduct an evaluation on the risk-return transaction of tactical deviations from policy. Louton et al,. (2015) therefore sought to establish the association between the size of the tactical band and practices of re-balancing to different measures of portfolio performance. The study findings indicated that managers' provision with insufficient flexibility in decision making on allocation of assets can allow define benefit strategies to weather down markets better.

In the United States, Simi (2013) carried out a study on strategic allocation of assets and Markov regime shift with generalized autoregressive conditional heteroscedasticity (GARCH). The authors argue that during 2008 financial crisis, the S&P 500 Implied Volatility Index (VIX), referred to as the "fear gauge," reached 80% which was the highest it had ever reached. There were great pressures on the portfolio managers in situations of vitality of high market. It is known that portfolio performance is dominated by asset allocation therefore, the current study looked in to the strategies of asset allocation. It came up with strategies of asset allocation solution for the management of portfolios under very volatile level of the markets and conditions.

$H_0$3: Tactical asset allocation has no significant effect on the overall financial performance of insurance companies

2.3.4 Dynamic Asset Allocation Strategy and Firm Financial Performance

Dynamic allocation of assets is an allocation plan employed by products of investment like mutual funds, index funds, principal protected notes, credit derivatives, hedge funds as well as other structured products of investment to gain exposure to different opportunities of investment and produce a 100 percent protection principal (Haixiang, Zhongfei & Yongzeng, 2016). Lioui and Poncet (2016) assert that the dynamic asset allocation can be used as an investment strategy whose objective is to produce high returns despite the performance of market indices by use of Tactical Asset Allocation/Global Tactical Asset Allocation (TAA/GTAA) tools around a benchmark that is strategic.

According to Giamouridis, Sakkas and Tessaromatis (2017), CPPI as part of dynamic allocation of assets includes an assurance which is linked to the underlying investment and zero-coupon bond. Constant proportion portfolio insurance (CPPI) is a form of trading method whereby the asset owner maintains an exposure to the risky asset upside potential while giving a guarantee in capital to the asset's downside risk. The assets are shifted between the two components considering the underlying investments performance.

Giamouridis et al. (2017) conducted a study on dynamic allocation of assets with liabilities. The authors developed an answer to the dynamic multi-period portfolio change of choice of different time changing investments and risky liabilities of investors. According to the results where there are no asset allocation weights and regulatory constraints, there are great gains to investors with dynamic allocation of assets model with liabilities. These gains are minimal in the pension funds as they face funding ratio constraints.

Cardinale, Navone and Pioch (2014) conducted a study on the power of dynamic asset allocation. The aim of the study was to investigate whether practitioners can profitably exploit predictability patterns by using relatively simple and dynamic asset allocation strategies. Using a long-term US sample between the years 1926 and 2010, the authors' findings were that predictability led to higher risk adjustment performance from the strategies of dynamic allocation that were based on inputs that were forward looking compared to historical average returns.

Basu, Oomen and Stremme (2010) conducted a study a study on international dynamic allocation of asset and predictability of return. The study constructed used simple, real-time dynamic international allocation of assets strategies that were based on every-day data that make use of predictability of the return from integration of market that varies with time. The strategies seemed to capture the practicability of the economic value that was implied by the market integration and have successful characteristics of timing strategies. In a study on stop-loss, stop-gain strategies' value in dynamic allocation of assets, Shelton (2017) argues that dynamic asset allocation methods that use the stop-gain stop-loss rules can increase long-term return and decrease risk compared to other asset allocation methods. The authors introduced a dynamic asset allocation method that shifted the portfolio weights considering a predefined stop-gain and rules of stop-loss. The bond and the S&P mutual bonds were used as the assets and the strategy was tested from 1992 to 2012 and gave a yearly geometric return of 8.45% vs 7.50% for the 500% S&P index fund less volatility (9.41% vs. 18.76% for the S&P index fund). Additionally, the method used showed a significant and positive CAPM alpha during the period of sampling.

In Canada, Switzer and Omelchak (2011) conducted a study on the benefits of dynamic asset allocation strategies across hedge funds. The performance of the asset allocation methods was done using both the dynamic and static strategies while considering the conditional volatility. Dynamic portfolios were considered daily and the three indices of the Standard & Poor's Hedge Fund Index findings were that they performed better than the passive S&P 500 Index, on risk adjusted and expected return parts.

In the United States, Madhogarhia and Lam (2015) conducted a study on dynamic asset allocation with a purpose of analyzing if dynamically changing a portfolio could result to better returns for multiple classes of assets. The article utilized different asset classes mean reverting trend and used a strategy of relative valuation in allocating the funds to different assets classes. The results indicated that the strategy of dynamic allocation of assets (DAA) led to a positive annualized geometric mean return differential over 20-30-year horizons on a geometric mean basis. The DAA technique standard deviation was lower compared to the six asset classes while Max Drawdown and Sharpe ratios were favorable compared to the small and large cap stocks portfolios.

$H_0$4: Dynamic asset allocation has no significant effect on overall financial performance of insurance companies

2.4 Conceptual Framework

This study sought to identify asset allocation strategies' effects on the insurance companies` financial performance. The independent variables in this study were strategy of integrated allocation of assets, strategy of strategic allocation of assets, strategy of tactical allocation of assets and strategy of constant-weighting allocation of assets. The dependent variable was the financial performance of insurance companies. Figure 2.1 shows that hypothesized associations between the independent variables (integrated allocation of assets, strategic allocation of assets, tactical allocation of assets and constant-weighting allocation of assets strategy) and the dependent variable (financial performance)

