

**ASSET ALLOCATION STRATEGIES ADOPTED BY PENSION  
SCHEMES IN KENYA**

**BY**

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## DECLARATION

This research project is my original work which to the best of my knowledge has not been submitted in any other institution for examination or academic award.

SIGNED



DATE November 9, 2021

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**D61/7979/2017**

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

SIGNED



DATE 9<sup>th</sup>. Nov 2021

**DR. OTIENO LUTHER**

## **DEDICATION**

To Myles and Mitch,

May this be a demonstration to you that hard work, tenacity and relentless faith eventually pays off. That you can triumph over adversity.

You have taken my intransigencies during this research in your stride.

You were also the wind beneath my wings.

I could not drop out of school because of you two, otherwise what behaviour would I have modelled?

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## **LIST OF ABBREVIATIONS/ACRONYMS**

<b>ALM</b>	Asset Liability Management
<b>Caps</b>	Market capitalization
<b>CAPM</b>	Capital Asset Pricing Model
<b>CIS</b>	Collective Investment Schemes
<b>DC</b>	Defined Contribution Scheme
<b>DB</b>	Defined Benefit Scheme
<b>GFOA</b>	Government Finance Officers' Association
<b>IPS</b>	Investment Policy Statement
<b>MPT</b>	Modern Portfolio Theory
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>RBA</b>	Retirement Benefits Authority
<b>rf</b>	Risk Free Rate of return
<b>REITS</b>	Real Estate Investment Trusts

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## ABSTRACT

Asset allocation strategies adoption in pension schemes management present cardinal importance. This study sought to examine asset allocation strategies adopted by pension schemes in Kenya. The study used descriptive cross sectional survey design. Yamane model and systematic sampling technique were used to draw a sample of 80 pension schemes. Structured questionnaires' were administered to fund managers of sampled pension schemes of which 74 successfully responded (92.5% response rate). Descriptive statistics; mean, standard deviation, minimum, maximum, frequency and percentages were used to analyze the data. The study established that various asset allocation strategies were adopted by pension schemes in Kenya: Strategic asset allocation strategy (Composite Mean = 4.202), Dynamic asset allocation strategy (Composite Mean =3.395), Tactical asset allocation strategy (Composite Mean = 4.69), Constant weighted asset allocation strategy (Composite Mean = 4.215), Insured asset allocation strategy (Composite Mean = 4.55), Integrated asset allocation strategy (Composite Mean = 4.61) and Asset and Liability management strategy (Composite Mean = 4.855). Factor analysis ascertained latent variables in the study. The study data had KMO value of 0.678, slightly above the KMO standard threshold of 0.6, denoting substantial correlation in the data, thus considered satisfactory for Factor Analysis. Bartlett's test shown significance at 0.000, implying that any identified factor accounted for ascertaining asset allocation strategies adopted by pension schemes in Kenya. The six factors after rotation still cumulatively accounted for by 92.242% of total rotation variance. The study recommended that pension scheme fund managers, trustees, regulator- retirement benefits authority and other pension scheme practitioners ought to regularly monitor and evaluate asset allocation strategies that best suits respective pension schemes to guarantee continuous growth and provision of pension benefits to members.

## **CHAPTER ONE: INTRODUCTION**

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

Asset allocation strategy can be conceptualized as a conglomeration of investment tools, models, tactics, concepts, principles and theories used by investors to optimize investment returns (Schroder, 2013). The explicit rules for rebalancing a portfolio in response to market nuances are considered asset allocation strategies. They include dynamic, constant weighting, strategic, insured, asset liability management and integrated asset allocation. The investor may have the right allocations, but if his or her dynamic strategy is wrong, the results will be inferior. In order to ensure maximization of returns, it has been proved that asset allocation is of paramount importance Ibbotson (2010). Pension Scheme Management is all about making the most of the contributions made into a pension fund by its members. Pension scheme managers may work on behalf of individuals with private pension scheme or organization of all sizes providing workplace pension for their employees. Any investment strategy that leads to loss of fund value, will result into a miserable future for retirees. Recall that fund assets are marked to market.

This study was anchored on Modern Portfolio Theory (Markowitz, 1959), Modern Portfolio Theory Subsequent Research Threads (Kane, 1982) and Capital Asset Pricing Model (Sharpe, 1970). Modern Portfolio Theory postulates that investors should take minimum risk to maximize return on investment, in which case, the risk return ratio will be at optimum. However, obsession with the expected risk and return of a single a stock does not result to the most ideal profit making. Instead, an investor should invest in multiple stocks so as to realize the benefits of diversification and minimize the unpredictability and volatility of the entire portfolio (Markowitz, 1959).Theoretically, other MPT Subsequent research strands will be deconstructed since they strive to address the shortcomings of MPT. It has been found that some assumptions of MPT are

unrealistic. Capital Asset Pricing Model attributed to William Sharpe, Jon Lintner and Jan Mosin, being extension of Markowitz body of work, postulates that investors should be compensated for risks as signified by 'beta' and time value of money as signified risk free (rf) rate (Reilly & Brown, 2012). Sharpe indicated that individual investments consists of systematic and unsystematic risk. Systematic risks are market risks that cannot be diversified while unsystematic risks are specific risks, unique to individual stocks. Systematic risk can be spread by expanding the variety of stocks in a portfolio. Therefore, CAPM can be used as the standard theory that explains well the relationship between risk and expected return (Pamanel & Vikpossi, 2014).

A pension scheme is a large specialized type of investment outfit that accumulates and invests funds which have been brought together by employers and eligible working participants to provide for the future claims of the said participants when they retire (Davis, 1995). Adaptation of asset allocation strategies for pension fund sustainability requirements is not unique to one country. This, certainly, explains why governments around the world are concerned with effective regulation and supervision of pension schemes (Thornton, 2011). The changeover from Defined Benefit (DB) to Defined Contribution (DC) plans in pension schemes has posed the challenge of moving investment uncertainty from corporate sector to households, subsequently and therefore progressively exposing them to financial markets risks thus rendering retirement income to greater variability than before. The overwhelming risk in modern day pension schemes management is that if the asset values decrease too much, eventually there may be little or no money to fulfil pension promises.

This study provided an outline on current asset allocation strategies adopted and explore if the investment tools and concepts enhances growth, relevance and benefit of pension to pensioners.

Additionally, the study established whether the adoption of new and emerging asset allocation strategies result into identification and usage of new and better investment opportunities.

### **1.1.1 Asset Allocation Strategies**

Asset allocation strategy encapsulates the style, method, decision, approach, rule, behaviour or procedure that is used by fund managers and investors to determine both the mix and proportion of asset classes that ought to be included in an investment portfolio which gels with the investor's risk appetite, time horizon, liabilities and investment objective (Schroeder, 2013; Santacruz, 2015& Babalola, 2017). Asset allocation decisions encompasses both assigning assets between different classes and allocation of one asset class in different geographical locations (Reilly & Brown, 2012). The conundrum of asset allocation and portfolio construction is multi-dimensional which hence requires concurrent use of fundamental and technical analysis. The test, therefore, is how to make the best use of all these asset allocation and portfolio construction paradigms so that a strategy can be realized that, eventually, yields a greater rate of return that is better as compared to the rate obtainable from the market (Fahmy, 2015).

The role of Pension fund managers is to allocate assets in different industries and economies to make sure that they get the best returns on investment targets as agreed with the trustees. Payments to retirees is depended upon how the investments have been managed and will determine whether the pensioners live a dignified life or a life of misery and dependency. Many pension schemes have gradually transitioned from DB to DC, the resultant effect being that the investment risk has concomitantly migrated from the institutional stakeholders to the households (Bams, Schotman & Tyagi, 2016).

This study explored asset allocation strategies implemented by retirement benefits schemes together with their contributions to development of the same. Strategic asset allocation measured by risk and return tradeoff of the investment classes. Tactical asset allocation measured by changing pattern of the reward available in the capital market. Asset liability management measured by surplus optimization. Constant weighting is continuous rebalancing of the portfolio to the original mix. Dynamic asset allocation is measured by extent of principal protection. Integrated asset allocation is measured by surplus and standard deviation of future net worth's. Insured asset allocation is measured by portfolios base value using CPPI.

### **1.1.2 Pension Schemes in Kenya**

In 1965, the pioneer entity to manage pension funds in Kenya was incorporated. Its name was the National Social Security Fund (RBA 2000) since none existed in the pre independence era. Currently, the pension space is supervised by the Retirement Benefits Authority (RBA). Kenya's pension scheme space consists of National Social Security Fund, Public Service Superannuation Scheme (PSSS) Occupational Retirement schemes (ORS) and Individual Retirement Schemes. The operations of Public Service Superannuation Scheme (PSSS) commenced on January 1, 2021, effected through Legal Notice 156 of August 12, 2020. The Public Service Superannuation Scheme was established by the Public Service Superannuation Scheme Act, 2012. Previously, it was known as Civil Servants Pension Scheme (CSPS). The policy direction was issued by the government through the National Treasury circular No.18 of 2010.

The Pension Nomenclature is diverse depending on the area of focus. Pension schemes can also be classified as public versus private pension schemes, occupational versus individual pension schemes, funded versus unfunded, open versus closed and segregated versus guaranteed schemes and finally defined contribution (DC) versus defined benefit (DB). Private pension schemes'

salient features are; that membership is drawn from private sector workers, the management is by private sector institutions, financial flows are not being controlled by general government, a large proportion of assets are invested in private sector securities, is regulated by private law and guarantees are offered by private sector institutions. Otherwise, such a pension scheme is classified as a public pension scheme (Yermo, 2002).

Occupational Pension schemes are established where an employer-employee relationship exists. In such schemes, contributions are indexed on the amount of the incomes of the employee. The sponsor contributes to the fund although the employee may also be required to contribute, as required by law, collective bargaining agreements or they may be voluntary where employers establish the schemes on their own accord in accordance with their ability and willingness to contribute to the fund. Members voluntarily contribute into Individual pension plans without reference to any employment contract, they are open to the general public. (Yermo, 2002; Clark & Mitchell, 2005)

A funded pension fund is one in which assets are pooled into the scheme which can then be utilized for payout of benefits to members. The ideal funding ratio is 100%. Where the assets of the scheme are not attributed to members, such a scheme is known as unfunded. The promises to members are made out from immediate contribution and other income of the sponsor (Yermo, 2002)

Pension funds can be open or closed (Hughes & Stewart, 2004). An open pension scheme does not place barriers and huddles on membership of the pension plan while closed pension schemes support only pension plans that are limited to certain employees.

Another way of defining pension schemes is defined benefit and defined contribution. Under a defined benefit arrangement, the amounts payable are determined at the point of the member's exit at the of retirement (Odundo, 2006). In such a plan, the sponsor pledges an agreed level of



retirement benefits to the members (Chan-Lau, 2005). In the event that the investment returns are not sufficient to cater for the scheme liabilities, then the sponsor will have to make good the deficit. In a defined contribution scheme, the contributions to the scheme by the members and the sponsor are specified well in advance (Besley & Prat, 2003). In segregated pension plans, the investment approach undertaken is spelt out in the trust deed. The trustees delegate all the investment decisions to a fund manager where the fund value is assured with an agreed percentage of interest. On the contrary in segregated pension schemes, the scheme takes responsibility for the performance of their investment, the fund manager performs an advisory role as the trustees make the decisions. If the performance is good, the fund value increases and vice versa (Maalim, 2014) Retirement benefits schemes can be classified as either a provident fund or a pension fund. If a member is paid his whole benefits at once, then such a scheme is called a provident fund. A pension scheme provides periodic payments called pension on attainment of retirement age. The Retirement Benefits Authority regulates and supervises all the Retirement Benefits Schemes in Kenya.

Pension scheme is a savings vehicle designed to allow accumulation of capital which will eventually be used to pay benefits for and in respect of the beneficiaries of the pension scheme (Derbyshire and Hardy, 2008). The Retirement Benefits Authority (RBA) through the RBA Act 1997 and RBA regulations 2000 regulate and supervise the pensions industry in Kenya. They have adopted the modus operandi of risk based supervision. The essence of constituting the RB Act (1997) and Regulations 2000 was to eliminate the glitches that the pension industry was experiencing at the time. Pension schemes are established under an irrevocable trust. They are to be managed separately from the influence and control of the sponsor. Pension Schemes do solicit

the services of independent professional services providers such as fund managers, custodians, auditors, actuary all who would provide requisite professional guidance to trustees.

The assets into which schemes invest are not dictated by RBA (Kiplagat, 2016). What the regulator does is to provide guidelines on the asset classes and limits of investment into those asset classes. Having understood their fundamentals, pension schemes are at liberty to choose where to invest. Existing regulations call for a caution in so far as investment is concerned. Pension scheme investments must therefore be made up of a well-diversified and well spread portfolio (Chirchir, 2007).

The Annual Report and Financial statements of the Retirement Benefits Authority outlines the core activity of the Authority as the regulation and supervision of establishment and management of retirement benefit schemes in Kenya. In so doing, they provide information concerning the total assets in the pension industry which hit the trillion mark as at June 2020. The pension industry reports also reveal the overall industry investment portfolio, the assets held by both fund managers and approved issuers, assets held by NSSF including the asset classes together with the level of compliance with investment guidelines.

