TRUSTEE-RELATED DETERMINANTS OF FINANCIAL RETURNS OF THE REGISTERED OCCUPATIONAL PENSION SCHEMES IN KENYA

GEORGE MWANGI GATHOGO

DOCTOR OF PHILOSOPHY

(Business Administration)

JOMO KENYATTA UNIVERSITY OF

AGRICULTURE AND TECHNOLOGY

2019

Trustee-Related Determinants of Financial Returns of the Registered Occupational Pension Schemes in Kenya

George Mwangi Gathogo

A Thesis submitted in partial fulfillment of the degree of Doctor of Philosophy in Business Administration (Finance) in the Jomo Kenyatta University of Agriculture and Technology

2019

DECLARATION

This thesis is my original work and has not been submitted for a degree in any other University.

Signature ……..Date…….

George Mwangi Gathogo

This thesis has been submitted for examination with our approval as the University supervisors

Signature ……Date…….

Prof. Gregory Simiyu Namusonge, Ph.D

JKUAT, Kenya

Signature ……Date…….

Prof. Maurice Sakwa, Ph.D

JKUAT, Kenya

DEDICATION

I dedicate this work to my dear father Mr. Gathogo Macharia and my Beloved Mother, Fraciah Wambui Gathogo for their unwavering interest in my education since my childhood times. I also dedicate this work to my granddaughter Lina Kanene who is reminding me that I should finish my Ph.D faster since she is about to start her formal education very soon.

ACKNOWLEDGEMENT

I wish to sincerely register my thanks and gratitude to all those who assisted me in coming up with this thesis. More specifically were my supervisors, Professor Namusonge and Professor Sakwa for their academic contribution, advice, comments and corrections. Prof. Bulitia, Prof. Machogu,Dr.Anne Nderitu, Dr.Joseph Gichure, Dr. John Wekesa Wanjala and Dr.David Kimani who gave me invaluable insights and guidance whenever I got stuck in my research work. Despite their busy schedules, they took their precious time and energies to literally go through the thesis to ensure that it is worth its salt. I am indeed grateful to my family members who have taken my absence positively all through my PhD degree programme. They gave me both emotional and moral support as well as praying for me during the difficult, tedious and lengthy times of thesis writing. Equally, am grateful to my colleagues for their unwavering support .They gave me peer guidance whenever I needed it .I cannot forget to register my appreciation to the JKUAT for providing me a learning opportunity at post graduate level and allowing me to access the resource materials in form of books, library materials, On-line Journals and other essential reference materials whenever I needed them. May the good lord in Heaven bless all of you for your support and invaluable contribution.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

DEA	Data envelopment analysis
DB	Defined Benefit
DC	Defined Contribution
IPS	Investment strategies statement
NSE	Nairobi Securities Exchange
NSSF	National Social Securities Fund
OECD	Organization for Economic Co-operation and Development
PAYG	Pay as you go
RBA	Retirement Benefits Authority
SPSS	Statistical Package for Social Sciences

OPERATIONAL DEFINITION OF TERMS

Defined Benefit Plan	In a DB scheme the amount the member gets at retirement is based on Factors include, the length of stay in the pension scheme and a members salary at retirement time (Chirchir, 2007).
Defined Contributions Plan	In a DC scheme the amount the member gets at retirement is based on factors such as the length of stay in the pension scheme, monetary contributions and Occupational Pension scheme earnings. (Chirchir,2007).
Density of Contributions	The amount ,often expressed as a percentage of earnings, that a worker and /or an employer pays into a pension scheme.(Maina, 2012).
Financial Returns	The measure of change of the financial state of an organization, or the financial outcomes that results from management decisions and the execution of those decisions. (Odundo,2013).
Occupational Pension Schemes	These were schemes initiated by employers of companies. They were institutional investors, which collect, pool and invest funds contributed by members and sponsors to provide for the future pension entitlements of the said beneficiaries.
Retirement Benefits Scheme	Any scheme or arrangement established by a written law under which persons were entitled to benefits in the form of payments upon exit or retirement from employment. (RBA ,2012).
Trustee-related determinants	These were the determinants that arise specifically from choices made by the Trustees of Registered Occupational Pension Schemes (Forbes, 2013).