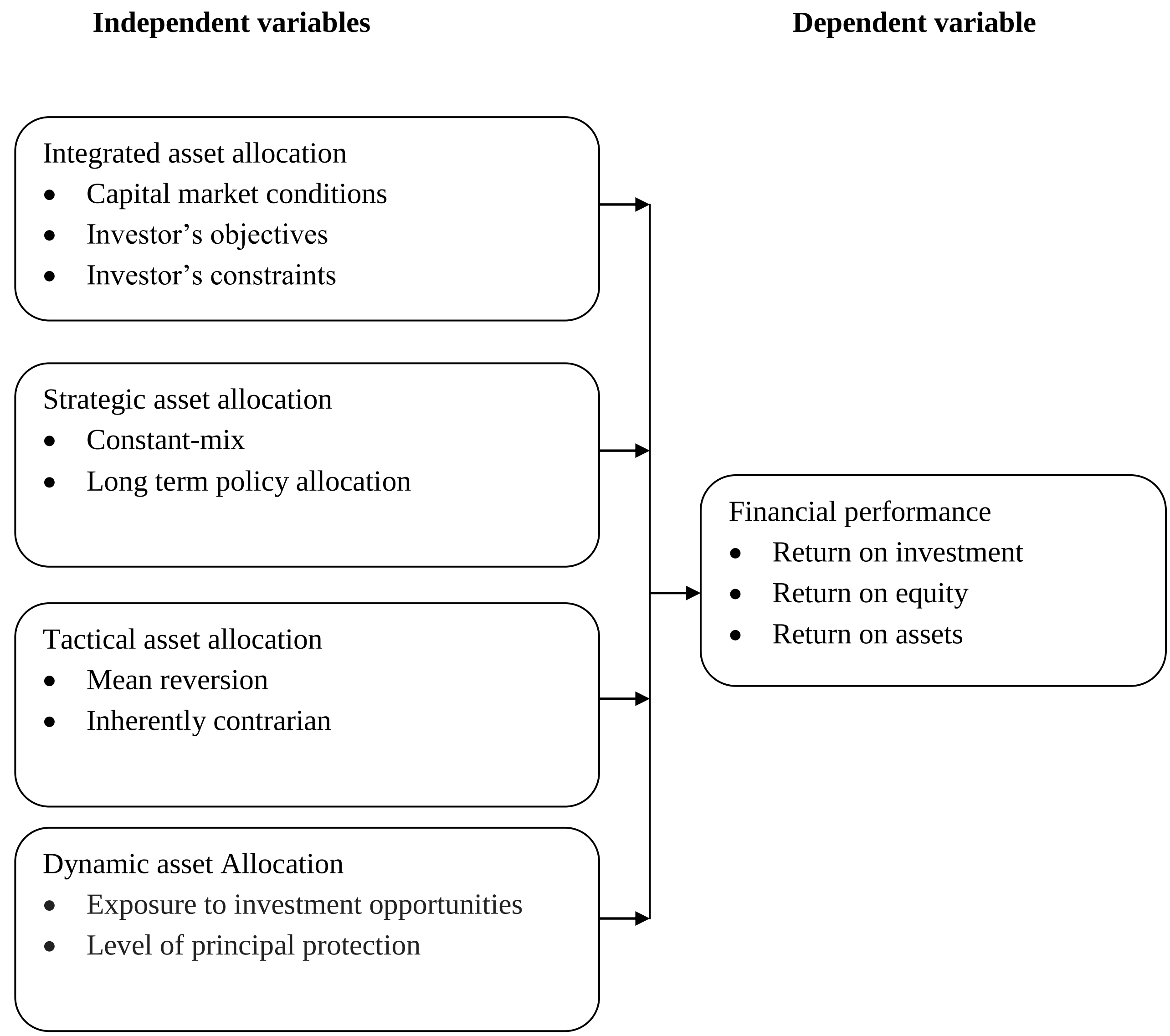

Figure 2. 1: Conceptual Framework

2.5 Research Hypothesis

In line with the research objectives, the following hypotheses were formulated for testing:

$H_0$1: Integrated asset allocation has no significant effect on the overall financial performance of insurance companies

$H_0$2: Strategic asset allocation has no significant effect on the overall financial performance of insurance companies

$H_0$3: Tactical asset allocation has no significant effect on the overall financial performance of insurance companies

$H_0$4: Dynamic asset allocation has no significant effect on overall financial performance of insurance companies

2.5 Variables Operationalization

Table2.1: Variables Operationalization

Objective	**Variable Type**	**Indicators**	**Measures**	**Type of data analysis**
To determine effect of integrated allocation of assets on the insurance companies' general financial performance.	**Independent** • Integrated allocation of assets	• Capital market conditions • Investor's objectives • Investor's constraints	• Nominal scale • Ordinal scale	• Descriptive statistics • Correlation analysis • Regression analysis
To examine strategic allocation of assets' effect on the insurance companies' general financial performance.	**Independent** • Strategic asset allocation	• Constant-mix • Long term policy allocation	• Nominal scale • Ordinal scale	• Descriptive statistics • Correlation analysis • Regression analysis
To establish tactical allocation of assets' effect on the insurance companies' general financial performance.	**Independent** • Tactical asset allocation	• Mean reversion • Inherently contrarian	• Nominal scale • Ordinal scale	• Descriptive statistics • Correlation analysis • Regression analysis
To determine dynamic allocation of assets' effect on the insurance companies' general financial performance.	**Independent** • Dynamic asset allocation	• Exposure to investment opportunities • Level of principal protection	• Nominal scale • Ordinal scale	• Descriptive statistics • Correlation analysis • Regression analysis
	Dependent • Financial performance	• Investment Return • Return on equity • Return on assets	• Nominal scale • Ordinal scale	• Descriptive statistics • Correlation analysis • Regression analysis

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to a process used to gather and analyze data during a study (Bryman & Cramer, 2012). This chapter presents methods which were used in this research, in sampling participants, collecting as well as analysing data. The section is made up of research design, target population, size of the sample, methods of sampling, instruments of collecting data, procedures used to collect data, pre-testing instruments of the research and data analysis and presentation.

3.2 Research Design

This is the method used to conduct the study. A descriptive research design was used. The method involves data gathering, events description and data organizing, tabulating, depicting, and describing. According to Greener (2008), descriptive design involves the collection of data so as to test the study hypothesis and answer questions on the subject under study. The reasons why the researcher used this method is because it provides a chance for the use of both quantitative as well as qualitative data so as to know the characteristics of the phenomenon under study. Additionally, the study used the views and opinions of the managers in insurance companies in Kenya and hence descriptive research design was the most appropriate.

3.3 Target Population

These are the members of a hypothetical or actual group of individuals, subjects or objects whom the study’s conclusions are generalized (Kothari, 2004). The current study’s target population was all the finance managers, investment managers and risk managers in all the insurance companies in Kenya. In accordance with Insurance Regulatory Authority (2016), Kenya has 55 licensed insurers.

Table 3. 2: Target population

Department	Target population
Finance	55
Investment/Development	55
Risk	55
Total	**165**

Source: Insurance Regulatory Authority (2016)

3.4 Sampling and Technique of Sampling

A sample is the representative portion which is selected to be a representation of the total population being studied (Creswell, 2006). 50% of the target population was selected using the stratified random sampling method. According to Greener (2008) a 50% sample should be selected if the population is between 100 and 500 (100<N<500). The use of the method of stratified random sampling classifies the population into sub-groups termed as strata. The members' attributes and characteristics are the basis of forming the sub-groups. The strata were classified, a random sample was gotten from every stratum in a number which was proportional to the size of the stratum compared to the total population (Bryman, 2003). The strata in the current study was the heads of three departments involved in asset allocation in insurance companies. These departments include finance, investment and risk. The key advantage of the stratified method of sampling lies in its ability to capture the important sample attributes. The sample size of the study was thus 83 respondents.

Table 3. 3: Size of the Sample

Department	Target population	Size of the Sample
Finance	55	28
Investment/Development	55	28
Risk	55	28
Total	**165**	**83**

3.5 Research Instrument

Primary data gathered by use of questionnaires that are semi-structured was used in the study. As pointed out by Kultar (2007), primary data is fresh data or data that has never been collected before. Questionnaires are usually used where respondents are willing to give information and are easily traceable. The fact that this method may be applied in reaching many respondents as long as they can read and write independently makes it convenient. The questionnaires were made up of questions which were both closed and open-ended to allow the respondent better give their opinion. The structured questions saved money and time and were easy to analyze. The unstructured questions on the other hand were used to allow the respondents to provide an in-depth response without being restricted to provide the information they had. Kothari (2004) explains that use of questionnaires is a cheap method of data collection from a large group and it also assures the respondents of anonymity.

The questionnaire contained six sections. The first section contained questions that provided the demographic information of the respondent. The other sections with the exception of the sixth which was the last section had questions regarding the independent variables while the last section had questions regarding the dependent variable.

3.6 Validity and Reliability

A pre-test was done so as to identify and rephrase any misinterpreted, ambiguous and misunderstood questions. Additionally, the pre-test facilitated the removal of any errors and allowed the researcher to know if the questions in the questionnaires were appropriate and relevant (Creswell, 2006). The pre-test group was sampled randomly from Jubilee Insurance risk department and comprised of 10% of the sample size (8 staff). Hertzog (2008) affirms that 10% of the sample needed for the full research ought to be utilized in the size of the sample.

According to Creswell (2006), validity is the extent to which the instrument of measure successfully describes the measured element. The study used content and face validity. In case the questions asked are misunderstood or misinterpreted then this is known as face validity. Logical or content validity is the degree the study's measure is a representation of the provided social construct facets. The content instrument of research validity was improved through seeking the study experts and supervisors' advice. The face validity of the instrument of research was enhanced by using a pre-test and making clear all the unclear questions.