It should be noted from here that the Annual reports and Financial Statements of the fund managers and retirement benefits schemes do not outline the asset allocation strategies employed while managing investment portfolios.

## **1.2 Research Problem**

There is no shortage of literature on asset allocation strategies for investment portfolio, what is lacking in investment theory is how to put into use these wealthy theoretical apparatus, a tricky endeavour but not something entirely new (Merton, 2003). On the other hand, a survey of investment

management practitioners in Europe by (Amenc et al, 2011) shows that institutional investors repeatedly utilize the latest most advanced asset allocation strategies. When it comes to private wealth management however, advanced asset allocation models are not widely used in Europe (Schroder, 2013). Surprisingly, Fahmy (2013) observes that ALM is most often used by European banks, Insurance companies and large pension funds. DC schemes operate under the scenario where the pension will be determined by the market value of assets in the scheme. In DB, annuitisation is inherent, with risk distribution across generations and the scheme can only pay a fraction of the value of assets owned by the organization. Ideally, overtime, the value of pension should not remain stagnant, instead they should grow as a result of contributions and investment returns. Investment returns are contingent on the asset allocation strategies and portfolio decisions of fund managers. Pension schemes may be funded or unfunded, they may also be classified as DC or DB. There exists group and personal pension schemes (Tonk, 2005 & Blake et al., 1999).

Pension scheme managers work closely with client representatives in committees since some clients prefer to take an active role in management matters rather than leave it entirely to a pension, insurance or benefits consultancy. In the US, there is apprehension, with survey and research evidence, of apathy and narrow-mindedness regarding retirement decisions. As such retirement capacity of DC plans may be compromised and in effect their ability to fulfil their promise to retirees.

The essence of research is to solve existing and emerging societal problems. Financial economists have developed models to assist professional investors to surmount constraints that are presented by conventional asset allocation models. The endeavour should be extended by encouraging and where necessary, compelling wealth management professionals to espouse freshly developed asset

allocation tools and concepts so that clients can derive benefits therefrom (Schroder, 2013). The close link between dismally performing funds and diverse investment strategies such as investment style, asset allocation, risk profile and regulatory effect, is still a developing area of academic interest (Babalola, 2017).

In Kenya, pension schemes management perform vital role as far as the overall growth of the economy is concerned. According to RBA report (2018), pensions coverage in Kenya stands at 20% whereas the assets that retirement schemes hold are worth more than Sh1 trillion, which is about 14% of the gross domestic product. The key regulators involved in pension scheme management are RBA and the Insurance Regulatory Authority (IRA). In spite of the strong regulatory framework, most pension funds in Kenya are faced with challenges arising from mismanagement such as failure to remit member contributions.

Considerable empirical research exists concerning asset allocation strategies adopted by pension schemes: A survey by Amenc (2008) to compare industry practices and academic research in investment management in Europe established that the techniques applied in industry are rooted in academic publication, what is overlooked is the organization of the investment process. Santacruz (2015) attempted to inspect the clash between theory and practice of asset allocation in Australian investment management industry and found that despite the high level of awareness, there was low uptake of asset allocation theories and techniques anchored on theories by Australian investment management practitioners. A contrarian result was reached by Amenc et al (2011) whereby economically significant size firms were found to use sophisticated portfolio construction techniques but ignored the same techniques in performance measurement.

Studies immediately following the enactment of the RBA Regulations 2000 were based on investment practices and Pension fund management (Wagacha, 2001; Omonyo, 2003 & Gitu, 2003) extended this to include trustees (Kiplagat, 2016; Onyango, 2011; Omondi, 2013); Oluoch, 2013; Mwachanya, 2015; Njuguna, 2010; Nguthu, 2009; Muia, 2015). However, studies generally looked at asset allocation and its influence on financial performance. A slightly different study was undertaken by (Okeyo, 2016) who looked at investment of portfolio in pension funds though the conclusion still referred to portfolio diversification affecting

Performance. Research has also been carried for other multiple asset portfolio with (Kagunda, 2015 & Sang, 2017) focusing on Units trusts and (Shikwe, 2016) on the Insurance sector.

Studying Asset allocation strategies adopted by Pension Schemes in Kenya filled both conceptual, contextual, empirical and knowledge gap in the existing literature. Contextually and empirically such a study has not been carried out in Kenya. The gap which the current study filled by responding to the research question: What are the asset allocation strategies adopted by pension schemes in Kenya?

### **1.3 Research Objective**

The objective of this research is to examine the asset allocation strategies adopted by pension schemes in Kenya.

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

A possible outcome of this research is enhanced awareness on the asset allocation strategies best suited for pension schemes in Kenya. Thus provide a guide to practitioners in the Pension industry to identify novel asset allocation strategies for multiple asset class portfolios.

These study findings helps Board of Trustees and fund managers of pension schemes to determine the asset allocation strategies to employ to ensure effective and efficient returns to pension schemes and other institutional investors.

The RBA, relevant ministry and other stakeholders may use the study findings to come up with policies on asset allocation strategies applicable to Pension Schemes in Kenya.

Information from this study are available to various researchers intending to carry out studies on the asset allocation strategies in pension schemes or advance on other relevant studies. Future researchers and scholars shall find the study handy as it helped beef up existing knowledge on asset allocation strategies by pension schemes. Scholars may use this study outcome as part of empirical studies.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The theoretical and conceptual underpinnings of this research is highlighted here. It entails the identification, discussion and conclusion of theories that are relevant to the study, review of empirical studies, concretization of the conceptual model as well the crystallization of identified shortcomings.

### **2.2 Theoretical Framework**

This segment provides an overview of the theories and conceptual framework asset allocation strategies that are relevant in pension fund management. The study has made use of Modern Portfolio Theory (MPT) (Markowitz, 1959), Modern Portfolio Theory Subsequent Research Threads (Kane, 1982) and Capital Asset Pricing Model (CAPM) (Sharpe, 1970).

#### **2.2.1 Modern Portfolio Theory**

Modern Portfolio Theory (MPT) recommends that investors should take minimum risk to make maximum return on investment in which case, the risk return ratio will be at optimum. He advised that the obsession with the expected risk and return of a single a stock does not lead to optimum profit making. Instead an investor should invest in multiple stocks so as to enjoy the benefits of diversification and minimize the unpredictability and volatility of the entire portfolio (Markowitz, 1959). MPT emphasizes that in a price efficient market, the market portfolio offers the highest rate of return for a given unit of risk. Before MPT, portfolios were created haphazardly since little was known about the management of portfolio, in other words, portfolios were managed haphazardly. Moreover, not much thought had been dedicated to the idea of risk either. When the price of a

stock has an upward trend, it would be included in the portfolio without taking into account any other factor (Hagstrom, 2001).

The concept of MPT can be used to create an 'efficient frontier' in which ideal portfolios are conceivable. Portfolio construction consists of the following steps: security valuation, asset allocation, and portfolio optimization and performance management. The study delved into asset allocation as a subset of portfolio construction. The theory has helped to identify expected portfolio return and expected portfolio risk as the constructs that affect the design of portfolio asset allocation.

This theory is relevant for this study seeing as pension management falls in the broad thematic area of management of multiple asset class portfolio as required by the Retirement Benefits Authority, in other words, MPT advocates for diversification as supported by (Santacruz, 2015; Babalola, 2017; Kagunda, 2010 & Kiplagat, 2016). MPT is the anchor of risk return axis for which it postulates that the theoretical best portfolio carries not only the least risk given a level of expected return but also the maximum expected return for a given level of risk (Bodie, Kane and Marcus, 2014). Pension managers must be alive to risks in pension investments given the long term horizon of investment.

### **2.2.2 MPT Subsequent Research Thread**

The assumptions of MPT presents constraints and practical problems associated with the original mean variance model. In order to address this limitations, MPT was broadened by other models now known as MPT Extensions, some of which are explained below and are useful in the comparison of theory and practice of investment in pension schemes.

It was established by (Kane, 1982) that incorporating skewness as a parameter while evaluating investment, makes better the mean-variance portfolio decision. Computational evidence in a study



conducted by (Low, Pachamanova & Sim, 2012) shows that incorporating the suggested parameter led to the creation of superior asset allocation. There a need for a multi-moment portfolio theory due to the growing concern for extreme risks as demonstrated by (Jurczenko & Maillet, 2006).

The other risk measures that have been suggested other than variance of expected returns are semi variance, lower partial moments (LPM), value at risk (VAR) and conditional value at risk (CVAR), also known as Expected Shortfall (ES) and Mean Absolute Deviation (MAD) (Santacruz, 2017). It is unfortunate that in DC pension arrangement, investment risks are borne by individual beneficiaries, the employer's legal obligation ceases once they wire the contributions to the scheme (Derbyshire & Hardy, 2008).

Traditional investment models are restrictive on the type of assets that are to be included in a multiple asset portfolio. They mainly advocated for investment in cash, equity and fixed interest security. Modern investments have a much bigger legroom as to the type of assets that they can invest in. The assets include venture capital, private equity, derivative instruments, property and precious metal (Santacruz, 2017).

Pension schemes are long term investors unlike banks and insurance companies, endowment funds or foundations. They need tailor made models to cater for multi-period analysis. The adaption of single period models is an overreaching exercise since it always assumes that parameters are independent of each other (Celikyurt & Ozekic, 2007). Strategic asset allocation, dynamic programming, stochastic programming and lifecycle investing are some of the panacea to this quagmire (Xiong, Sullivan & Wang, 2013; Busu, Byrne & Drew, 2011; Ye & Li, 2012). Multi period models will increasingly acquire a high level of significance in pension scheme management due to pension fund exposure to extreme risks.

### **2.2.3 Capital Asset Pricing Model**

The model is attributed to William Sharpe, Jon Lintner and Jan Mosin, being extension of Markowitz body of work. It postulates that investors should be compensated for risks as signified by 'beta' and time value of money as signified risk free (rf) rate (Reilly & Brown, 2012).

Sharpe indicated that individual investments consists of systematic and unsystematic risk. Systematic risks are market risks that cannot be diversified while unsystematic risks are specific risks, unique to individual stocks. Systematic risk can be spread by expanding the variety of stocks in a portfolio. We can conclude that CAPM is the yardstick that seeks to elucidate the interplay of risk and expected return (Pamane1 & Vikpossi, 2014).

The pertinence of this theory in my work is that it helps trustees together with pension fund managers to build portfolio that offer maximum returns and minimum risk through diversification and helps in establishment of the benchmark being the rf rate –which is denoted by 10-year government bond yield (Babalola, 2017).The supreme objective of Pension Fund Managers is capital preservation which is determine by rf (Omony, 2003), consequently, any extra risk taken must be compensated. If the price of a share is aligned to that of the market, then the stick's beta is equal to 1. Therefore, a stock that has a beta of 2.0, would inflate by 20% when the stock price rises by 10% and deflate by 20% when the stock price falls by 10%.

### **2.3 Asset Allocation Strategies adopted by Pension Schemes**

In order to manage and grow portfolios, pension fund managers can espouse asset allocation strategies such as Strategic asset allocation, which is the apportionment of the fund investment portfolio into different asset classes with a long-term investment goal in tandem with risk and return viewpoint of the investment classes (Sharpe, 1996).Arnot and Fabozzi (1998),on the other hand defines tactical asset allocation (TAA) as vigorous strategies whose aim to augment

performance by artfully varying the asset blend of a portfolio in order to align them to the varying patterns of the compensation available in the markets. TAA aims to exploit the apparent inefficiencies in asset pricing in the short term. Constant-Weighting allocation is the continuous rebalancing of the portfolio to the original mix. Dynamic Asset Allocation is employed by structured investment products such as hedge and mutual funds to attain exposure to various investment avenues and provide absolute principal protection. Insured asset allocation involves the determination of base asset value from which the portfolio should not drop. There are instances for which, an investor can increase expected net worth by taking on more net worth risk. The desirability of the added net worth risk is determined by the standard deviation of the future net worth. This type of strategy is known as Integrated asset allocation as expounded by (Sharpe, 1987). Finally, asset liability management (ALM) is a concept that focusses on the scheduling of cash flows given that business entities must anticipate that liabilities will arise and they have to be made good. ALM endeavours to ensure that assets can be quickly converted into cash so as to clear monetary obligations as they fall due.

Whereas integrated asset allocation is measured by expected net worth-for individuals its wealth and for pension funds it's the surplus- and standard deviation of future net worth, insured asset allocation is measured by the portfolios base value using the constant proportion portfolio insurance (Sharpe, 1987). In the European investment practices (Amenc, Goltz, Le Sourd, and Martellini, 2008), observed that cash flow Matching, surplus optimization and liability driven investments are measures of ALM. Suresh and Krishnan (2018) studied gap analysis in Indian Banks, TAA measured by optimal portfolio weight. It should be noted that Dynamic asset allocation can be measured by Constant Proportion Portfolio Insurance (Schroder, 2013; Howe, 2014).