ABSTRACT

The reforms witnessed in the pension industry over the past years had an effect on the financial performance of the pension schemes and more so, on the occupational pension schemes. This thesis attempted to examine trustee-related factors that affect the performance of occupational pension schemes in Kenya. The general objective of this thesis therefore, was to find out the key trustee- related determinants of the financial returns of the registered Occupational Pension Schemes in Kenya**.** The specific objectives were; to establish whether the Operational costs, Density of contributions, asset allocation and risk preferences respectively were actually determinants of the financial Returns of the Occupational Pension Schemes. The study further assessed the moderating effect of the Pension Regulatory Framework on their financial Returns. The research was guided by the post-modern portfolio theory, Agency theory as well as the systems theory. A mixed research design targeting a population of one thousand two hundred and thirty two (1,232) occupational pensions schemes registered with the Kenya Retirement Benefits Authority, and were in operation between 2006 to 2015 , was carried out. A systematic sampling was applied to select 293 sample units representing the population sourced from the RBA list. The primary data was sourced from the Trust secretaries of the sampled occupational pension schemes. Out of 293 sampled units, only 250 questionnaires were complete and returned to the researcher. The questionnaire developed was pilot tested using twenty sampled schemes and the results were analyzed for validity and reliability using Cronbach's Alpha coefficient formula. The secondary data, on the other hand, was sourced from the audited financial reports of the sampled registered Occupational Pension Schemes as provided by the Retirement Benefits Authority. A factor, correlational and regression analyses respectively were conducted by means of statistical packages for social sciences (SPSS). The analysis found that the density of contributions and asset allocations had a high positive correlation on the performance while operational costs and risk preferences respectively had a moderate positive influence on the schemes financial Returns. Incidentally, the study found that the regulatory framework acted as an impediment on their financial results rather than a booster. This confirmed the conceptual framework of the study as proposed in this thesis. Based on the findings, the researcher recommended a critical review on these trustee-related determinants of the financial Returns of the registered Occupational Pension Schemes in Kenya. In addition, the study challenges the government and policy makers to come up with better pension related policies that would be in line with the current investment climate. In the academic circles, the researcher hopes that other researchers would take interest in the reforms in the pension industry, particularly in the occupational pension schemes and find this work would be of essence in their quest for further knowledge on financial returns of Pension schemes.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Occupational Pension Schemes are linked to employment and they have certain features that other pension schemes in the pensions industry lack. First, they are independent entities created by companies through trust deeds (RBA, 2014). Secondly, the intentions of the sponsoring companies are to benefit members of the Occupational pension schemes upon retirement. Thirdly, members' participation as trustees of the funds is largely 50:50 (RBA, 2014). The Occupational pension schemes created are professionally managed by the registered professional service providers appointed by the Trustees. Companies that create such Pension schemes, normally top up the amount contributed by the employees (NSSF, 2013).

Occupational pension schemes were therefore funded entities (Njuguna, 2012). The funds contributed were expected to be invested in long term income generating investments such as Government and private bonds as well as real estates among other investment opportunities acceptable by the RBA. Initially, Occupational pension schemes were incorporated as Defined Benefits (DB) plans (Njeru 2010). However, world over these schemes were required to transform to Defined contribution (DC) plans, apparently to shift any form of risk from the sponsoring companies to their members. In addition, under the DC plans, the returns for the Occupational pension schemes would depend on the efficiency of the management and the asset performance of the pension schemes. Members of a particular scheme would be paid their retirement benefits according to the returns or performance of those schemes (Odundo,2013).According to Tari(2014), DC plans have become the primary retirement savings vehicle for many employees in Kenya and the DC design continues to grow in importance. Thus the financial performance of these pension schemes becomes a critical