A measure of consistency is known as reliability. It is also the degree to which the measure gives similar results each time it is used on similar subjects under similar circumstances. The questionnaires that were completed by the pilot group were used in testing the research instrument`s reliability. In the current study, the research instrument's reliability was quantified by measuring the internal consistency of the responses. The internal consistency was measured using the Cronbanch's Alpha technique where the ranges of alpha were from 0 to 1, with the reliability increasing as the values of alpha increased. The most common used reliability coefficient is 0.6 to 0.7 and a good reliability is shown by a value of 0.8 or a greater value (Kothari, 2004). In the current study, a value of 0.7 and above was accepted but a value less than 0.7 necessities adjustments in the instrument of research. The data obtained from the pilot study was not adopted in the main research.

3.7 Procedure of Data Collection

Before collection of data, the researcher obtained a data collection letter from KCA University and a permit of research from the National Commission of Science Technology and Innovation (NACOSTI). The questionnaires were administered to the finance managers, investment managers and risk managers in the 55 insurance companies using a drop and pick method. Follow-ups were done every day to monitor the progress of the respondents while answering the questionnaires. The exercise of collecting data was anticipated to take a fortnight.

3.8 Analysis of Data and Presentation

Both quantitative and qualitative data were generated from the semi-structured questionnaire whereby the analysis of the data was done differently using different methods. Thematic method was used for the analysis of qualitative data as the results were presented in form of prose. Descriptive and inferential statistics with the aid of STATA 12, a statistical software were employed in analyzing quantitative data. Before the analysis was done, the questionnaires were edited for consistency and completeness. To summarize the background information, descriptive statistics were used. It included the use of measures of standard deviation, central tendency, percentages and frequencies. Presentation of the results was in form of figures and tables including pie and bar charts.

The connection between the dependent and independent variables was determined using correlation and regression analysis. A 95% confidence level was applied which shows a significant level of 0.05. This indicates that for the independent variable to take a significant effect on the dependent variable, the p–value should be below 0.05. The four study independent variables make up the regression model below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby;

Y = Financial performance of insurance companies

B_0 = Constant

β_1- β_4 =Coefficients of determination

X_1 = Integrated allocation of assets

X_2 = Strategic allocation of assets

X_3 = Tactical allocation of assets

X_4 = Dynamic allocation of assets

ε = Error term

3.9 Ethical Considerations

To maintain the credibility of the study, the researcher considered important ethical issues. First, all ideas from other authors used in the research were acknowledged so as to avoid plagiarism. Additionally, the people who showed a willingness to be part of the study were the ones provided with questionnaires to fill. Those unwilling to participate in the research for whichever reasons, were not made to take part. The study observed total confidentiality and no unauthorized person was given the study's information. To assure the respondents, an assurance was given to them on the integrity and confidentiality of the information they provided. Further, the researcher applied for a permit to conduct the research from the National Council of Science and Technology Council (NACOSTI).

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter covers the results presentation, interpretation as well as discussion. The purpose of this research was to determine the impact of the strategies of asset allocation on financial performance. The study also sought to establish the influence of the strategy of integrated allocation of assets, strategic allocation of assets, strategy of tactical allocation of assets as well as strategy of dynamic allocation of assets.

4.2 Response Rate

The study`s target population included all the 83 managers in the Kenyan insurance companies. Out of 83 managers, 72 responses were obtained. This provides a response rate of 86.74%. A 100% rate of response was not attained because some of the questionnaires contained some information which was inconsistent and some were filled half-way and therefore could not be employed in the study. According to Kothari (2004), a 50% or more rate of response is enough for analysis, thus showing that 86.74% was an acceptable basis for drawing a conclusion.

4.3 General Information

The overall information comprises of the respondents, gender, age bracket, highest education level as well as the time duration they had been working in their organizations.

4.3.1 Respondent`s Gender

The respondents were requested to show their gender and the findings were as shown in table 4.1.

Table 4 1: Gender of the Respondents

Gender	Freq.	Percent	Cum.
Female	29	40.28	40.28
Male	43	59.72	100.00
Total	72	100.00	

From the results, 59.72% of the respondents showed that they were male as 40.28% indicated that they were female. This implied that most of the finance, investment and risk managers in the insurance industry in Kenya were male. The findings are in agreement with the finding of Njeru, and Kasomi, (2015) that majority of staff in insurance firms are male.

4.3.2 Age Bracket of the Respondents

The respondents were requested to show their age bracket. The results are presented in Table 4.2;

Table 4 2: Age Bracket of the Respondents

Age	Freq.	Percent	Cum.
20 to30 years	14	19.44	19.44
31 to 40 years	34	47.22	66.67
41 to 50 years	24	33.33	100.00
Total	72	100.00	

In accordance with the findings, 47.22% of the respondents showed that they were aged between 31 and 40 years, 33.33% showed that they were aged between 41 and 50 years while 19.44% showed that they were aged between 20 and 30 years. From the findings, most of the finance, investment and risk managers in the insurance industry in Kenya were aged between 31 and 40 years. The findings are in agreement with the findings of Abuaf (2013) that most of employees working in insurance firms in Kenya are in the age bracket of 31 and 40 years.

4.3.3 Highest Education Level of the Respondents

The respondents were also asked to show their highest education level. The results were as shown in Table 4.3.

Table 4 3: Highest Level of Education of the Respondents

Highest level of education	Freq.	Percent	Cum.
Undergraduate degree	49	68.06	68.06
Masters Degree	23	31.94	100.00
Total	72	100.00	

From the results, 68.06% of the respondents indiacted that they had undergraduate degrees while 31.94% showed that they had masters degrees. This implied that most of the finance, investment and risk managers in the insurance industry in Kenya had an undergraduate degree as their highest education level. The findings are in line with the findings of Njeru, and Kasomi (2015) that most employees working in insurance firms is Kenya were undergraduates.

4.3.4 Work Experience of the Respondents

The respondents were requested to show the time duration they had been working in their insurance companies. The findings were as presented in Table 4.4.

Table 4 4: Respondents' Work Experience

work duration	Freq.	Percent	Cum.
less than 2 years	14	19.44	19.44
2 to 5 years	40	55.56	75.00
6 to 9 years	16	22.22	97.22
10 to 13 years	2	2.78	100.00
Total	72	100.00	

From the results, 55.56% of the respondents indicated that they had been in their insurance companies for 2 to 5 years, 22.22% showed 6 to 9 years, 19.44% indicated for less than 2 years and 2.78% indicated for 10 to 13 years. These implied that most of the finance, investment and risk managers in the insurance industry in Kenya had been in their insurance companies for 2 to 5 years. The finding is in line with the finding of Flynn, (2014) that most employees in insurance firms have worked in their respective firms for a period of 2 to 5 years.

4.3.5 Departments of the Respondents

The respondents were requested to indicate the department where they were located in the insurance firm. The results were as shown in table 4.5.

Table 4 5: Respondents' Departments

Department	Freq.	Percent	Cum.
Finance department	33	45.83	45.83
Investment departmment	26	36.11	81.94
Risk Department	13	18.06	100.00
Total	72	100.00	

From the results, 45.83% of the respondents showed that they were working in the finance department, 36.11% indicated that they were working in the investment department and 18.06% indicated that they were working in the risk department. From the findings, the study can deduce that most of the finance, investment and risk managers in the insurance industry in Kenya were working in the finance department.