The findings of this study should encourage wealth management professionals to embrace modern asset allocation theories more so pension schemes given the uncertainties involved. The most critical recommendation by (Schroeder, 2013) is that financial economists should not only endeavour to develop asset allocation models that integrate insights of rigorous economic theory but also come up with models that are viable in practice.

In Australia, Santacruz (2015) used the survey methodology on a population consisting of the research community and investment management industry practitioners. He employed methodological triangulation for data gathering since he was gathering both quantitative and qualitative data. Three studies were carried out, thus, survey of academics, interviews of practitioners and survey of practitioners. A link was sent to 395 officers working investment management sections in the companies and relevant industry associations. Out of those, 305 started to be responded, 123 were completed but only 91 were valid and therefore included in the analysis. The study concluded that practitioners are aware of novel asset allocations theory but the usage is negligible. The greatest significance of this study in relation to mine is that it established a divergence between theory and practice and went further to suggest that though the dichotomy is inevitable, the two sides should keep nourishing each other and academics should recognize practice as the stage where new thinking arises out of necessity (Roth, Mavin & Dekker, 2014). In his suggestion for further research, Santacruz (2015) suggested that a research strand should extend to asset allocation practices of pension funds and other non-institutional investment managers. My study has focused on the former so that the behavioral finance issues identified can be researched further.

Yet another research was conducted in the US, there in, McCown, et al (2018) looked at four issues; looking for assets that mimic Markowitz theoretical market-capitalization weighted

portfolio of all investable assets (broadly diversified and not highly correlated), investments that require low initial investment, low annual expenses and those that can be sold short in a theoretical market portfolio.

Many studies on asset allocation strategies have been carried out locally (Kagunda, 2005; Sang, 2015) focused on Unit Trusts, (Shikwe, 2016) looked at asset allocation vis a vis financial performance on the insurance sector whereas (Omondi, 2013; Mwachanya, 2015; Gitu, 2003; Omonyo, 2003; Wagacha, 2001; Kiplagat, 2016; Oluoch, 2013 & Ndug'u, 2016) have done research on Pension Schemes. I have spent a considerable amount of time and effort in literature review for my study. As far as I am concerned, no one has researched on the strand of the dichotomy of theory and practice as far as asset allocation strategy in pension schemes are Kenya are concerned.

## **2.4 Summary of Literature and Study Gap Analysis**

The theories underpinning this study are Modern Portfolio Theory (MPT), MPT subsequent research strands and CAPM. On the global arena, to the best of my understanding, I have not come across a study dedicated to assess the asset allocation strategies adopted by pension schemes. The closest recent studies are three, one was conducted by Schroeder (2013) concerning private wealth management in Europe and the second was carried out by Santacruz (2015) on investment management industry in Australia. The third was a research conducted by (Lee & Junior 2018) concerning portfolio construction, risk management and performance evaluation in Brazilian investment management industry. This presents both a conceptual and contextual gap from my study which deals with the pension industry. However, many studies have been conducted dealing with or comparing asset allocation and financial performance which also presents a conceptual gap.

Continently, a study conducted by Babalola (2017) in Nigeria set to establish the cause effect between investment strategies and the performance of funds whereby 335 out of 460 employees of the Pension fund administrators were surveyed. The findings were that asset allocation greatly influence the performance of pension funds. This study however, did not investigate all asset allocation strategies in use in pension schemes.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

Here, the study outlined the Research design, Target population of the study, sample and sampling technique, research instruments, data collection procedure, processing and analysis and presentation of research findings.

### **3.2 Research Design**

The researcher used descriptive cross-sectional survey was. Descriptive research design was suitable for this study because it generates both qualitative and quantitative data that define the state of nature at a specific point in time. Moreover, the design has been successfully used by (Schroder, 2013; Santacruz, 2015 & Babalola, 2017)

This study endeavored to improve an understanding of the asset allocation strategies adopted by pension schemes.

### **3.3 Target Population**

The population of study was 389 Segregated Pension Schemes registered by Retirement Benefits Authority (RBA) as at 31<sup>st</sup> December 2020 (Appendix I). The population targeted must comprise similar traits that are observable and enable the researcher establish representative results of the whole study advises Mugenda and Mugenda (2013). The Fund Managers of Segregated Pension Schemes registered with RBA whose main role is asset allocation strategy decisions, provided primary data on various asset allocation strategies in use by respective pension schemes.

### **3.4 Sampling Size and Sampling Technique**

#### **3.4.1 Sampling Design**

The sample size for the research was determined by Yamane's formula (1967) as stated below.

$$n_s = \frac{N}{\{1 + N(e^2)\}}$$

Where,  $n_s$  = Sample size,  $N$  = Population size,  $e$  = Margin error = 10%. The level of precision is the range in which the true value of the population is estimated to be; it was presented as a percentage points ( $\pm 5\%$ ). This sample size was calculated at 90% significance level.

$$n_s = \frac{389}{1 + 389(0.1)^2}$$

= 80 Pension Schemes

The 80 Respondents were systematically selected from the sampling frame of 389 alphabetically arranged Segregated Pension Schemes, where every 5<sup>th</sup> element (pension scheme) was picked (Appendix I).

### 3.5 Data Collection

The primary data on asset allocation strategies was collected using emailed structured questionnaires to pension schemes fund managers as they are the custodians of data about asset allocation strategy. Primary data is appropriate for this study because the data required ought to be original, fresh-concerned more with most current asset allocation strategies that pension schemes in Kenya use to manage investment portfolio.

The structured questionnaire consists of two parts. Part A gathered the respondents' background information. Part B gathered information about Asset allocation strategies, using the five point likert scale: Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5) (Appendix II).



### **3.6 Data Analysis**

The data was gathered from the field, coded, cleaned, tabulated and analyzed using Statistical Package for Social Sciences (SPSS) version 20. Data analysis employed both descriptive and factor analysis. Descriptive statistics comprised of mean, composite mean and standard deviation of various asset allocation strategies used in Pension Scheme Management.

Factor analysis ascertained latent asset allocation strategies that are employed by pension schemes in Kenya. Data were presented in tables as was successfully adopted by Santacruz (2015); Sakwa (2018). Where there was a representation of the communalities before and after the extraction, principal component analysis adopted as extraction method and the varimax with Kaiser Normalization being rotation method. Principal component analysis operates on the postulation that all variables are similar prior to extraction at a value of 1.00 (Kothari, 2014).

## CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION.

### 4.1 Introduction

This segment of the research unveiled the response rate, Fund Managers of Pension Schemes background information, Descriptive Statistics, Factor Analysis of data linked to the study objective and discussions of the findings.

### 4.2 Response Rate

**Table 4.1: Response Rate**

Target Responses	Frequency	Percentages
Response	74	92.5%
Non Response	6	7.5%
<b>Total</b>	<b>80</b>	<b>100%</b>

**Source: (Research SPSS Data, 2021)**

Table 4.1 indicates that, out of the 80 questionnaires sent to Fund Managers of 80 Pension Schemes in Kenya, 74 questionnaires were completed and mailed back. This depicts a high response rate of 92.5%. This was adequate for drawing conclusions, consistent with Berg (2004) who concluded that response rate above 70% is noble. The 6 questionnaires were not returned translating to 7.5% non-response. The respondents did not respond to follow ups by the researcher. .

### 4.3 Pension Schemes Fund Managers` (Staff) Level of Education

Table 4.2 below outlines the standard of educational attainment of fund managers of pension schemes. Out of the 74 fund managers of pension schemes under study, 51.4 % were holders of Master`s Degree, 37.8 % were Certified Investment and Financial Analysts (CIFA), and 10.8 % were holders of Bachelor`s degree. Thus, Master`s degree was established as the highest level of education for respondents under the study. It was similarly noted that all the pension schemes fund managers were Certified Investment and Financial Analysts (CIFA). This depicted that all the

respondents` had requisite knowledge on Asset allocation strategies that pension schemes in Kenya have espoused.

**Table 4.2: Uppermost Level of Education**

Level of Education	Frequency	Percent	Cumulative Percent
Bachelor's Degree	8	10.8	10.8
Master's Degree	38	51.4	62.2
CIFA	28	37.8	100.0
<b>Total</b>	<b>74</b>	<b>100.0</b>	

Source: (Research SPSS Data, 2021)

#### 4.4 Pension Schemes Fund Managers` (Staff) Length of Service

**Table 4.3: Length of Service**

Length of Service	Frequency	Percent	Cumulative Percent
1-5 Years	9	12.2	12.2
6-10 Years	21	28.4	40.5
11-15 Years	44	59.5	100.0
<b>Total</b>	<b>74</b>	<b>100.0</b>	

Source: (Research SPSS Data, 2021)

Tables 4.3 denote 74 Fund Managers of Pension Schemes that participated in the study, 59.5 % had served between 11-15 years, 28.4 % had served between 6-10 years, with 12.2 % having served for between 1-5 years. This established that all the fund managers of pension schemes had adequate experience to provide data relevant to ascertain asset allocation strategies embraced by pension schemes in Kenya.

## 4.5 Pension Fund Managers' (Firm) period of operation

**Table 4.4: Pension Fund Managers' (Firm) period of operation**

Period of Operation	Frequency	Percent	Cumulative Percent
5 years to less than 10 years	1	1.4	
10 years to less than 20 years	5	6.8	1.4
20 years to less than 50 years	53	71.6	8.1
More than 50 years	15	20.3	79.7
<b>Total</b>	<b>74</b>	<b>100.0</b>	100.0

Source: (Research SPSS Data, 2021)

Table 4.4 denote 74 pension schemes that participated in the study, 71.6 % had been in operation between 20 to 50 years, 20 % had operated more than 50 years, 6.8 % had operated between 10 to 20 years and 1.4 % had been in existence between 5 to less than 10 years. This denoted that all the pension funds had operated long enough to avail data relevant for determining asset allocation strategies of pension schemes in Kenya.

## 4.6 Asset allocation strategies adopted in Pension schemes in Kenya

Asset allocation strategies were itemized as strategic asset allocation, dynamic asset allocation, tactical asset allocation, constant weighted asset allocation, insured asset allocation, integrated asset allocation and Asset and Liability management strategy. The data were analyzed via descriptive statistics plus factor analysis.

### 4.6.1 Descriptive Statistics

The Descriptive Statistics (mean, minimum, maximum and std deviation) to ascertain asset allocation strategies were obtained from empirical investigation data.

**Table 4.5: Descriptive Statistics of Asset allocation Strategies**

Asset Allocation Strategies	N	Mini.	Maxi	Mean	Std. Dev.
Strategic Asset Allocation Strategy Rebalancing of portfolio periodically (every now and then).	74	2	5	4.78	.647

Diversification to reduce risk and improve return.	74	3	5	3.81	.946
Target allocation based on Investor risk tolerance.	74	4	5	4.99	.116
Target allocation based on time horizon.	74	1	5	2.59	1.820
Target allocation based on Investment objectives.	74	3	5	4.84	.439
<b>Composite Mean</b>				<b>4.202</b>	
<b>Dynamic Asset allocation strategy</b>					
Adjust mix of assets in a portfolio based on market condition/trend.	74	2	5	4.30	1.069
Reducing position in the worst performing asset classes.	74	2	5	2.84	1.047
Adding position in the best performing assets.	74	2	5	4.22	1.126
Relies on portfolio manager's judgment instead of a target mix of asset.	74	1	5	1.82	1.275
<b>Composite Mean</b>				<b>3.395</b>	
<b>Tactical Asset Allocation Strategy</b>					
Stocks, bonds and cash are actively balanced/adjusted.	74	2	5	4.62	.839
Maximize portfolio returns, minimize market risk.	74	3	5	4.84	.439
Portfolio asset mix always reflect your goals at any point in time.	74	3	5	4.61	.699
<b>Composite Mean</b>				<b>4.69</b>	
<b>Constant weighted Asset Allocation Strategy</b>					
Continually (Automatically) rebalance your portfolio.	74	2	5	4.18	.970
Purchase assets that decline in value.	71	2	5	4.15	1.051
Sell assets that increase in value.	74	2	5	4.11	1.054
Rebalance portfolio to original mix in case of asset movement above 5%	74	2	5	4.42	1.047
<b>Composite Mean</b>				<b>4.215</b>	
<b>Insured Asset Allocation Strategy</b>					
Investor is risk-averse	74	2	5	4.26	.966
Establish portfolio base/floor to cushion decline	74	3	5	4.28	.868
Relying on analytical research, forecast and experience to decide security to buy, hold and sell	74	3	5	4.93	.344
Aim at increasing portfolio value as much as possible	74	2	5	4.73	.816
<b>Composite Mean</b>				<b>4.55</b>	
<b>Integrated Asset Allocation Strategy</b>					
Optimization of an investors net worth.	74	3	5	4.78	.625
Deals with expected net worth (asset less liabilities).	74	3	5	4.55	.665
Investor willingness to take added net worth risk.	74	3	5	4.50	.707
Intention to increase expected net worth.	74	3	5	4.61	.637
<b>Composite Mean</b>				<b>4.61</b>	
<b>Asset and Liability Management Strategy</b>					
Planning to meet the liquidity needs	74	4	5	4.99	.116
Arrange maturity pattern of assets and liabilities	74	4	5	4.89	.313
Spread asset liability management	74	3	5	4.69	.639

Interest sensitivity analysis	74	3	5	4.85	.515
<b>Composite Mean</b>				<b>4.855</b>	

(Source: Research SPSS data, 2021)

The study explored the various Asset allocation strategies adopted in the management of pension schemes in Kenya. Table 4.5 denotes that most respondents agreed various asset allocation strategies were adopted in pension schemes in Kenya: Strategic asset allocation strategy (Composite Mean = 4.202), Dynamic asset allocation strategy (Composite Mean = 3.395), Tactical asset allocation strategy (Composite Mean = 4.69), Constant weighted asset allocation strategy (Composite Mean = 4.215), Insured asset allocation strategy (Composite Mean = 4.55), Integrated asset allocation strategy (Composite Mean = 4.61) and Asset and Liability management strategy (Composite Mean = 4.855). Each element of various asset allocation strategies registered moderate to high standard deviation, depicting divergent views on extent of asset allocation strategy adoption in pension schemes in Kenya.