point of interest to the members as well as to the sponsoring companies. However, Occupational Pension Schemes were not well designed to one integrated financial product, they had rigid regulatory guidelines and their designs were not reviewed periodically. This compromises the members' benefits. Muriithi (2017) in the study on "Analysis on the Effect of Operating Costs on Financial Performance of Occupational Pension Schemes in Kenya", indicated that, among the challenges faced by the pension industry in Kenya were high service providers' expenses, low fund manager performance, rigidity in asset allocations which resulted to low investment returns. Pension schemes were rated according to how well or poorly they manage their costs as well as their assets .This was according to Nyakundi (2014)in the study on "Pension coverage in Kenya :Legal and Policy Framework required to encourage coverage in Kenya.".

The financial performance of Occupational pension schemes, according to Ichingwa and Mbithi (2017) in their study on the "Effect of total contribution on the financial performance of pension schemes in Kenya" is wanting . The study argues that the poor performance of pension schemes has jeopardized the role they were expected to perform such that members retire disappointed while some schemes were on the verge of collapsing. This is a critical issue of concern. Since the survival of many occupational pension schemes is at risk, there is a need to examine those factors that affect the performance of the occupational pension schemes in order to address them. More importantly, since much of the performance depends on the choice made by the Trustees, it is imperative to focus on the Trustee related determinants. By so doing, the performance and growth of Occupational pension schemes would be sustained and possibly pre-empt possible failures of these particular category of pension schemes.

The changes in pension plans had effects on the performance of the occupational pension schemes. With the Occupational pension schemes, trustees have the freedom to choose the service providers and pay them for the services rendered. Reports from the RBA 2013 and 2016 respectively indicated a general increase in the management and

operational costs (RBA, 2016). More so the operational cost to asset ratio was increasing from 2008 to 2016 respectively. This implied that the returns ratio to the assets invested was decreasing. Campbell & Viceira (2012) in their study on "Strategic Asset Allocation: Portfolio choice for long term investors" confirmed that there is a significant improvement in efficiency (and particularly cost-effectiveness) through moving from public management of the system to a competitive private management arrangement. In a study report on "Pension at a Glance: 2016, Retirement Income Systems in OECD Counties" the empirical results of 12 countries indicated that these pension schemes were costly to manage (OECD, 2016). The study indicated that seven pension schemes out of fourteen assessed against international benchmarks reported five times the predicted levels of financial results. More so, the total operating costs were more than 50% of the contribution returns while five had the entire cost above the total revenue. In their study on the "Analysis of the financial performance of registered individual retirement schemes in kenya", Gakure & Gakera,(2015) concluded that good governance had strong influence on the financial returns of individual pension schemes. Kigen (2016) when studying the "Effect of Fund Size on the financial performance of Pension Funds in Kenya", observed that administration expenses, investment expenses have a significant effect on the financial performance of Pension fund in Kenya. It is therefore imperative to find out whether the same scenario is replicated in the Occupational pension schemes.

Hlavac (2011) in the study on "Financial performance of the Czech private pension scheme: Its current position and the comparison with other CEE countries" noted that the Density of contribution affects the financial performance of pension schemes. This is because the higher the contributions the higher is the investment. Empirical studies have indicated that those pension schemes with huge density of contributions were more likely to improve their asset base and investment portfolios. The RBA statistical reports of 2013 and 2016 respectively, indicate general increase in asset sizes as well as the volumes of financial returns. The study on "The determinants of performance of pension

funds in Kenya" by Oluoch (2013), revealed a strong positive correlation between contributions and financial performance of pension schemes in Kenya. Kigen, (2016) observed that accumulated fund assets have a significant effect on the financial performance of Pension fund in Kenya. Ichingwa & Mbithi, (2017) established that total contribution has a positive and significant effect on financial performance of pension schemes. It would be imperative to see whether density of contribution is a determinant of financial performance on occupational pension schemes.