4.4 Integrated Asset Allocation

The first study objective was to examine the effect of integrated asset allocation on the overall financial performance of insurance companies.

4.4.1 Influence of Integrated Asset Allocation on Performance

The respondents were requested to show to what degree the following components of integrated asset allocation influenced the financial performance of their insurance company. They were to use 1 to represent no extent at all, 2 to represent low extent, 3 to represent moderate extent, 4 to represent great extent and 5 to represent very great extent.

Table 4 6: Influence of Integrated Asset Allocation on Performance

	Obs	Mean	Std. Dev.	Min	Max
Capital market conditions	72	4.083333	0.6869	2	5
Investors objectives	72	4.208333	0.786103	1	5
Investors constraints	72	4.208333	0.767977	2	5
Mix of assets	72	4.194444	0.70489	2	5

From the results, the respondents showed that investors' objectives and investors' constraints influenced financial performance of their insurance companies to a great extent as shown by the means of 4.208 and 4.208 respectively. In addition, the respondents showed by the mean of 4.194 that mix of assets affects the financial performance of the insurance companies to a great extent. Further, the respondents indicated that capital market conditions influence financial performance of their insurance companies to a great extent as shown by the mean of 4.083. The findings are in line with the findings of Asimakopoulos, Samitas, and Papadogonas (2009) that the main factors which influence financial performance of insurance firms was capital market conditions.

4.4.2 Integrated Asset Allocation Strategy

The respondents were asked to show to what degree they conquered with some statements in regard to integrated asset allocation strategy. They were to use 1 to symbolize strongly disagree, 2 to symbolize disagree, 3 to symbolize neutral, 4 to symbolize agree and 5 to symbolize strongly agree.

Table 4 7: Integrated Asset Allocation Strategy

	Obs	Mean	Std. Dev.	Min	Max
-Involves determining a risk-return efficient investment mix for the whole organization portfolio, considering all significant types of risks	72	3.986111	0.45 9426	2	5
-Considers both risk and economic expectations in establishment of an asset mix	72	4.347222	0.63 1558	3	5
-Both conditions of capital market and investor-specific constraints and objectives are established before determining the asset mix	72	4.277778	0.675991	3	5
-Integrates strategic and tactical asset allocation strategies	72	4.263889	0.731448	2	5
-It is the most comprehensive strategy	72	4.402778	0.744174	1	5
-It is the most difficult and resource intensive implement	72	4.097222	0.790074	1	5

From the results, the respondents conquered that it was the most comprehensive strategy and that strategy considers both risk and economic expectations in establishment of an asset mix as shown by the means of 4.402 and 4.347 respectively. The respondents further agreed that both conditions of capital markets and constraints and investor-specific objectives are established prior to the determination of the asset mix and that the strategy integrates strategic and tactical asset allocation strategies as shown by the means of 4.277 and 4.263. In addition, the respondents agreed that strategy is the most difficult and resource intensive to implement and also that strategy involves searching for an efficient risk-return investment mix for the whole organization portfolio, considering all significant types of risks as shown by the means of 4.097 and 3.986 respectively. The findings are in line with the findings of Tokat, and Stockton (2015) that that insurance firms' strategy considers both risk and economic expectations in establishment of an asset mix.

4.5 Strategic Asset Allocation

The second study objective was to determine the effect of strategic asset allocation on the overall financial performance of insurers.

4.5.1 Influence of Strategic Asset Allocation on Performance

The respondents were requested to show to what degree the following components of strategic asset allocation influenced the financial performance of their insurance company. They were to use 1 to represent no extent at all, 2 to represent low extent, 3 to represent moderate extent, 4 to represent great extent and 5 to represent very great extent.

Table 4 8: Influence of Strategic Asset Allocation on Performance

Variable	Obs	Mean	Std. Dev.	Min	Max
-Constant-mix	72	3.902778	0.824958	1	5
-Long term policy allocation	72	4.458333	0.670033	2	5
-Consideration of investment constraints	72	4.25	0.6869	3	5
-Consideration of return requirements	72	4.375	0.720671	3	5
-Investor's risk tolerance	72	4.444444	0.578704	3	5
-Time horizon	72	4.277778	0.716451	2	5
-Diversification to reduce risk	72	4.180556	0.718496	2	5
-Diversification to improve portfolio returns.	72	4.277778	0.562245	3	5

From the findings, the respondents indicated that long-term policy allocation and investors' risk tolerance influenced financial performance of their companies to a great degree as shown by the means of 4.4583 and 4.444 respectively. The respondents also indicated that consideration of return requirements and time horizon also influenced financial performance of their insurance companies to a great extent as shown by the means of 4.375 and 4.277 respectively. In addition, the respondents' showed that diversification to improve portfolio returns and consideration of investment constraints influenced financial performance of their insurance companies to a great extent as shown by the means of 4.277 and 4.25. Further, the respondents indicated that diversification to reduce risk and constant-mix influenced financial performance of their insurance company to a great extent as shown by the means of 4.180 and 3.90 respectively.

4.5.2 Strategic Asset Allocation Strategy

The respondents were asked to show to what degree they conquered with several statements in regard to strategic asset allocation strategy. They were to use 1 to represent strongly disagree, 2 to represent disagree, 3 to represent neutral, 4 to represent agree and 5 to represent strongly agree.

Table 4 9: Strategic Asset Allocation Strategy

Variable	Obs	Mean	Std. Dev.	Min	Max
Supports strategic decisions about fundamental investment orientation of an entire portfolio	72	4.013889	.2050802	3	5
It is designed to accomplish long term goals of an organization	72	4.486111	.6711994	3	5
Used to determine the fund's market exposure	72	4.347222	.8584251	1	5
Aversion of risk is put into consideration when deciding strategic allocation of asset, but prevailing conditions of market are not considered	72	3.916667	.9457094	1	5

From the results, the respondents concurred that the strategy of strategic asset allocation is designed to accomplish long-term goals of an organization as shown by a mean of 4.486. Additionally, the respondents agreed that the strategic asset allocation was used to determine the fund's market exposure as shown by the mean of 4.347. Furthermore, the respondents concurred with a mean of 4.013 that the strategy of strategic asset allocation supports strategic decisions about essential investment orientation of a whole portfolio. The respondents also concurred with a mean of 3.916 that risk aversion is considered when deciding on strategic allocation of assets, but prevailing conditions of the market are not put into consideration. The findings are in line with the findings of Sa-Aadu,, Shilling, and Tiwari (2014) that strategic asset allocation is designed to accomplish long-term goals of insurance firms and risk aversion is considered when deciding on strategic allocation of assets.

4.5.3 Disadvantages of Strategic Asset Allocation Strategy

The respondents indicated that strategic asset allocation strategy is structured to get a particular return for a specific risk over a market cycle (generally defined as six to eight years). In addition, the respondents indicated that strategic asset allocation does not allow for anomalies in the market place and as a result, can underperform the markets on a regular basis. This therefore leads to performance drag. The findings are in line with the findings of Tokat, and Stockton (2015) that strategic asset allocation does not prevent anomalies in the market place and as a result, can underperform the markets on a regular basis.

4.6 Tactical Asset Allocation Strategy

The third objective of the study was to determine the effect of tactical asset allocation on the overall financial performance of insurance companies.

4.6.1 Influence of Tactical Asset Allocation on Performance

The respondents were requested to indicate to what extent the following components of tactical asset allocation influenced the financial performance of their insurance company. They were to use 1 to represent no extent at all, 2 to represent low extent, 3 to represent moderate extent, 4 to represent great extent and 5 to represent very great extent.