**Table 4.6: Descriptive Statistics of Importance of Asset Allocation Strategies**

<b>Importance of Asset Allocation Strategies</b>	<b>N</b>	<b>Mini.</b>	<b>Maxi.</b>	<b>Mean</b>	<b>Std. Dev.</b>
They enhance effectiveness in meeting clients' needs	74	4	5	4.86	.344
They enhances our work performance	74	2	5	4.50	.997
Their use boosts our productivity	74	2	5	4.36	.987
Learning how to use them is easy	74	1	4	1.82	.942
Their usage presents flexibility	74	3	5	4.39	.699
It is easy to become competent at using them	74	1	5	2.18	1.297
The industry encourages their usage.	74	2	5	4.54	.797
A majority in the industry uses them	74	2	5	4.54	.780
RBA thinks that we should adopt their usage	74	2	5	4.45	.953
We highly regard those who use them	74	3	5	4.59	.639
We are endowed with the means necessary to use them	74	4	5	4.99	.116
We possess the requisite knowledge and capability to use them	74	5	5	5.00	.000
Entities exist that can assist us in using them	74	3	5	4.49	.745
<b>Composite Mean</b>				<b>4.21</b>	

(Source: Research SPSS data, 2021)

Table 4.6 illustrates most respondents considered asset allocation strategies adoption very important in the management of pension schemes in Kenya (composite mean = 4.21). Having requisite knowledge and capability to use asset allocation strategies scored maximum (mean = 5). Endowed with the means necessary to use asset allocation strategies ranked second highest (mean = 4.99). Learning how to use them is easy, scored the lowest (mean = 1.82). It is easy to become competent at using asset allocation strategies registered second lowest score (mean = 2.18). Most elements of importance of asset allocation strategies registered a high standard deviation, depicting divergent views.

#### 4.6.2 Factor Analysis

Descriptive Factor analysis conducted to point out important and interesting relationships among observed study data. Principal component method was used with the objective of identifying latent variables that may ascertain asset allocation strategies in pension schemes. The purpose of factor analysis was to ascertain simple aspects of the association and allow for conclusive analysis (Anderson, 2004)

**Table 4.7: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.678
	Approx. Chi-Square	1160.322
Bartlett's Test of Sphericity	Df	36
	Sig.	.000

(Source: Research SPSS Data, 2021)

Table 4.7 shows the KMO and Bartlett's test. KMO test measured data suitability for Factor Analysis. The KMO test measured sampling adequacy for each variable in the model cum for the complete model. The study data KMO had a value of 0.678, slightly above the KMO standard threshold of 0.6, denoting substantial correlation in the data, thus considered satisfactory for Factor

Analysis (Revelle, 2016). Bartlett`s test shows significance at 0.000, implying that any identified factor can be taken into account in ascertaining asset allocation strategies adopted by pension schemes in Kenya.

**Table 4.8: Communalities**

	<b>Initial</b>	<b>Extraction</b>
Rebalancing of portfolio periodically (every now and then).	1.000	.778
Diversification to reduce risk and improve return.	1.000	.962
Target allocation based on Investor risk tolerance.	1.000	.789
Target allocation based on time horizon.	1.000	.976
Target allocation based on Investment objectives.	1.000	.996
Adjust mix of assets in a portfolio based on market condition/trend.	1.000	.956
Reducing position in the worst performing asset classes.	1.000	.861
Adding position in the best performing assets.	1.000	.947
Relies on portfolio manager`s judgment instead of a target mix of asset.	1.000	.770
Stocks, bonds and cash are actively balanced/adjusted.	1.000	.991
Maximize portfolio returns, minimize market risk.	1.000	.996
Portfolio asset mix always reflect your goals at any point in time.	1.000	.942
Continually (Automatically) rebalance your portfolio.	1.000	.867
Purchase assets that decline in value.	1.000	.973
Sell assets that increase in value.	1.000	.899
Rebalance portfolio to original mix in case of asset movement above 5%	1.000	.888
Investor is risk-averse	1.000	.957
Establish portfolio base/floor to cushion decline	1.000	.946
Relying on analytical research, forecast and experience to decide security to buy, hold and sell	1.000	.929
Aim at increasing portfolio value as much as possible	1.000	.978
Optimization of an investors net worth.	1.000	.977
Deals with expected net worth (asset less liabilities).	1.000	.906
Investor willingness to take added net worth risk.	1.000	.973
Intention to increase expected net worth.	1.000	.965
Planning to meet the liquidity needs	1.000	.756
Arrange maturity pattern of assets and liabilities	1.000	.930
Spread asset liability management	1.000	.963
Interest sensitivity analysis	1.000	.958

Extraction Method: Principal Component Analysis.  
**(Source: Research SPSS data, 2021)**



Table 4.8 illustrate communalities giving fraction of changeability in original variable accounted for by high loading factors, which have Eigen values more than one (Churchill and Lacobucci, 2002). This indicates for example that 77.8 % of variability of rebalancing portfolio periodically, 96.2 % of variability of diversification to reduce risk and improve return, 94.7% of variability of adding position in the best performing assets, 95.7% of variability of investor is risk-averse, 97.7% of variability of optimization of an investors net worth, 96.5% of variability of intention to increase expected net worth, 95.8% of variability of interest sensitivity analysis are accounted for by factors 1, 2 ,3 ,4 , 5 and 6, shown in table 4.9.

**Table 4.9: Total Variance Explained**

Component	Initial			Extraction Sums of Squared			Rotation Sums of Squared		
	Eigenvalues			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.441	51.574	51.574	14.441	51.574	51.574	9.203	32.868	32.868
2	4.263	15.225	66.799	4.263	15.225	66.799	7.165	25.590	58.458
3	2.491	8.895	75.693	2.491	8.895	75.693	3.325	11.876	70.334
4	1.969	7.031	82.724	1.969	7.031	82.724	2.984	10.658	80.992
5	1.461	5.219	87.943	1.461	5.219	87.943	1.691	6.040	87.032
6	1.204	4.299	92.242	1.204	4.299	92.242	1.459	5.210	92.242
7	.978	3.494	95.736						
8	.627	2.240	97.976						
9	.321	1.147	99.123						
10	.160	.573	99.696						
11	.037	.132	99.828						
12	.033	.119	99.948						
13	.015	.052	100.000						
14	3.746E-015	1.338E-014	100.000						
15	3.469E-015	1.239E-014	100.000						
16	2.352E-015	8.399E-015	100.000						
17	1.789E-015	6.388E-015	100.000						
18	1.366E-015	4.877E-015	100.000						
19	6.070E-016	2.168E-015	100.000						
20	4.176E-016	1.491E-015	100.000						
21	3.040E-016	1.086E-015	100.000						
22	-3.853E-016	-1.376E-015	100.000						
23	-8.207E-016	-2.931E-015	100.000						
24	-1.334E-015	-4.766E-015	100.000						
25	-1.563E-015	-5.581E-015	100.000						
26	-2.198E-015	-7.848E-015	100.000						
27	-2.934E-015	-1.048E-014	100.000						
28	-4.700E-015	-1.679E-014	100.000						

Extraction Method: Principal Component Analysis.

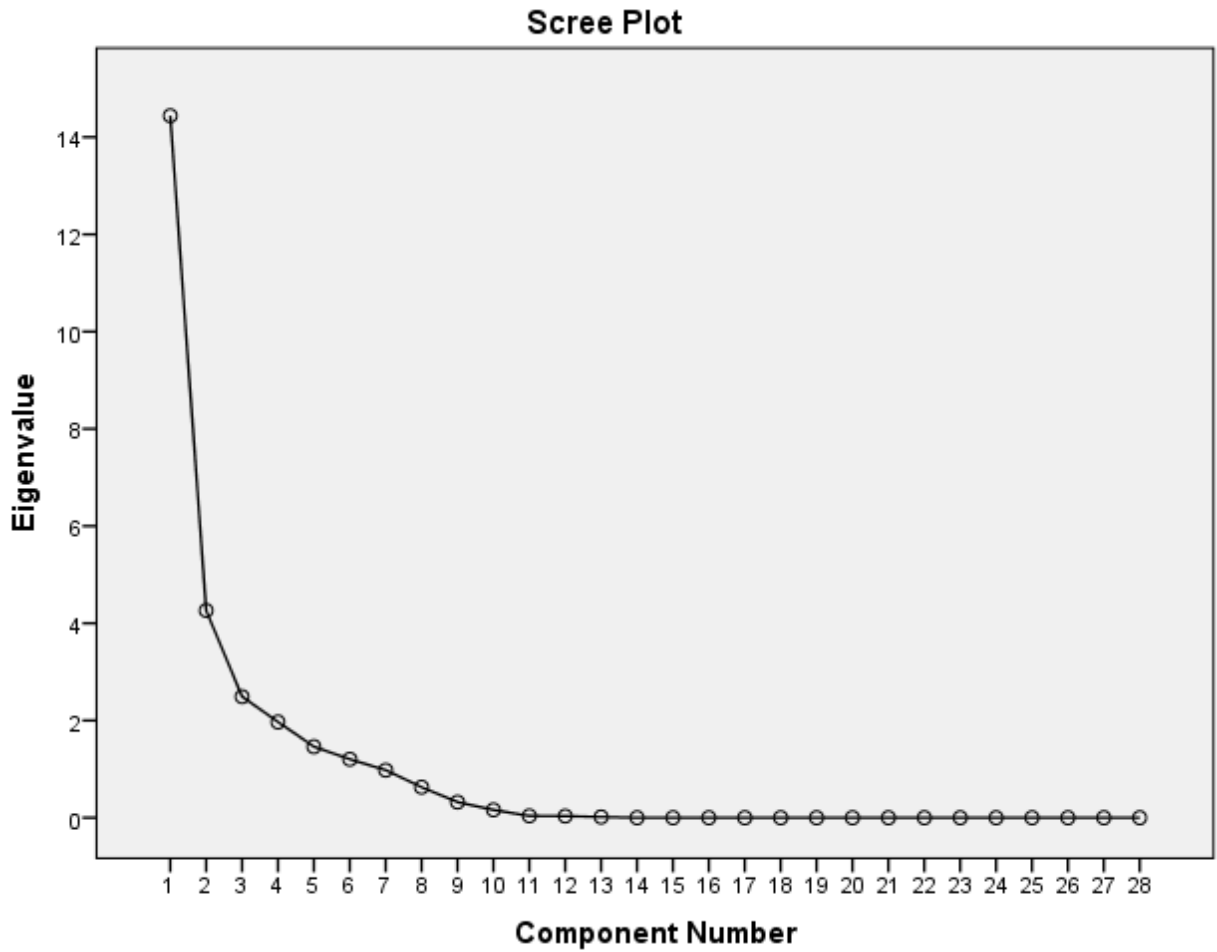
**(Source: Research SPSS Data, 2021)**

Table 4.9 illustrate that new factors are six. The first factor had Eigen value of 14.441, implying that 51.574% of total variance was accounted for by first factor. Second factor had Eigen value of

4.263, denoting that 15.225% of the total variance was accounted for by second factor. The third factor had Eigen value of 2.491, implying that 8.895% of total variance was accounted for by third factor. The fourth factor had Eigen value of 1.969, denoting that 7.031% of the variance was accounted for by the fourth factor. The fifth factor had Eigen value of 1.461, denoting that 5.219% of the variance was accounted for by the fifth factor. The sixth factor had Eigen value of 1.204, denoting that 4.299% of the variance was accounted for by the sixth factor. The six factors cumulatively accounted for by 92.242% of total variance.

The Rotation Sums of Squared Loadings denotes distribution of the variance after varimax rotation that tries to maximize the variance of each of the six extracted factors. For example, the first factor rotates to 9.203, implying that 32.868% of total rotation variance was accounted for by first factor. The fifth factor rotates to 1.691, implying that 6.040% of total rotation variance was accounted for by fifth factor. The six factors after rotation still cumulatively accounted for by 92.242% of total rotation variance.

**Figure 4.1: Scree Plot.**



(Source: Research SPSS Data, 2021)

Figure 4.1 is the scree plot showing six factors with Eigenvalues above 1.0, these factors account for more than 100% of the variance for all the variables. It offers backing for a six factor elucidation to the factor analysis.

**Table 4.10: Rotated Component Matrix<sup>a</sup>**

	Component					
	1	2	3	4	5	6
Rebalancing of portfolio periodically (every now and then).	.140	.842	-.194	.061	.018	-.083
Diversification to reduce risk and improve return.	-.803	-.427	-.161	-.322	-.062	-.033
Target allocation based on Investor risk tolerance.	.089	-.045	.132	.063	-.121	.862
Target allocation based on time horizon.	-.875	-.276	-.133	-.321	-.107	-.047
Target allocation based on Investment objectives.	.461	-.060	.870	.078	-.120	.046
Adjust mix of assets in a portfolio based on market condition/trend.	.798	.069	.474	.286	-.062	.055
Reducing position in the worst performing asset classes.	-.859	-.102	-.115	-.139	-.237	-.153
Adding position in the best performing assets.	.789	.297	.418	.225	-.099	.043
Relies on portfolio manager's judgment instead of a target mix of asset.	-.657	-.314	.159	.298	-.252	-.247
Stocks, bonds and cash are actively balanced/adjusted.	.383	.005	.208	.893	.018	-.054
Maximize portfolio returns, minimize market risk.	.438	-.026	.854	.071	.137	-.226
Portfolio asset mix always reflect your goals at any point in time.	.282	.822	.104	.205	.361	.064
Continually (Automatically) rebalance your portfolio.	.787	.425	.235	.044	-.076	.068
Purchase assets that decline in value.	.708	.632	.134	.231	-.003	.010
Sell assets that increase in value.	.703	.601	.116	.169	-.021	.018
Rebalance portfolio to original mix in case of asset movement above 5%	.208	.849	-.005	.339	.078	-.057
Investor is risk-averse	.738	.418	.095	.441	-.020	-.181
Establish portfolio base/floor to cushion decline	.684	.520	-.001	.309	.304	.141
Relying on analytical research, forecast and experience to decide security to buy, hold and sell	-.023	.162	.844	.228	.068	.366
Aim at increasing portfolio value as much as possible	.136	.094	.093	.966	-.009	.098
Optimization of an investors net worth.	.078	.925	.324	-.055	-.081	.008
Deals with expected net worth (asset less liabilities).	.659	.641	-.149	.051	.187	.020
Investor willingness to take added net worth risk.	.595	.691	.253	.150	.229	.056
Intention to increase expected net worth.	.610	.690	.163	-.270	.085	.096
Planning to meet the liquidity needs	.000	.082	.071	.038	.847	-.162
Arrange maturity pattern of assets and liabilities	.379	-.091	-.165	-.182	.638	.558
Spread asset liability management	.831	-.269	.406	-.180	-.052	-.010
Interest sensitivity analysis	.117	.929	-.132	-.192	-.164	-.036

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

**(Source: Research SPSS Data, 2021)**

Table 4.10 shows that factor loading values for factors with Eigen values greater than or equal to one. It shows both positive and negative correlation (R values for some component in the table are positive while others are negative).

**Table 4.11: Component Transformation Matrix**

Component	1	2	3	4	5	6
1	.749	.562	.242	.224	.102	.059
2	-.309	.735	-.548	-.229	.067	-.081
3	-.411	.236	.244	.735	-.313	-.278
4	-.165	.255	.641	-.582	-.391	-.076
5	-.382	.147	.362	.093	.600	.577
6	-.032	-.035	.199	-.099	.612	-.758

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

**(Source: Research SPSS Data, 2021)**

Table 4.11 denotes the matrixes that multiply the unrotated factor matrix to attain rotated factor matrix. This depicts that the six factors aligned to asset allocation strategies adopted by the pension schemes in Kenya were rotated relative to original eigen values to ascertain extent of correlation (positive or negative).

#### **4.7 Discussion of Findings**

The study findings illustrates that various asset allocation strategies are actually made use of in the management of pension funds in Kenya as outlined in the descriptive statistics (mean) and factor analysis outputs (positive factors correlations): Strategic asset allocation strategy (Composite Mean = 4.202), Dynamic asset allocation strategy (Composite Mean =3.395), Tactical asset allocation strategy (Composite Mean = 4.69), Constant weighted asset allocation strategy (Composite Mean = 4.215), Insured asset allocation strategy (Composite Mean = 4.55), Integrated asset allocation strategy (Composite Mean = 4.61) and Asset and Liability management strategy (Composite Mean = 4.855). The results are concur with the research conducted by Babalola (2017) in Nigeria that revealed how Investment strategies influence the performance of pension funds, where 335 out of 460 employees of the Pension fund administrators were surveyed. The findings were that asset allocation has a significant effect on fund performance. However, the study did not

investigate all asset allocation strategies in use in pension schemes. The current study findings have thus bridged the knowledge gap by investigating adoption of the seven asset allocation strategies by pension schemes in Kenya.

The study findings considered asset allocation strategies adoption very important in the management of pension schemes in Kenya (composite mean = 4.21). Having requisite knowledge and capability to use asset allocation strategies scored maximum (mean = 5). Endowed with the means necessary to use asset allocation strategies ranked second highest (mean = 4.99). This outcome mirrored McCown, et al (2018) that looked at four issues; looking for assets that mimic Markowitz theoretical market-capitalization weighted portfolio of all investable assets (broadly diversified and not highly correlated), investments that require low initial investment, low annual expenses and those that can be sold short in a theoretical market portfolio. The outcomes of this study advances on the research conducted by (Lee & Junior 2018) concerning portfolio construction, risk management and performance evaluation in Brazilian investment management industry. The study outcomes are thus conforms to Modern Portfolio Theory that advocates for diversification as supported by (Santacruz, 2015; Babalola, 2017; Kagunda, 2010 & Kiplagat, 2016).

The study found out that the six factors Eigen values cumulatively accounted for by 92.242% of total variance. The six factors after rotation still cumulatively accounted for by 92.242% of total rotation variance. This depicted the extent of adoption and relevance of various asset allocation strategies in the Kenyan context. The study outcomes relates to European investment practices (Amenc, Goltz, Le Sourd, and Martellini, 2008), that observed that cash flow Matching, surplus optimization and liability driven investments are measures of ALM. The study outcomes are

similar to findings of Suresh and Krishnan (2018) that studied gap analysis in Indian Banks, where TAA was measured by optimal portfolio weight. The Dynamic asset allocation was measured by Constant Proportion Portfolio Insurance (Schroder, 2013).

The findings of this study should encourage wealth management professionals to embrace modern asset allocation theories more so pension schemes given the uncertainties involved. The study findings coincide with the critical recommendation by (Schroeder, 2013) that financial economists should not only endeavour to develop asset allocation models that integrate insights of rigorous economic theory but also come up with models that are viable in practice.



## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

The segment outlines the summary, conclusion of study, recommendations and limitation of the study together with submissions for additional research.

### **5.2 Summary**

The study examined the asset allocation strategies adopted by pension schemes in Kenya. The study was anchored on Modern Portfolio Theory (Markowitz, 1959), Modern Portfolio Theory Subsequent Research Threads (Kane, 1982) and Capital Asset Pricing Model (Sharpe, 1970). The descriptive cross-sectional survey research design was adopted. The primary data on asset allocation strategies was collected using emailed structured questionnaires in which 74 pension schemes fund managers, the custodians of data about asset allocation strategies adopted by pension schemes in Kenya provided valuable response.

Descriptive statistics confirmed that various asset allocation strategies were adopted in pension schemes in Kenya: Strategic asset allocation strategy (Composite Mean = 4.202), Dynamic asset allocation strategy (Composite Mean = 3.395), Tactical asset allocation strategy (Composite Mean = 4.69), Constant weighted asset allocation strategy (Composite Mean = 4.215), Insured asset allocation strategy (Composite Mean = 4.55), Integrated asset allocation strategy (Composite Mean = 4.61) and Asset and Liability management strategy (Composite Mean = 4.855). Each element of various asset allocation strategies registered moderate to high standard deviation, depicting divergent views on extent of asset allocation strategy adoption in pension schemes in Kenya. The asset allocation strategies adopted were considered very important in the management of pension schemes in Kenya (composite mean = 4.21).

The Factor analysis conducted pointed out important and interesting relationships among observed study data. The study data KMO had a value of 0.678, slightly above the KMO standard threshold of 0.6, denoting substantial correlation in the data, thus was satisfactory for Factor Analysis (Revelle, 2016). Bartlett's test shows significance at 0.000, implying that any identified factor accounted for ascertaining asset allocation strategies adopted by pension schemes in Kenya. The communalities presented fraction of changeability in original variable accounted for by high loading factors, which have Eigen values more than one (Churchill and Lacobucci, 2002). This indicates for example that 77.8 % of variability of rebalancing portfolio periodically, 96.2 % of variability of diversification to reduce risk and improve return, 94.7% of variability of adding position in the best performing assets, 95.7% of variability of investor is risk-averse, 97.7% of variability of optimization of an investors net worth, 96.5% of variability of intention to increase expected net worth, 95.8% of variability of interest sensitivity analysis are accounted for by factors 1, 2 ,3 ,4 , 5 and 6.

The six factors cumulatively accounted for by 92.242% of total variance. The Rotation Sums of Squared Loadings denoted distribution of the variance after varimax rotation that maximized the variance of each of the six extracted factors. For example, the first factor rotates to 9.203, implying that 32.868% of total rotation variance was accounted for by first factor. The fifth factor rotates to 1.691, implying that 6.040% of total rotation variance was accounted for by fifth factor. The six factors after rotation still cumulatively accounted for by 92.242% of total rotation variance.

### **5.3 Conclusion of the Study**

Various asset allocation strategies were adopted in pension schemes management in Kenya: Strategic asset allocation strategy, Dynamic asset allocation strategy, Tactical asset allocation

strategy, Constant weighted asset allocation strategy, Insured asset allocation strategy, Integrated asset allocation strategy and Asset and Liability management strategy. The asset allocation strategies adopted were considered very important in the management of pension schemes in Kenya. Trustees on behalf of respective pension scheme member should therefore ensure the appointed fund managers adopt the best asset allocation strategies to grow and safeguard the pension funds for the ultimate benefit to the stakeholders.

#### **5.4 Recommendation of the Study**

The practitioners in the Pension industry to take cognizance of importance of various asset allocation strategies for multiple asset class portfolios, thus monitor and evaluate regularly, the best suited for pension schemes in Kenya and beyond.

The Board of Trustees and fund managers of pension schemes to always determine the asset allocation strategies to employ to ensure effective and efficient returns to pension schemes and other institutional investors.

The RBA, Ministry of labour and social protection and other policy makers can utilize the findings therein to formulate policies on asset allocation strategies applicable to Pension Schemes in Kenya.

Future researchers and scholars to beef up existing knowledge on asset allocation strategies by pension schemes, thus provide continuous skill advancement in pension schemes management in Kenya and beyond.

#### **5.5 Limitation of the Study**

Since the research considered primary data gathered via questionnaire in a cross sectional survey to Fund Managers of pension schemes in Kenya, the historical collections associated with

secondary data were not considered in the study of asset allocation strategies of pension schemes in Kenya.

This study was limited to sampled pension schemes in Kenya, though the findings may be generalized, specific issue on the adoption of asset allocation strategies unique to certain pension scheme could have been missed out.

The study was limited to fund managers of pension schemes views, thus did not consider Trustees and the regulator-Retirement benefits authority take on applicability or adoption of asset allocation strategies in pension schemes in Kenya.

### **5.6 Suggestions for Further Research**

A possible research could be conducted to establish the views of Trustees and the RBA on the adoption and importance of asset allocation strategies in pension schemes management in Kenya.

Another study on other anticident aspects that influence Pension schemes financial performance should be undertaken in Kenya.