Table 4 10: Influence of Tactical Asset Allocation on Performance

Variable	Obs	Mean	Std. Dev.	Min	Max
Mean reversion	72	3.972222	.8217505	1	5
Inherently contrarian	72	4.333333	.8721028	1	5
Active management portfolio	72	4.430556	.6462544	2	5
Market timing and shifting assets among asset classes	72	4.236111	.5689886	3	5

From the findings, the respondents indicated that active management portfolio and inherently contrarian influenced the financial performance of their insurance companies to a great extent as indicated by the means of 4.430 and 4.333 respectively. In addition, the respondents indicated that market timing and shifting assets among asset classes and mean reversion influenced the financial performance of their insurance companies to a great extent as indicated by the means of 4.236 and 3.972 respectively. The findings are in line with the findings of Wu, Ma and Yue (2017) that market timing, shifting assets among asset classes, mean reversion influenced the active management portfolio thus influencing financial performance of insurance firms.

4.6.2 Tactical Asset Allocation Strategy

The respondents were requested to indicate to what extent they agreed to various statements in regard to tactical asset allocation strategy. They were to use 1 to represent strongly disagree, 2 to represent disagree, 3 to represent neutral, 4 to represent agree and 5 to represent strongly agree.

Table 4 11: Tactical Asset Allocation Strategy

Variable	Obs	Mean	Std. Dev.	Min	Max
Commonly used to optimize the specific composition of a predefined portfolio	72	4.055556	.4072888	2	5
It is design to accomplish short term goals and take advantage of dynamic market conditions	72	4.208333	.9335303	1	5
Requires more dynamic tradition	72	4.097222	.6746877	2	5
Mainly depends on the ability to diversify within asset classes	72	4.305556	.6637259	3	5
It is considered to be more opportunistic	72	4.25000	.5992954	3	5
The main goal is to maximize returns	72	4.291667	.5156017	3	5

From the findings, the respondents agreed with a mean of 4.305 that tactical asset allocation strategy mainly depends on the ability to diversify within asset classes. The respondents also agreed with a mean of 4.291 that tactical asset allocation strategy’s main goal is to maximize returns. In addition, the respondents agreed with a mean of 4.25 that tactical asset allocation strategy is considered to be more opportunistic. Also, the respondents agreed with a mean of 4.208 that tactical asset allocation strategy is designed to accomplish short-term goals and take advantage of dynamic market conditions. In addition, the respondents agreed with a mean of 4.097 that tactical asset allocation strategy requires more dynamic tradition. Further, the respondents agreed with a mean of 4.055 that tactical asset allocation strategy is commonly used to optimize the specific composition of a pre-defined portfolio. The findings are in line with the findings of Zhang and Ge (2016) that tactical asset allocation is commonly used to optimize the specific composition of a predefined portfolio as it is design to accomplish short term goals and take advantage of dynamic market conditions by most of insurance firms.

4.7 Dynamic Asset Allocation Strategy

The fourth objective of the study was to establish the effect of dynamic asset allocation on overall financial performance of insurance companies.

4.7.1 Influence of Dynamic Asset Allocation on Financial Performance

The respondents were requested to indicate to what extent the following components of dynamic asset allocation influenced the financial performance of their insurance company. They were to use 1 to represent no extent at all, 2 to represent low extent, 3 to represent moderate extent, 4 to represent great extent and 5 to represent very great extent.

Table 4 12: Influence of Dynamic Asset Allocation on Financial Performance

Variable	Obs	Mean	Std. Dev.	Min	Max
Exposure to investment opportunities	72	4.194444	.4638749	3	5
Level of protection	72	4.444444	.7484988	2	5
Portfolio adjustments over the short term to respond to market conditions	72	4.291667	.7399562	2	5
No target asset mix	72	4.194444	.8330986	1	5

From the findings, the respondents indicated that level of protection and portfolio adjustments over the short-term to respond to market conditions influenced financial performance of an insurance company to a great extent as indicated by the means of 4.444 and 4.291 respectively. In addition, the respondents indicated that exposure to investment opportunities and no target asset mix influenced financial performance of an insurance company to a great extent as indicated by the means of 4.194 and 4.194 respectively.

4.7.2 Dynamic Asset Allocation Strategy

The respondents were requested to indicate to what extent they agree to various statements in regard to dynamic asset allocation strategy. They were to use 1 to represent strongly disagree, 2 to represent disagree, 3 to represent neutral, 4 to represent agree and 5 to represent strongly agree

Table 4 13: Dynamic Asset Allocation Strategy

Variable	Obs	Mean	Std. Dev.	Min	Max
Involves several portfolio adjustments over the short term to respond to market conditions	72	3.902778	.4794281	1	5
There is no target asset mix because portfolio managers can change allocations based on their assessments of current and future market trends	72	4.097222	.6315579	1	5
Dynamic asset allocation could underperform market averages, especially in volatile markets, because of high trading costs associated with frequent portfolio rebalancing.	72	4.069444	.4542875	2	5

From the findings, the respondents agreed that in dynamic asset allocation strategy there is no target asset mix because portfolio managers can change allocations based on their assessments of current and future market trends as shown by the mean of 4.097. In addition, the respondents agreed that dynamic asset allocation could underperform market averages, especially in volatile markets, because of high trading costs associated with frequent portfolio re-balancing as shown by the mean of 4.069. Further, the respondents agreed that dynamic asset allocation strategy involves several portfolio adjustments over the short-term to respond to market conditions as indicated by the mean of 3.902.

4.7.3 Disadvantages of Dynamic Asset Allocation Strategy

The respondents indicated that dynamic asset allocation entails re-balancing. Re-balancing would generally involve reducing positions in the best-performing asset class, while adding to positions in under-performing assets. This is due to the high costs that are involved. In addition, in dynamic asset allocation there is need for active portfolio management, demanding money, time and tools, increased chance of loss due to poor market interpretation and wrong decisions, increased risk compared to other strategies and in many times keeping the right asset allocation ratio and risk level is very difficult.

4.8 Financial Performance

This is a measure of the results of financial goals, policies or objectives of an entity through the use of metrics or monetary measures.

4.8.1 Trend of Performance

The respondents were asked to indicate whether the performance of their organizations was increasing or decreasing in the past one year.

	Freq.	Percent	Cum.
Increased	69	95.83	95.83
Decreased	3	4.17	100.00
Total	72	100.00	

Table 4 14: Trend of Performance

From the findings, 95.83% of the respondents indicated that the performance of the organization was increasing. 4.17% of the respondents indicated that the organizations performance had been decreasing over the past one year. The findings imply that the performance of insurance companies in the past one year has been increasing.

4.8.2 Performance Measures

The respondents were asked to rate the measures of performance in their insurance companies. They used 1 to represent poor, 2 to represent bad, 3 to represent to represent moderate, 4 to represent good, and 5 to represent excellent.

Table 4 15: Performance Measures

Variable	Obs	Mean	Std. Dev.	Min	Max
Return on investment	72	4.263889	.6918653	1	5
Profitability	72	4.263889	.6278301	3	5
Return on equity	72	4.236111	.6165112	3	5
Return on assets	72	4.277778	.5366097	3	5

From the findings, the respondents rated the return on asset of their insurance companies as good. This is shows by a mean of 4.277. In addition, they rated the return on investment of their insurance companies as good as indicated by a mean of 4.263. Also, the respondents rated the profitability of their insurance companies as good as indicated by a mean of 4.263. Further, the respondents rated return on equity of their insurance companies as good as shown by a mean of 4.236.

4.9 Inferential Statistics

The study used both correlation analysis and regression analysis to investigate the association between the independent variables and the dependent variable.