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## APPENDICES

### Appendix I: Segregated Pension Schemes and corresponding Fund Managers in Kenya

S/NO	PENSION SCHEMES	PENSION FUND MANAGER
1	Aar Holdings	<b><i>Genafrica Asset Managers Limited</i></b>
2	Abercrombie And Kent Limited SRBS	GENAFRICA ASSET MANAGERS LIMITED
3	Action Aid International	Old Mutual Investment Group Limited
4	African Braille Centre And Sight Savers International	BRITAM ASSET MANAGERS KENYA LIMITED
5	<b><i>African Economic Research Consortium Provident Fund</i></b>	Icea Lion Asset Management Limited
6	Afya Sacco Society Srbs	Genafrica Asset Managers Limited
7	Agricultural Finance Pension Scheme	Icea Lion Asset Management Limited
8	Agriculture Finance Corporation Staff Pension Scheme 2008	Icea Lion Asset Management Limited
9	Aig Kenya Insurance Company Staff Pension Scheme	Sanlam Investments East Africa Limited
10-	<b><i>Air Kenya Express Staff Provident Fund</i></b>	Genafrica Asset Managers Limited
11	Airtel Network Kenya Srbs	Genafrica Asset Managers Limited
12	Alliance Investment Ltd Staff Pension Scheme	Old Mutual Investment Group Limited
13	Amana Personal Pension Plan	Amana Capital Limited
14	Amana Umbrella Pension Scheme	Amana Capital Limited
15	<b><i>Amref Health Africa Staff Provident Fund</i></b>	Old Mutual Investment Group Limited
16	Anti-Counterfeit Staff Pension Scheme	Genafrica Asset Managers Limited
17	Ardhi Sacco Srbs	Co-Op Trust Investment Services Limited
18	Association Of Kenya Insurers SRBS	CIC Life Assurance Limited
19	Atkins Consulting Engineers Srbs	Genafrica Asset Managers Limited

20	<b><i>Atlas Copco Eastern Africa Provident Fund</i></b>	Old Mutual Investment Group Limited
21	Bamburi Cement Srbs	Sanlam Investments East Africa Limited
22	Bandari Sacco Ltd Staff Provident Fund	CO-OP Trust Investment Services Limited
23	Bank Of Africa Staff Provident Fund	ICEA LION ASSET MANAGEMENT LIMITED
24	Banki Kuu Pension Scheme 2012	Sanlam Investments East Africa Limited
25	<b><i>Barclay Bank Of Kenya</i></b>	OLD MUTUAL INVESTMENT GROUP LIMITED
26	Barclays Bank Of Kenya Staff Provident Fund	OLD MUTUAL INVESTMENT GROUP LIMITED
27	BAT Kenya Provident Trust A/C (1991)	SANLAM INVESTMENTS
28	Bat Kenya Staff Provident Fund(Old Fund)	Icea Lion Asset Management Limited
29	Bayer East Africa Staff Provident Fund	Icea Lion Asset Management Limited
30	<b><i>Bdf East Africa Srbs</i></b>	African Alliance Kenya Investment Bank Limited
31	Bible Translation And Literacy SRBS	OLD MUTUAL INVESTMENT GROUP LIMITED
32	Black Empowerment Trust Rbs	Britam Asset Managers Kenya Limited
33	Blues Msmes Jua Kali	Co-Op Trust Investment Services Limited
34	Boc Kenya Srbs	
35	<b><i>BOC Kenya Staff Provident Fund</i></b>	
36	Bollore Africa Logistics Srbs	Co-Op Trust Investment Services Limited
37	C Dorman Srbs	
38	Cadbury Kenya Limited Srbs	Icea Lion Asset Management Limited
39	Cadbury Kenya Limited –Srbs 2009	Icea Lion Asset Management Limited
40	<b><i>Care International Kenya Srbs</i></b>	<b><i>Icea Lion Asset Management Limited</i></b>
41	Catering And Tourism Development Levy Sps 2011	Genafrika Asset Managers Limited
42	Catering Levy Trustees Rb	Genafrika Asset Managers Limited

43	Commercial Bank Of Africa Individual Pension Plan	CBA CAPITAL LIMITED
44	Cba Staff Rbs	Cba Capital Limited
<b>45</b>	<b><i>Communications Commission Of Kenya SRBS</i></b>	GENAFRICA ASSET MANAGERS LIMITED
46	Central Bank Of Kenya Pension Fund	BRITAM ASSET MANAGERS KENYA LIMITED
47	Centum Investment Staff Retirement Benefits Scheme	Icea Lion Life Assurance Limited
48	Cfc Life Assurance Staff Pension Scheme	Liberty Life Assurance Kenya Ltd
49	Cfc Life Assurance Ltd Umbrella Fund	
<b>50</b>	<b><i>Chai Sacco Srbs</i></b>	Co-Op Trust Investment Services Limited
51	Chak Provident Fund	Co-Op Trust Investment Services Limited
52	Chase Bank Srbs	
53	Chemelil Sugar Staff Pension Scheme	Genafrica Asset Managers Limited
54	Chloride Group Staff Provident Fund	Icea Lion Asset Management Limited
<b>55</b>	<b><i>Church World Services Srbs</i></b>	Genafrica Asset Managers Limited
56	Cic Insurance Srbs	Cic Asset Management Limited
57	<i>Cicam Income Draw Down Fund</i>	CIC Asset Management Limited
58	Cicam Umbrella Retirement Fund	Cic Asset Management Limited
59	Citibank Provident Fund	Sanlam Investments East Africa Limited
<b>60</b>	<b><i>Capital Markets Authority Srbs</i></b>	Genafrica Asset Managers Limited
61	Coca Cola East Africa Provident Fund 2004	Genafrica Asset Managers Limited
62	Coffee Board Of Kenya SRBS	SANLAM INVESTMENTS EAST AFRICA LIMITED
63	Coffee Research Foundation Srbs	Co-Op Trust Investment Services Limited
64	Coffee Research Foundation Staff Pension Scheme	Co-Op Trust Investment Services Limited
<b>65</b>	<b><i>Colgate Palmolive (Ea) Provident Fund</i></b>	Genafrica Asset Managers Limited
66	Commission For Higher Education SRBS	CO-OP Trust Investment Services Limited
67	Commission For University Education Pension Scheme	Co-Op Trust Investment Services Limited

68	Competition Authority Of Kenya Srbs	Icea Lion Asset Management Limited
69	Consolidated Bank Srbs	Genafrica Asset Managers Limited
<b>70</b>	<b><i>Co-Op Trust Investment RBS</i></b>	CO-OP Trust Investment Services Limited
71	Cooper Kenya Srbs	Old Mutual Investment Group Limited
72	Co-Operative University College Of Kenya Staff Provident Fund	CO-OP Trust Investment Services Limited
73	Country Images Provident Fund	
74	County Pension Fund	Co-Op Trust Investment Services Limited
<b>75</b>	<b><i>Cpf Individual Pension Scheme</i></b>	Co-Op Trust Investment Services Limited
76	Crown Berger Kenya Limited Staff Provident Fund	African Alliance Kenya Investment Bank Limited
77	Cytonn Income Draw Down Fund	Cytonn Asset Managers Limited
78	Cytonn Personal Rbs	Cytonn Asset Managers Limited
79	Cytonn Umbrella Retirement Benefits Scheme	Cytonn Asset Managers Limited
<b>80</b>	<b><i>De LA Rue Currency And Security Print</i></b>	GENAFRICA ASSET MANAGERS LIMITED
81	Deacons Kenya Limited Rbs	Old Mutual Investment Group Limited
82	Dedan Kimathi University College Of Technology	ICEA Lion Life Assurance Limited
83	Defense Forces Canteen Organization	Old Mutual Investment Group Limited
84	Delmonte Kenya Staff Provident Fund	ICEA LION ASSET MANAGEMENT LIMITED
<b>85</b>	<b><i>Deloitte Limited Staff Pension Scheme</i></b>	Old Mutual Investment Group Limited
86	Dhl Excel Supply Chain Kenya Srbs	Old Mutual Investment Group Limited
87.	Dib Kenya Limited Staff Provident Fund	Genafrica Asset Managers Limited
88	Document Handling Kenya Srbs	Old Mutual Investment Group Limited
89	Dry Associate Personal Provident Plan	Dry Associates Limited
<b>90</b>	<b><i>DT Dobie And Co. Kenya</i></b>	GENAFRICA ASSET MANAGERS LIMITED
91	Eabl Staff Provident Fund(2003)	Genafrica Asset Managers Limited
92	Eacc Staff Retirement Benefits Scheme	

93	Eagle Africa Srbs	Genafrica Asset Managers Limited
94	East Africa Portland Cement Srbs	Icea Lion Asset Management Limited
<b>95</b>	<b><i>East African Packaging Industries Srbs</i></b>	African Alliance Kenya Investment Bank Limited
96	Ecobank Kenya LTD SRBS	GENAFRICA ASSET MANAGERS LIMITED
97	Egerton University Grade I-Iv Srbs	Sanlam Investments East Africa Limited
98	Elimu Sacco Society Staff Provident Fund	Co-Op Trust Investment Services Limited
99	Enwealth Diaspora And Expatriates Retirement Fund	GENAFRICA ASSET MANAGERS LIMITED
<b>100</b>	<b><i>Enwealth Personal Pension Scheme</i></b>	Genafrica Asset Managers Limited
101	Enwealth Umbrella Fund	Icea Lion Asset Management Limited
102	Equity Bank Staff Rbs	Sanlam Investments East Africa Limited
103	Ernst And Young SPF	ICEA Lion Life Assurance Limited
104	Express Kenya Limited Executive Staff BS	Icea Lion Asset Management Limited
<b>105</b>	<b><i>Family Bank Staff Pension Scheme</i></b>	Co-Op Trust Investment Services Limited
106	FarmChem SRBS	
107	Federation Of Kenya Employers Provident Fund	Icea Lion Asset Management Limited
108	First Assurance Co. Srbs	Genafrica Asset Managers Limited
109	Food For The Hungry International(K) Srbs	Old Mutual Investment Group Limited
<b>110</b>	<b><i>Fortune Sacco Staff Provident Fund</i></b>	Co-Op Trust Investment Services Limited
111	Fusion Umbrella Rbs	Fusion Investment Management Limited
112	G4s Kenya Srbs	Genafrica Asset Managers Limited
113	Gdc Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
114	Genesis Kenya Investment Management	Genafrica Asset Managers Limited
<b>115</b>	<b><i>Getrudes Garden Children's Hospital SRBS</i></b>	
116	Githunguri Dairy Farmers Staff Provident Fund	Co-Op Trust Investment Services Limited
117	Giz Staff Retirement Benefits Scheme	Co-Op Trust Investment Services Limited

118	Gulf African Bank Srbs	Genafrica Asset Managers Limited
119	Haco Industries	Genafrica Asset Managers Limited
<b>120</b>	<b><i>Hamilton Harris &amp; Matthews</i></b>	Old Mutual Investment Group Limited
121	Harambee Sacco Staff Provident Fund	Cic Asset Management Limited
122	Helb Staff Retirement Benefits Scheme	Old Mutual Investment Group Limited
123	Helb Staff Retirement Dc Scheme	Old Mutual Investment Group Limited
124	Henkel Chemicals Staff Provident Fund	African Alliance Kenya Investment Bank Limited
<b>125</b>	<b><i>Heritage Aii Insurance Co. Srbs</i></b>	Liberty Life Assurance Kenya Ltd
126	Hf Group Staff Rbs	Icea Lion Asset Management Limited
127	Huduma Provident Fund For Catholic Relief Services	BRITAM ASSET MANAGERS KENYA LIMITED
128	Iber Africa Power (Ea)Srbs	Icea Lion Life Assurance Limited
129	Icea Lion Umbrella Rbs	Icea Lion Life Assurance Limited
<b>130</b>	<b><i>Idb Capital Ltd Staff Dc Pension Scheme</i></b>	<b><i>Co-Op Trust Investment Services Limited</i></b>
131	IEBC Staff Pension Scheme	Icea Lion Asset Management Limited
132	Ig Sacco Staff Provident Fund	Co-Op Trust Investment Services Limited
133	Imarika Sacco Staff Provident Fund	Co-Op Trust Investment Services Limited
134	Inchcappe Shipping Services SRBS	OLD MUTUAL INVESTMENT GROUP LIMITED
<b>135</b>	<b><i>Insurance Regulatory Authority Staff Pension S</i></b>	Icea Lion Asset Management Limited
136	International Fund For Animal Welfare SRBS	GENAFRICA ASSET MANAGERS LIMITED
137	Intra Africa Assurance Co.	Old Mutual Investment Group Limited
138	Isuzu East Africa Srbs	Genafrica Asset Managers Limited
139	James Finlay Kenya Provident Fund	Old Mutual Investment Group Limited
<b>140</b>	<b><i>Jamii Bora Bank Rbs</i></b>	
141	Jamii Sacco Society Srbs	Co-Op Trust Investment Services Limited

142	Jaramogi Oginga Odinga University Of Science And Technology SRBS	CO-OP Trust Investment Services Limited
143	JKUAT SRBS	GENAFRICA ASSET MANAGERS LIMITED
144	Johnson Diversity East Africa Limited	Old Mutual Investment Group Limited
<b>145</b>	<b><i>Jsi Staff Provident Fund</i></b>	
146	JSC Superannuation Scheme	Sanlam Investments East Africa Limited
147	Judicial Service Staff Superannuation(Dc) Scheme	Sanlam Investments East Africa Limited
148	K Rep Group Staff Provident Fund	
149	K- Unity Sacco Staff Provident Fund	Cic Asset Management Limited
<b>150</b>	<b><i>Kari Staff Rbs</i></b>	Old Mutual Investment Group Limited
151	Kari Staff Retirement Benefits Scheme	African Alliance Kenya Investment Bank Limited
152	KASNEB SRB And Life Assurance 2011	OLD MUTUAL INVESTMENT GROUP LIMITED
153	Kasneb Srbs	
154	Kcb Pension Fund	Old Mutual Investment Group Limited
<b>155</b>	<b><i>Kebs Srbs</i></b>	Genafrika Asset Managers Limited
156	Kemri Pension Fund	Genafrika Asset Managers Limited
157	KEMU Staff Retirement Benefits Scheme	BRITAM ASSET MANAGERS KENYA LIMITED
158	Kenchic Limited Srbs	Icea Lion Asset Management Limited
159	Kengen Dc Scheme 2012	Co-Op Trust Investment Services Limited
<b>160</b>	<b><i>Kengen SRBS</i></b>	BRITAM ASSET MANAGERS KENYA LIMITED
161	Kentalya Limited Srbs	
162	Kentrade Staff Pension Scheme	
163	Kenya Aerotech Srbs	African Alliance Kenya Investment Bank Limited
164	Kenya Airports Authority Staff Pension Scheme	Sanlam Investments East Africa Limited
<b>165</b>	<b><i>Kenya Airports Authority Staff Superannuation Scheme</i></b>	<b><i>Sanlam Investments East Africa Limited</i></b>



166	Kenya Airways Staff Provident Fund	Old Mutual Investment Group Limited
167	Kenya Broadcasting Corporation Srbs	Genafrika Asset Managers Limited
168	Kenya Bureau Of Standards Srbs 2011	Genafrika Asset Managers Limited
169	Kenya Civil Aviation Authority Srbs	Britam Asset Managers Kenya Limited
<b>170</b>	<b><i>Kenya Commercial Bank Srb(Dc)S 2006</i></b>	Old Mutual Investment Group Limited
171	Kenya Education Management Institute Srbs	Co-Op Trust Investment Services Limited
172	Kenya Fluospar Provident Fund	Apollo Asset Management Company Limited
173	Kenya Forestry Research Institute Dc Rbs	Sanlam Investments East Africa Limited
174	Kenya Hospital Association Staff Provident Fund	GENAFRICA ASSET MANAGERS LIMITED
<b>175</b>	<b><i>Kenya Institute Of Administration SRBS 2009</i></b>	ICEA LION ASSET MANAGEMENT LIMITED
176	Kenya Investment Authority Staff Pension Scheme	Icea Lion Asset Management Limited
177	Kenya Law Reform Commission Staff Pension Scheme	Britam Asset Managers Kenya Limited
178	Kenya Maritime And Fisheries Institute SRB(DC) Scheme	BRITAM ASSET MANAGERS KENYA LIMITED
179	Kenya Maritime And Fisheries Institute Srbs	ICEA Lion Life Assurance Limited
<b>180</b>	<b><i>Kenya Medical Association Individual Rs</i></b>	African Alliance Kenya Investment Bank Limited
181	Kenya Orient Individual Pension Plan	Kenya Orient Life Assurance Limited
182	Kenya Orient Umbrella Pension Scheme	Kenya Orient Life Assurance Limited
183	Kenya Petroleum Refineries Dc Pension Fund	Sanlam Investments East Africa Limited
184	Kenya Petroleum Refineries Provident Fund	Sanlam Investments East Africa Limited
<b>185</b>	<b><i>Kenya Pipeline Srbs</i></b>	Genafrika Asset Managers Limited
186	Kenya Plant Health Inspectorate Service Srbs	Old Mutual Investment Group Limited
187	Kenya Post Office Savings Bank Srbs	Sanlam Investments East Africa Limited
188	Kenya Post Office Savings Bank –Srbs 2007	Sanlam Investments East Africa Limited
189	Kenya Railways Provident Fund	African Alliance Kenya Investment Bank Limited
<b>190</b>	<b><i>Kenya Railways Srbs</i></b>	Co-Op Trust Investment Services Limited

191	Kenya Re Staff Pension Scheme	GENAFRICA ASSET MANAGERS LIMITED
192	Kenya Reinsurance Corporation Ltd Staff DC Pension Scheme	Genafrica Asset Managers Limited
193	Kenya Seed Co. Staff Retirement Benefits	Old Mutual Investment Group Limited
194	Kenya Sugar Board Staff Retirement Benefits	ICEA Lion Asset Management Limited
<b>195</b>	<b><i>Kenya Tourism Board Staff Pension Scheme</i></b>	<b>ICEA Lion Asset Management Limited</b>
196	Kenya Tourist Development Corporation	Old Mutual Investment Group Limited
197	Kenya Wildlife Service 2006	ICEA Lion Asset Management Limited
198	Kenyatta National Hospital Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
199	Kenyatta University Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
<b>200</b>	<b><i>Kesho Hela Liberty Income Drawdown Fund</i></b>	<b>Genafrica Asset Managers Limited</b>
201	Kenya Sugar Research Foundation	Genafrica Asset Managers Limited
202	Kianda School Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
203	Kibabii University Staff Pension Scheme	African Alliance Kenya Investment Bank Limited
204	Kimc Staff Pension Scheme	Old Mutual Investment Group Limited
<b>205</b>	<b><i>Kirdi Staff Retirement Scheme</i></b>	<b>GA Life Assurance Limited</b>
206	Kisii Bottlers Staff Retirement Benefits Scheme	
207	Kivuli Umbrella Fund	Genafrica Asset Managers Limited
208	KMTC Staff Retirement Benefits Scheme	Britam Asset Managers Kenya Limited
209	Kenya Medical Training College Staff Pension Scheme 2011	Sanlam Investments East Africa Limited
<b>210</b>	<b><i>Kenya National Bureau of Statistics</i></b>	<b>ICEA Lion Asset Management Limited</b>
211	KNEC Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
212	Kenyatta National Hospital Superannuation Scheme	Genafrica Asset Managers Limited
213	Kenya National Library Services Board	ICEA Lion Asset Management Limited
214	Kobil Petroleum Limited	ICEA Lion Asset Management Limited

215	<b><i>Kofinaf Company Staff Retirement Benefits Scheme</i></b>	<b>Sanlam Investments East Africa Limited</b>
216	Kenya Ports Authority Pension Scheme	Genafrica Asset Managers Limited
217	Kenya Ports Authority Staff Retirement Benefits Scheme 2012	Sanlam Investments East Africa Limited
218	Kenya Power & Lighting Company	Sanlam Investments East Africa Limited
219	Kenya Power & Lighting Company 2006	Genafrica Asset Managers Limited
<b>220</b>	<b><i>KPMG Kenya CPA Staff Provident Fund</i></b>	<b>ICEA LION ASSET MANAGEMENT LIMITED</b>
221	Kenya Revenue Authority Staff Pension Scheme	Genafrica Asset Managers Limited
222	Kenya Tea Development Authority Staff Provident Fund	Sanlam Investments East Africa Limited
223	Kenya Tea Development Authority	Sanlam Investments East Africa Limited
224	KUSCO	Co-Op Trust Investment Services Limited
<b>225</b>	<b><i>Kerio Valley Development Authority Staff Retirement Benefits Scheme</i></b>	Old Mutual Investment Group Limited
226	Kenya Wine Agencies Limited Provident Fund	Sanlam Investments East Africa Limited
227	Kenya Wine Agencies DC	Sanlam Investments East Africa Limited
228	Kwetu Sacco Staff Provident Fund	Co-Op Trust Investment Services Limited
229	Kenya Wildlife Service Staff Pension Scheme	ICEA Lion Asset Management Limited
<b>230</b>	<b><i>Lake Basin Development Authority Provident Fund</i></b>	Old Mutual Investment Group Limited
231	Liberty Life Boresha Maisha Individual Pension Plan	Liberty Life Assurance Kenya Ltd
232	Liberty Life Boresha Maisha Individual Provident Fund	Sanlam Investments East Africa Limited
233	Libya Oil Kenya Limited (DB) Pension Fund	Old Mutual Investment Group Limited
234	Libya Oil Kenya Ltd Staff Dc Provident Fund	Old Mutual Investment Group Limited
<b>235</b>	<b><i>Local Authorities Provident Fund</i></b>	ICEA Lion Asset Management Limited
236	Lutheran World Federation Staff Provident Fund	ICEA Lion Asset Management Limited
237	Maasai Mara University Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
238	Machakos University Staff Retirement Benefits Scheme	Old Mutual Investment Group Limited

239	Mackenzie Maritime Staff RBS	Genafrica Asset Managers Limited
<b>240</b>	<b><i>Magereza Staff Sacco Provident Fund</i></b>	Co-Op Trust Investment Services Limited
241	Mantrac Staff Pension Scheme	Old Mutual Investment Group Limited
242	Mantrac Staff Provident Fund	
243	Maseno University College SRBS	Genafrica Asset Managers Limited
244	Masinde Muliro University Of Science And Technology SRBS	OLD MUTUAL INVESTMENT GROUP LIMITED
<b>245</b>	<b><i>Mastermind Tobacco Staff Retirement Benefits Scheme</i></b>	ICEA Lion Asset Management Limited
246	Mentor Savings And Credit Co-Operative Society Ltd Staff Provident Fund	CO-OP Trust Investment Services Limited
247	Methodist Church In Kenya Provident Fund	GENAFRICA ASSET MANAGERS LIMITED
248	Methodist Church In Kenya Staff DC PF	GENAFRICA ASSET MANAGERS LIMITED
249	Metropolitan Health Services Provident Fund	CO-OP Trust Investment Services Limited
<b>250</b>	<b><i>Milele Income Drawdown</i></b>	Genafrica Asset Managers Limited
251	Minet Kenya Umbrella Retirement Fund	Genafrica Asset Managers Limited
252	Mission Aviation Fellowship Staff Pension Scheme	African Alliance Kenya Investment Bank Limited
253	Mission For Essential Drugs And Supplies(MEDS) Provident Fund	Britam Asset Managers Kenya Limited
254	Moi University Pension Scheme Pension Fund	Genafrica Asset Managers Limited
<b>255</b>	<b><i>Moi University Provident Fund</i></b>	Genafrica Asset Managers Limited
256	Mumias Sugar Company Limited	African Alliance Kenya
257	Muranga University College Staff Pension Scheme	ICEA Lion Asset Management Limited
258	Mwalimu Sacco Dc Staff Retirement Benefits Scheme 2015	Old Mutual Investment Group Limited
259	Mwalimu Sacco Staff Pension Scheme	Old Mutual Investment Group Limited
<b>260</b>	<b><i>Mwavuli Income Draw Down Fund</i></b>	African Alliance Kenya Investment Bank Limited
261	Mwavuli Individual Pension Plan	African Alliance Kenya Investment Bank Limited
262	Mwavuli Pension Plan	Amana Capital Limited

263	Nairobi Bottlers Staff Provident Fund	Old Mutual Investment Group Limited
264	Nampak Kenya Limited Provident Fund	Genafrica Asset Managers Limited
<b>265</b>	<b><i>Nas Airport Services Provident Fund</i></b>	ICEA Lion Asset Management Limited
266	Nation Media Group SRBS	Sanlam Investments East Africa Limited
267	National Cohesion And Integration Staff Pension Scheme	ICEA LION ASSET MANAGEMENT LIMITED
268	National Construction Authority Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
269	National Council For Population And Development SRBS	African Alliance Kenya Investment Bank Limited
<b>270</b>	<b><i>National Drought Management Authority Staff Pension Scheme</i></b>	<b>Britam Asset Managers Kenya Limited</b>
271	National Housing Corporation Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
272	National Housing Corporation Staff Provident Fund	Genafrica Asset Managers Limited
273	NCBA Group Plc Staff Provident Fund	ICEA Lion Asset Management Limited
274	National Intelligence Service Staff Pension Scheme	Genafrica Asset Managers Limited
<b>275</b>	<b><i>National Irrigation Board Staff Retirement Benefits Scheme</i></b>	<b>Old Mutual Investment Group Limited</b>
276	National Water Conservation And Pipeline	OLD MUTUAL INVESTMENT GROUP LIMITED
277	Nawiri Sacco Staff Retirement Benefits Scheme	Co-Op Trust Investment Services Limited
278	NATIONAL Bank of Kenya	Genafrica Asset Managers Limited
279	The National Cereals & Produce Board Provident Fund	Genafrica Asset Managers Limited
<b>280</b>	<b><i>NCR Kenya Limited Staff Provident Fund</i></b>	<b>Old Mutual Investment Group Limited</b>
281	NCR Kenya Staff Provident Fund	
282	Ndege Chai Sacco Staff Provident Fund	Co-Op Trust Investment Services Limited
283	Nestle Kenya Staff Pension Scheme	Old Mutual Investment Group Limited
284	Ngao Umbrella Pension Scheme	Britam Asset Managers Kenya Limited
<b>285</b>	<b><i>NHIF Staff Retirement Benefits Scheme (Dc) Scheme</i></b>	<b>Co-Op Trust Investment Services Limited</b>