4.9.1 Correlation Analysis

To investigate if there was a relationship between the dependent and independent variables, the Pearson product-moment correlation analysis was used. A correlation is the number between -1 and +1 that shows the association degree between two variables. A positive association is shown by a positive value while a negative association is shown by a negative value. If the co-efficient is zero, then there exists no relationship between the two variables and if the independent variable changes it will not affect the dependent variable.

According to the findings, there was a positive relationship between integrated asset allocation strategy and financial performance (r=0.6492, p=0.000). The results indicate a positive relationship between strategic asset allocation strategy and performance (r=0.6574, p-0.000). In addition, there was a positive association between tactical asset allocation strategy and financial performance (r=0.6455, p=0.000). Further, there was a positive relationship between dynamic asset allocation strategy and financial performance (r=0.5602, r-0.000).

Table 4 16: Correlation Analysis

	Financial Performance	Integrated	Strategic	Tactical	Dynamic
Financial Performance	1.0000				
Integrated	0.6492* 0.0000	1.0000			
Strategic	0.6574* 0.0000	0.6154* 0.0000	1.0000		
Tactical	0.6455* 0.0000	0.5227* 0.0000	0.5956* 0.0000	1.0000	
Dynamic	0.5602* 0.0000	0.5035* 0.0000	0.4561* 0.0001	0.4561 0.0000	1.0000

4.9.2 Regression Analysis

The study used multiple regression analysis to examine the weight of the relationship between the independent variables (integrated asset allocation strategy, strategic asset allocation strategy, tactical asset allocation strategy and dynamic asset allocation strategy) and the dependent variable (financial performance of insurance companies in Kenya).

The multivariate regression model will be:

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

Where: Y = Financial performance of insurance companies in Kenya; β_0 = Constant Term; β_1, β_2, β_3 and β_4 = Beta coefficients; X_1= Integrated asset allocation strategy; X_2= Strategic asset allocation strategy; X_3= Tactical asset allocation strategy; X_4= Dynamic asset allocation strategy; ε = Error term

Table 4 17: Model Summary and ANOVA

Source	SS	df	MS
Model	11.3850598	4	2.84626496
Residual	7.11146796	67	.106141313
Total	18.4965278	71	.260514476

Number of obs	=	72
F(4, 67)	=	26.82
Prob > F	=	0.0000
R-squared	=	0.6155
Adj R-squared	=	0.5926
Root MSE	=	.32579

Financial	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Integrated	.2541443	.1033086	2.46	0.016	.0479393	.4603492
Strategic	.3042538	.1291901	2.36	0.021	.0463893	.5621184
Tactical	.4193627	.1510058	2.78	0.007	.1179539	.7207716
Dynamic	.2940373	.1384069	2.12	0.037	.017776	.5702986
_cons	-1.266708	.5605444	-2.26	0.027	-2.385559	-.1478563

From the findings, the R-squared shows the variation in the dependent variable that can be explained by the independent variables being studied. The R-squared in this study was 0.6155. This implies that the four independent variables (integrated asset allocation strategy, strategic asset allocation strategy, tactical asset allocation strategy and dynamic asset allocation strategy) can be explained by 61.55% of the dependent variable (financial performance of insurance companies in Kenya).

The analysis of variance shows whether or not a model is a good fit for the data. The F-calculated (26.82) is greater than the F-critical (2.46), which shows that the model can be used in predicting the influence of the independent variables on the dependent variable. In addition, the p-value (0.000) is less than the significance level (0.05), which shows that the model is a good fit for the data.

The regression model took the following form;

$$Y = -1.2667 + 0.2541X_1 + 0.3042X_2 + 0.4193X_3 + 0.2940X_4 + \varepsilon$$

From the findings, tactical asset allocation strategy had a positive influence on the financial performance of insurance companies in Kenya as indicated by the regression co-efficient of 0.419. This implies that increase in tactical asset allocation would lead to a 0.419 increase in financial performance of insurance companies in Kenya. The relationship was significant because, the p-value (0.007) was less than the significance level (0.05).

In addition, strategic asset allocation strategy had a positive influence on the financial performance of insurance companies in Kenya as indicated by the regression co-efficient of 0.304. This implies that increase in risk taking would lead to a 0.304 increase in the financial performance of insurance companies in Kenya. The relationship was significant because, the p-value (0.021) was less than the significance level (0.05).

Further, dynamic asset allocation strategy had a positive influence on the performance of insurers in Kenya as indicated by the regression coefficient of 0.294. This implies that increase in risk taking would lead to a 0.294 increase the financial performance of insurance companies in Kenya. The relationship was significant because, the p-value (0.037) was less than the significance level (0.05).

Lastly, integrated asset allocation strategy had a positive influence on the financial performance of insurance companies in Kenya as indicated by the regression coefficient of 0.254. This implies that increase in risk taking would lead to a 0.254 increase in the financial performance of insurance companies in Kenya. The relationship was significant because, the p-value (0.016) was less than the significance level (0.05).

The results also show that tactical asset allocation strategy was the most significant factor influencing the performance of insurers in Kenya, followed by strategic asset allocation strategy, dynamic asset allocation strategy and integrated asset allocation strategy.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a discussion of the key findings, conclusions drawn from the findings, recommendation and suggestions for further studies. The research conclusions and recommendations sought to address the study purpose which was to determine the impact of asset allocation strategies on financial performance of insurance companies in Kenya.

5.2 Summary

This section provides a summary of the results of the effects of the four asset allocation strategies on the financial performance of insurance companies in Kenya.

5.2.1 Effect of Integrated Asset Allocation Strategy

The study found that integrated asset allocation strategy influences financial performance of insurance companies positively. This study found that capital market conditions, investors' objectives, investors' constraints and mix of assets are the key components of integrated asset allocation strategy that affect financial performance.

In addition, the study found that an integrated asset allocation strategy involves using an investment mix that is risk-return efficient for the whole organization portfolio considering all the risk types, while also considering the risk and economic expectations and establishing the investors' constraints and objectives and the conditions in the capital market before determining the asset mix. This corresponds to the theory of modern portfolio by Harry Markowitz (1952) which attempts to provide a linkage between maximization of a portfolio's returns and the risk appetites of individual investors. Mulvey, Simsek and Zhuojuan (2006)'s findings also allude to the fact using an integrated market mix, an investor takes into consideration his risk and economic expectations so as to come up with an asset mix. The study further found out that an integrated asset allocation strategy integrates strategic and tactical asset allocation strategies, is the most comprehensive strategy and it is the most difficult and resource-intensive to implement.

However, the study concludes that integrated asset allocation does not take into account future market returns. It instead accounts for risk tolerance unlike the other strategies of allocation of assets. This is in agreement to the findings by Baranoff and Sagar (2009) that integrated asset allocation looks at future net worth of the investors and its standard deviation provided with the willingness of the investor to embrace risk, and in addition takes into consideration both the risk tolerance and future returns.

The null hypothesis therefore that integrated asset allocation strategy has no significant effect on the overall financial performance of insurance companies is rejected.

5.2.2 Effect of Strategic Asset Allocation Strategy

The study found that strategic asset allocation strategy positively influences the Kenyan insurance companies' financial performance. This study indicated that long-term policy allocation, consideration of investment constraints, consideration of return requirements, investors' risk tolerance, time horizon, diversification to reduce risk and diversification to improve portfolio returns components of strategic asset allocation strategy are key in influencing financial performance. Well-diversified portfolios across different asset classes and within particular asset classes ensure that a downturn in the return of a particular asset class does not greatly affect the overall portfolio return. The Barbell Theory (Cohen, 2005) is seen to support this finding in that it focusses on short and long duration bonds as a key strategy to achieving higher returns as opposed to short-term money market instruments. In addition, the study conducted by Sa-Aadu, Shilling and Tiwari (2014) is also in agreement to this finding to the extent that the timeliness of the gains recorded across various asset classes plays a significant role in the performance of the portfolio of assets.