286	National Industrial Training Authority Staff Pension Scheme	Old Mutual Investment Group Limited
287	NMC Staff Pension Scheme	ICEA Lion Asset Management Limited
288	Nokia Solutions And Network Branch Operations OY Staff RBS	ICEA Lion Life Assurance Limited
289	National Social Security Fund	Genafrica Asset Managers Limited
<b>290</b>	<b>NSSF Staff Retirement Benefits Scheme</b>	<b>Genafrica Asset Managers Limited</b>
291	NSSF Staff Pension Scheme	ICEA Lion Asset Management Limited
292	Ntisl Income Draw Down Fund	Natbank Trustee And Investments Company Ltd
293	Ntisl Income Draw Down Fund	
294	Ntisl Personal Pension Plan	Natbank Trustee And Investments Company Ltd
<b>295</b>	<b>NTSA Staff Retirement Benefits Scheme</b>	<b>Sanlam Investments East Africa Limited</b>
296	Nzoia Sugar Co. Provident Fund	Genafrica Asset Managers Limited
297	Nzoia Sugar Company ( 2007)	Genafrica Asset Managers Limited
298	Office Of The Auditor General Staff Retirement Benefits Scheme	BRITAM ASSET MANAGERS KENYA LIMITED
299	Octagon Income Drawdown Fund	Co-Op Trust Investment Services Limited
<b>300</b>	<b>Octagon Personal Pension Scheme</b>	Genafrica Asset Managers Limited
301	Octagon Umbrella SRBS	ICEA Lion Life Assurance Limited
302	Old Mutual Individual Retirement Benefit Scheme	Old Mutual Investment Group Limited
303	Old Mutual Umbrella Retirement Benefits Scheme	Sanlam Investments East Africa Limited
304	Ollin Sacco Staff Provident Fund	
<b>305</b>	<b>Oxfam Staff Provident Fund</b>	<b>Old Mutual Investment Group Limited</b>
306	Oxford University Press Staff Retirement Benefits Scheme	ICEA Lion Life Assurance Limited
307	Parliamentary Service Commission Staff Retirement Benefits Scheme 2008	ICEA Lion Asset Management Limited
308	PCEA Kikuyu Hospital Staff Retirement Benefits Scheme	Old Mutual Investment Group Limited
309	Pentecostal Assemblies Of God (Kenya) Provident Fund	Genafrica Asset Managers Limited

<b>310</b>	<b>Pharmacy And Poisons Board Staff PS</b>	<b>ICEA Lion Asset Management Limited</b>
311	Plan International Staff Provident Fund	Old Mutual Investment Group Limited
312	Postal Corporation Of Kenya Provident Fund	African Alliance Kenya Investment Bank Limited
313	Postal Corporation Of Kenya SRBS	Old Mutual Investment Group Limited
314	Postal Corporation Of Kenya SRBS	ICEA Lion Asset Management Limited
<b>315</b>	<b>Public Procurement Oversight Authority Staff Pension Scheme</b>	<b>Genafrica Asset Managers Limited</b>
316	Public Service Commission Staff Pension Scheme	Genafrica Asset Managers Limited
317	Retirement Benefits Authority Staff(Dc) 2010	Genafrica Asset Managers Limited
318	Rift Valley Bottlers Staff Retirement Benefits Scheme	ICEA Lion Life Assurance Limited
319	Rural Electrification Authority Staff Retirement Benefits Scheme	Genafrica Asset Managers Limited
<b>320</b>	<b>Safaricom Staff Retirement Benefits Scheme</b>	<b>Genafrica Asset Managers Limited</b>
321	Sameer Africa Staff Retirement Benefits Scheme	ICEA Lion Asset Management Limited
322	Sanlam Kenya Plc Staff Retirement Benefits Scheme	Sanlam Investments East Africa Limited
323	SBM Bank (Kenya)Staff Retirement Benefits Scheme	ICEA Lion Asset Management Limited
324	Signon Freight Limited SPF	Genafrica Asset Managers Limited
<b>325</b>	<b>Smithkline Beecham Staff Retirement Scheme</b>	Sanlam Investments East Africa Limited
326	South Eastern University Of Kenya Pension Scheme	Genafrica Asset Managers Limited
327	St. Mary's School Staff Provident Fund	ICEA Lion Asset Management Limited
328	Stanbic Bank Staff Pension	Sanlam Investments East Africa Limited
329	Standard Chartered Kenya Pension Fund	Sanlam Investments East Africa Limited
<b>330</b>	<b>Standard Chartered Kenya Staff Retirement Benefits Scheme 2006</b>	<b>Genafrica Asset Managers Limited</b>
331	Stanlib Individual Pension Fund	
332	Stima Sacco Staff Pension Scheme	Genafrica Asset Managers Limited
333	Strathmore Educational Trust Staff Provident Fund	Old Mutual Investment Group Limited

334	Suluhu Umbrella Rb Scheme	Old Mutual Investment Group Limited
<b>335</b>	<b><i>Surgilinks Limited Staff Provident Fund</i></b>	
336	Swedish Co-Operative Centre SRBS	CO-OP Trust Investment Services Limited
337	Swissport Kenya SPS	ICEA LION Asset Management Limited
338	Taifa Sacco Limited Staff Provident Fund	Co-Op Trust Investment Services Limited
339	Taita Taveta Teachers Co-Op Staff Provident Fund	CO-OP Trust Investment Services Limited
<b>340</b>	<b>Takaful Umbrella Fund</b>	<b>African Alliance Kenya Investment Bank Limited</b>
341	Tana And Athi Rivers - Development Authority Staff Pension Scheme	Old Mutual Investment Group Limited
342	Tata Chemicals Magadi Provident Fund	Old Mutual Investment Group Limited
343	Teachers Service Commission Staff Superannuation Scheme	Co-Op Trust Investment Services Limited
344	TUK Staff Retirement Benefits Scheme	Co-Op Trust Investment Services Limited
<b>345</b>	<b><i>Teleposta Pension Scheme</i></b>	Genafrika Asset Managers Limited
346	Teleposta Provident Fund	Co-Op Trust Investment Services Limited
347	The Kenya Alliance New Life Individual Retirement Benefits Scheme	The Kenyan Alliance Insurance Company Limited
348	The Anglican Church Of Kenya Spf	Old Mutual Investment Group Limited
349	The Catholic Diocese Of Kitui Staff Provident PF	ICEA LION Asset Management Limited
<b>350</b>	<b><i>The CUEA Staff Provident Fund</i></b>	Britam Asset Managers Kenya Limited
351	The Co-Operative Bank Of Kenya SRBS 2007	CO-OP Trust Investment Services Limited
352	The Ford Foundation Provident Fund	Genafrika Asset Managers Limited
353	The Local Authorities Pension Trust	CIC Asset Management Limited
354	The Standard Group Staff Pension Scheme	Old Mutual Investment Group Limited
<b>355</b>	<b><i>The Us Government Staff Pension Scheme</i></b>	Sanlam Investments East Africa Limited
356	Timsales Provident Fund	Old Mutual Investment Group Limited
357	Total Kenya Staff Retirement Benefits Scheme	Genafrika Asset Managers Limited
358	Tourism Promotion Services Pension Scheme	Genafrika Asset Managers Limited



359	Tourism Promotion Services Provident Fund	CBA Capital Limited
<b>360</b>	<b><i>Toyota East Africa Staff Pension Scheme</i></b>	<b>Old Mutual Investment Group Limited</b>
361	Trans Nation Sacco Society Staff Retirement Provident Fund	CO-OP Trust Investment Services Limited
362	Teachers Service Commission Staff Retirement Benefits Scheme	Old Mutual Investment Group Limited
363	Tusker Mattresses Staff Provident Fund	Genafrika Asset Managers Limited
364	Tuskys Staff Pension Scheme	Genafrika Asset Managers Limited
<b>365</b>	<b><i>Twiga Chemical Industries Staff Retirement Benefits Scheme</i></b>	<b>African Alliance Kenya Investment Bank Limited</b>
366	Twiga Chemical Industries Staff Provident Fund 2007	African Alliance Kenya Investment Bank Limited
367	Tyson's Limited Staff Provident Fund	Co-Op Trust Investment Services Limited
368	UAP Insurance Pension Fund	Co-Op Trust Investment Services Limited
369	UAP Staff Pension(Dc) Scheme	Old Mutual Investment Group Limited
<b>370</b>	<b><i>Uchumi Supermarkets Limited Staff Provident Fund</i></b>	<b>African Alliance Kenya Investment Bank Limited</b>
371	Ukulima Co-Operatives And Savings SRBS	Genafrika Asset Managers Limited
272	Unafric (Kenya ) Provident Fund	Sanlam Investments East Africa Limited
373	Unaitas Sacco Staff Provident Fund	Co-Op Trust Investment Services Limited
374	Unilever Kenya Pension Fund	Genafrika Asset Managers Limited
<b>375</b>	<b><i>Unilever Tea Kenya Staff Retirement Savings Plan</i></b>	<b>ICEA Lion Asset Management Limited</b>
376	Union East Africa Pension Fund	Genafrika Asset Managers Limited
377	United Nations Co-Operative Savings Staff Pension Scheme	CO-OP Trust Investment Services Limited
378	University Of Kabianga Staff Retirement Benefits Scheme	Co-Op Trust Investment Services Limited
379	University Of Nairobi Pension Scheme	Genafrika Asset Managers Limited
<b>380</b>	<b><i>USIU-A Staff Pension Scheme</i></b>	<b>Britam Asset Managers Kenya Limited</b>
381	Vivo Energy Kenya Provident Fund	Genafrika Asset Managers Limited
382	Wakenya Pamoja Sacco Staff Provident Fund	CIC ASSET MANAGEMENT LIMITED

383	Wigglesworth Exporters Staff Retirement Benefits Scheme	ICEA Lion Asset Management Limited
384	Williamson Tea Kenya SPF	Sanlam Investments East Africa Limited
<b>385</b>	<b>Wrigley Kenya SRBS</b>	<b>Old Mutual Investment Group Limited</b>
386	Yetu Sacco Society Staff Provident Fund	CO-OP Trust Investment Services Limited
387	Zamara Fanaka Retirement Benefits Scheme	Genafrika Asset Managers Limited
388	Zamara Vuna Pension Plan	Sanlam Investments East Africa Limited
389.	<b>Zimele Personal Pension Plan</b>	<b>Zimele Asset Management Company Limited</b>

(Source: Retirement Benefits Authority, 2021).

## Appendix II: Questionnaire

Please tick (√) the box that corresponds to your response to the questions.

### PART A: RESPONDENT'S PROFILE

1. What is your uppermost level of education?

- i. Diploma
- ii. Bachelor's Degree
- iii. Master's Degree
- iv. Doctorate
- v. Any other, kindly specify \_\_\_\_\_

2. What is your length of service at your organization?

- 1-5 years     6-10 years     11-15 years   
 16- 20 years     21-25 years     26 and above

3. How long has the organization you are working for been operating?

- Less than 5 years
- 5 years to less than 10 years
- 10 years to less than 20 years
- 20 years to less than 50 years

### PART B: ASSET ALLOCATION STRATEGIES

4. Indicate your opinion on the level on significance of the following asset allocation strategies.

Use a five point likert scale: Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5).

Asset Allocation Strategies in pension schemes					
I. Strategic Asset Allocation Strategy	1	2	3	4	5
Rebalancing of portfolio periodically (every now and then).					
Diversification to reduce risk and improve return.					
Target allocation based on Investor risk tolerance.					
Target allocation based on time horizon.					
Target allocation based on Investment objectives.					

<b>II. Dynamic Asset allocation strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Adjust mix of assets in a portfolio based on market condition/trend.					
Reducing position in the worst performing asset classes.					
Adding position in the best performing assets.					
Relies on portfolio manager's judgment instead of a target mix of asset.					
<b>III. Tactical Asset allocation strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Stocks, bonds and cash are actively balanced/adjusted.					
Maximize portfolio returns, minimize market risk.					
Portfolio asset mix always reflect your goals at any point in time.					
<b>IV. Constant weighted asset allocation strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Continually (Automatically) rebalance your portfolio.					
Purchase assets that decline in value.					
Sell assets that increase in value.					
Rebalance portfolio to original mix in case of asset movement above 5%					
<b>V. Insured asset allocation strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Investor is risk-averse					
Establish portfolio base/floor to cushion decline					
Relying on analytical research, forecast and experience to decide security to buy, hold and sell					
Aim at increasing portfolio value as much as possible					
<b>VI. Integrated asset allocation strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Optimization of an investors net worth.					
Deals with expected net worth (asset less liabilities).					
Investor willingness to take added net worth risk.					
Intention to increase expected net worth.					
<b>VII. Asset and liability management strategy</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Planning to meet the liquidity needs					
Arrange maturity pattern of assets and liabilities					

Spread asset liability management					
Interest sensitivity analysis					

5. Your take on the importance of each of the following statements concerning asset allocation strategies in general? Use five point likert scale: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4) and Strongly Agree (5)

	1	2	3	4	5
They enhance effectiveness in meeting clients' needs					
They enhances our work performance					
Their use boosts our productivity					
Learning how to use them is easy					
Their usage presents flexibility					
It is easy to become competent at using them					
The industry encourages their usage.					
A majority in the industry uses them					
RBA thinks that we should adopt their usage					
We highly regard those who use them					
We are endowed with the means necessary to use them					
We possess the requisite knowledge and capability to use them					
Entities exist that can assist us in using them					