The study further indicated that strategic asset allocation strategy supports strategic decisions about fundamental investment orientation of an entire portfolio, is designed to accomplish long-term goals of an organization, is used to determine the fund's market exposure and that when deciding on strategic asset allocation, risk aversion is considered but the current conditions of the market are not considered. From this perspective, it can therefore be deduced that strategic asset allocation is of paramount importance during the design stage of the portfolio for purposes of assessing and measuring future outcomes and as well as anticipation of return and risk potential, a finding that corresponds to Hayes, Primbs and Chiquone (2015). However, the study concludes that strategic asset allocation does not allow for anomalies in the market place and as a result, can under-perform the markets on a regular basis. This therefore leads to performance drag. This is in conformance to Umar (2017)'s assertion that strategic asset allocation denotes the basic nature of a trade-off between safety and opportunity that confront an investor.

The null hypothesis therefore that strategic asset allocation strategy has no significant effect on the overall financial performance of insurance companies is rejected.

5.2.3 Effect of Tactical Asset Allocation Strategy

The study found that tactical asset allocation strategy positively influences financial performance of insurance companies. From the study, the findings indicated that mean reversion, inherently contrarian, active management portfolio and market timing and shifting assets among asset classes components of the tactical asset allocation strategy affects financial performance.

The study further indicated that tactical asset allocation strategy is commonly used to optimize the specific composition of a predefined portfolio, is designed to accomplish short-term goals and take advantage of dynamic market conditions. Further, tactical asset allocation requires more dynamic tradition, mainly depends on the ability to diversify within asset classes, is considered to be more opportunistic and the main goal is to maximize returns. However, the study concludes that tactical asset allocation can increase portfolio risk, especially if tactical allocations emphasize riskier asset classes. This coincides with the findings of Uhl, Pedersen and Malitius (2013) that investors should not adopt changing positions too often in the course of their asset allocation activities given that the strategy does not allow for volatility in market conditions. This strategy does not account for risk tolerance. This finding is in concurrence to the findings by Tokat and Stockton (2015) that averagely tactical asset allocation strategies do not produce statistically excess returns over all time periods, and that the success of the strategy was significantly dependent on the construction of a good model. The same is also in agreement to the findings by Louton et. al. (2015) who argued that tactical asset allocation strategies aim at adding value through deviation from a policy mix plan based on the views of the fund manager.

The null hypothesis that tactical asset allocation strategy has no significant effect on the overall financial performance of insurance companies is therefore rejected.

5.2.4 Effect of Dynamic Asset Allocation Strategy

The study found that dynamic asset allocation strategy positively influences financial performance of insurance companies. From the findings, the study established several dynamic asset allocation strategy components that influence financial performance. These components include exposure to investment opportunities, level of protection, portfolio adjustments over the short-term to respond to market conditions and lack of target asset mix. The findings are in agreement to Madhogarhia and Lam (2015)'s findings that indicated that the strategy of dynamic allocation of assets led to a positive annualized geometric mean return differential over 20-30-year horizons on a geometric mean basis.

In addition, the study indicated that dynamic asset allocation strategy involves several portfolio adjustments over the short-term to respond to market conditions. In addition, the study found that in dynamic asset allocation strategy, target assets mix does not exist since portfolio managers can change the allocations in line with their current and future trends assessments. Further, the study found that dynamic asset allocation in volatile markets can under-perform the averages due to the high costs of trading which are as a result of frequent portfolio re-balancing. This is in agreement to Cardinale, Navone and Pioch (2014) whose findings were that predictability led to higher risk adjustment performance from the strategies of dynamic allocation.

However, the study concludes that in dynamic asset allocation, there is need to manage active portfolio demanding money, time and tools and this led to a higher chance of loss from wrong decisions and poor market interpretations, raised risk as compared to other strategies and most times keeping the required risk level and risk asset allocation is very difficult.

The null hypothesis that dynamic asset allocation strategy has no significant effect on the overall financial performance of insurance companies is therefore rejected.

5.3 Conclusion

The study concludes that integrated asset allocation strategy positively influences financial performance of insurance companies in Kenya. This study found that capital market conditions, investors' objectives, investors' constraints and mix of assets are the key components of integrated asset allocation strategy that affect financial performance.

In addition, the study concludes that strategic asset allocation strategy has a positive influence on financial performance of insurance companies in Kenya. This study indicated that long-term policy allocation, consideration of investment constraints, consideration of return requirements, investors' risk tolerance, time horizon, diversification to reduce risk and diversification to improve portfolio returns are key components that affect financial performance.

Further, the study concludes that tactical asset allocation strategy influences financial performance of insurance companies in Kenya. The study found that mean reversion, inherently contrarian, active management portfolio and market timing and shifting assets among asset classes as components of the tactical asset allocation strategy affect financial performance.

Lastly, the study concluded that dynamic asset allocation strategy influences financial performance of insurance companies in Kenya. The study established several dynamic asset allocation strategy components that influence financial performance and include exposure to investment opportunities, level of protection, portfolio adjustments over the short-term to respond to market conditions and lack of target asset mix.

5.4 Recommendations

The study found that integrated asset allocation strategy is resource-intensive to implement because it involves the combination of strategic and tactical asset allocation strategies. This study therefore recommends that insurance companies should only use integrated asset allocation strategy when they have enough resources and ensure effective implementation.

The study found that strategic asset allocation is designed to accomplish long-term goals of an organization. This study therefore recommends that insurance companies should only use strategic allocation strategy in the achievement of long-term goals.

The study revealed that tactical asset allocation strategy is designed to accomplish short-term goals and take advantage of dynamic market conditions. This study therefore recommends that tactical asset allocation should be used in achieving the short-term goals of an organization.

The study also revealed that dynamic asset allocation could under-perform market averages, especially in volatile markets, because of high trading costs associated with frequent portfolio re-balancing. This study therefore suggests that dynamic asset allocation should be avoided in volatile markets.

5.5 Suggestion for Further Studies

This study was limited to insurance companies in Kenya therefore its findings cannot be generalized to other financial institutions in Kenya. This study therefore recommends further studies in other financial institutions like micro-finance institutions and Savings and Credit Cooperative Societies (SACCOs). The study recommends further studies in determinants of asset allocation strategies in the financial sector.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

REF: INVITATION TO PARTICIPATE IN A RESEARCH STUDY

I am a student at KCA University conducting a research project as part of the course requirement for Master of Science (Commerce). The study seeks to investigate the impact of asset allocation strategies on financial performance of insurance companies in Kenya. This letter serves to kindly request for your co-operation and participation, in a bid to obtain information for the above study. I assure you that the information provided will be used strictly for academic purposes and all information will be treated confidentially. A copy of the study will be available upon request. Thank you for taking time to participate in the study.

Yours faithfully,

ROBERT GATHAGE

APPENDIX II: QUESTIONNAIRE

This questionnaire is to collect data for purely academic purposes. All information will be treated with strict confidence. Do not put any name or identification on this questionnaire.

GENERAL INFORMATION

1. Please indicate your gender

    Female [ ] Male [ ]

2. Indicate your age bracket

    20-30 yrs [ ] 31-40 yrs [ ] 41-50 yrs [ ] 51 and above [ ]

3. What is your highest level of education?

    Primary education [ ] Secondary education [ ]

    Undergraduate Degree [ ] Master's degree [ ]

    PhD degree [ ]

4. For how long have you been working in your insurance company?

    Less than 2 years [ ] 2 to 5 years [ ]

    6 to 9 years [ ] 10 to 13 years [ ]

    More than 13 years [ ]

5. In which department do you belong?

    Finance department [ ]

    Investment department [ ]

    Risk department [ ]

SECTION B: INTEGRATED ASSET ALLOCATION

6. To what extent do the following components of integrated asset allocation influence the financial performance of your insurance company? (Key: **1=no extent at all, 2=low extent, 3=moderate extent, 4=great extent, 5=very great extent)**

Statements	**1**	**2**	**3**	**4**	**5**
Capital market conditions					
Investor's objectives					
Investor's constraints					
Mix of assets					

7. To what extent do you agree with the following statements in regard to integrated asset allocation strategy? (Key: **1=Strongly disagree 2=agree, 3=neutral, 4=agree, 5=strongly agree)**

Statements	**1**	**2**	**3**	**4**	**5**
Involves finding a risk-return efficient investment mix for the entire organization portfolio, in consideration of all significant risk types					
Puts into consideration both economic expectations and risk in establishing an asset mix.					
Both capital market conditions and investor-specific objectives and constraints are established before the asset mix is determined					
Integrates strategic and tactical asset allocation strategies					
It is the most comprehensive strategy					
It is the most difficult and resource intensive implement					

8. What are the disadvantages of integrated asset allocation strategy?

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SECTION C: STRATEGIC ASSET ALLOCATION

9. To what extent do the following components of strategic asset allocation influence the financial performance of your insurance company? (Key: **1=no extent at all, 2=low extent, 3=moderate extent, 4=great extent, 5=very great extent)**

	1.	**2.**	**3.**	**4.**	**5.**
Constant-mix					
Long term policy allocation					
Consideration of investment constraints					
Consideration of return requirements					
Investor's risk tolerance					
Time horizon					
Diversification to reduce risk					
Diversification to improve portfolio returns.					

10. To what extent do you agree with the following statements in regard to strategic asset allocation strategy? (Key: **1=Strongly disagree 2=agree, 3=neutral, 4=agree, 5=strongly agree)**

Statements	**1**	**2**	**3**	**4**	**5**
Supports strategic decisions about fundamental investment					

orientation of an entire portfolio					
I is design to accomplish long term goals of an organization					
Used to determine the fund’s market exposure					
Risk aversion is considered when deciding strategic asset allocation, but current market conditions are not considered					

11. What are the disadvantages of strategic asset allocation?

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SECTION D: TACTICAL ASSET ALLOCATION STRATEGY

12. To what extent do the following components of tactical asset allocation influence the financial performance of your insurance company? (Key: **1=no extent at all, 2=low extent, 3=moderate extent, 4=great extent, 5=very great extent)**

	1	**2.**	**3.**	**4.**	**5.**
Mean reversion					
Inherently contrarian					
Active management portfolio					
Market timing and shifting assets among asset classes					

13. To what extent do you agree with the following statements in regard to tactical asset allocation strategy? (Key: **1=Strongly disagree 2=agree, 3=neutral, 4=agree, 5=strongly agree)**

Statements	**1**	**2**	**3**	**4**	**5**
Commonly used to optimize the specific composition of a predefined portfolio					
It is design to accomplish short term goals and take advantage of dynamic market conditions					
Requires more dynamic tradition					
Mainly depends on the ability to diversify within asset classes					
It is considered to be more opportunistic					
The main goal is to maximize returns					

14. What are the disadvantages of tactical asset allocation?

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SECTION E: DYNAMIC ASSET ALLOCATION STRATEGY

15. To what extent do the following components of dynamic asset allocation influence the financial performance of your insurance company? (Key: **1=no extent at all, 2=low extent, 3=moderate extent, 4=great extent, 5=very great extent)**

	1	**2.**	**3.**	**4.**	**5.**
Exposure to investment opportunities					
Level of protection					

Portfolio adjustments over the short term to respond to market conditions					
No target asset mix					

16. To what extent do you agree with the following statements in regard to dynamic asset allocation strategy? (Key: **1=Strongly disagree 2=agree, 3=neutral, 4=agree, 5=strongly agree)**

Statements	**1**	**2**	**3**	**4**	**5**
Involves several portfolio adjustments over the short term to respond to market conditions					
There is no target asset mix because portfolio managers can change allocations based on their assessments of current and future market trends					
Dynamic asset allocation could underperform market averages, especially in volatile markets, because of high trading costs associated with frequent portfolio rebalancing.					

17. What are the disadvantages of dynamic asset allocation?

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SECTION F: FINANCIAL PERFORMANCE

18. In the last one year, has the performance of your organization increased or decreased?

Increased [ ] Decreased [ ]

19. How do you rate the following measures of financial performance in your organization?

(Key: **1= Poor 2=Bad, 3= Moderate, 4=Good, 5=Excellent**)

	Poor	**Bad**	**Moderate**	**Good**	**Excellent**
Return on investment					
Profitability					
Return on equity					
Return on assets					

THANK YOU

APPENDIX III: LICENCED INSURANCE COMPANIES

1. AAR Insurance Kenya Limited
2. AIG Kenya Insurance Co Ltd
3. Africa Merchant Assurance Co. Ltd
4. Allianz Insurance Co of Kenya Ltd
5. APA Insurance Limited
6. APA Life Assurance Limited
7. Barclays Life Assurance K Ltd
8. Britam General Ins. Co. (K) Ltd.
9. British-American Insurance Co. Ltd.
10. Cannon Assurance Ltd
11. Capex Life Assurance Limited
12. CIC General Insurance Limited
13. CIC Life Assurance Ltd
14. Continental Reinsurance Ltd
15. Corporate Insurance Co. Ltd
16. Directline Assurance Co Ltd
17. EA Reinsurance Company Ltd
18. Fidelity Shield Insurance Co Ltd
19. First Assurance Company Ltd
20. GA Insurance Limited
21. GA Life Assurance Ltd
22. Geminia Insurance Company Ltd
23. ICEA LION General Insurance Co Ltd
24. ICEA LION Life Assurance Co Ltd
25. Intra Africa Assurance Co Ltd
26. Invesco Assurance Company Ltd
27. Kenindia Assurance Co Ltd
28. Kenya Orient Insurance Ltd
29. Kenya Orient Life Assurance Ltd
30. Kenya Reinsurance Corp Ltd
31. Liberty Life Assurance Kenya Ltd
32. Madison Insurance Company Ltd
33. Mayfair Insurance Company Ltd
34. Metropolitan Cannon Life Ass Ltd
35. Occidental Insurance Co Ltd
36. Old Mutual Life Assurance Co Ltd
37. Pacis Insurance Company Ltd
38. Pioneer Life Assurance Company Ltd

39 Pioneer General Insurance Ltd

40. Phoenix of EA Assurance Co Ltd
41. Prudential Life Assurance K Ltd
42. Saham Assurance Company K Ltd
43. Sanlam General Insurance Ltd
44. Sanlam Life Assurance Ltd
45. Tausi Assurance Company Ltd
46. The Heritage Insurance Company Ltd
47. Trident Insurance Company Ltd
48. Resolution Insurance Company Ltd

49. UAP Life Assurance Limited

50. UAP Insurance Company Limited

51. Takaful Insurance of Africa Limited

52. The Jubilee Insurance Co. Ltd

53. The Monarch Insurance Co. Ltd.

54. The Kenyan Alliance Insurance Co Ltd

55. Xplico Insurance Limited