Asset allocation appears to be a contributor to the performance of occupational pension schemes. According to Njuguna,(2012),in the study on the "Critical success factors for a Micro-Pension Plan;An exploratory study",each category of an occupational pension scheme has a prescribed investment limits for the investment opportunities available to the pension schemes. Investment opportunities available for occupational pension schemes include immovable properties, Government securities, Quoted Equity, Unquoted Equity, Commercial and Corporate bonds, fixed and time deposits, Cash and Demand Deposits, offshore investments and even guaranteed funds among others. Schemes were, by law, required to diversify their investments thereby effectively managing investment risks (RBA, 2014).

There is some degree of investment freedom in the case of Occupational Pension Schemes since the trustees make their own investment choices as guided by the RBA regulations. Naturally, this makes them better investment vehicles as opposed to allowing workers to make their own investment choices (Nyakundi,2014). The RBA 2013 and 2016 report indicate that there has been an improvement in financial returns in between 2006 and 2014 which can be attributed to the improved investment strategies adopted by the service providers. However, 2015 there was a drop in investment returns which stood at 2.387% while the industry performance improved by 0.783% to stand at 3.684% .Empirical studies have shown a strong relationship between the asset allocation and pension fund's financial performance (Ngugi *et. al.*,2018). According to Njeru (2014), majority of Pension Schemes in Kenya invest their pension fund in the Nairobi

Securities Exchange. However, there were some pension schemes that also invest their funds in property, offshore, quoted and unquoted securities. The study established that equities performed well especially in large Occupational pension schemes while the offshore investments were poorest in performance in the category of medium pension schemes.

The study strongly recommended that both the Trustees and members be trained on financial management skills so as to make informed choices. Gerber & Weber (2007) observed in a study of Switzerland pension schemes that large schemes invested more in equities and real estate compared to small schemes. Gitundu (2014) study found that asset allocations differ in various pension schemes and that Funds managers tend to outdo one another in terms of choosing asset mix and in their responses to improve in asset fortunes. Ng'etich (2012) study found that a sound investment strategy leads to an operational efficiency. The study recommended that an investment strategy must be designed in such a manner that a mix of short and long term investment portfolio is available. From the above RBA reports and empirical studies ,it is clear that a positive relationship exists between asset allocation adopted by the trustees and the financial performances of the occupational pension schemes.

However, these Occupational pension schemes expose a significant part of employees' income into market uncertainties such as the investment risks, longevity risks, financial market dynamics, employers willpower to support the schemes, age profiles of the contributors among others (Hlavac, 2011). It would be expected that these uncertainties would compel funds managers to be keen on re-examining investment choices and possibly maximize the returns given the number of risks that were involved. Their successes or otherwise therefore, were based on their financial performances at the end of a given period of time.

The Post-Modern Portfolio Theory postulate a linear relationship between risk and returns (Orina,2011). This means that the higher the returns demanded, the higher the

risk that one should be prepared to take (Steve & Lumby,2011). Given the fact that majority of the Trustees were risk averse, could perhaps be the reason why majority of occupational pension schemes were still performing below par. Njuguna (2011) sees the influence of Risk preferences as of great concern especially in the bearish financial times. According to Ngugi *et. al.*(2018),the longevity associated with defined contribution pension schemes and the funding risk taken up by the sponsors of defined benefit pension funds have attracted more attention to the investment strategies employed by pension funds. Gakure & Gakera,(2015) study found that risk had an enormous effect on the financial returns of the occupational Pension Schemes. Furthermore, they argued that some of the precautions taken by the individual pension schemes to deal with risk included investing in government bonds, allowing insurance companies to invest on their behalf and thus procuring guaranteed returns, fixed deposits with banks among others. There is therefore need to examine whether the precautions taken by the individual occupational pension schemes to deal with risk affect the financial performance of occupational pension schemes in the same way.

The moderating effect of the Regulatory framework as regards the financial operations of Occupational pension Schemes cannot be ignored. The provisions especially in the RBA Act 1997 could have either a positive or negative effect in regards to the operations and the financial performance of the Pension schemes since 2001. The cardinal objective of the regulation is to promote the pension members' confidence as well as facilitating retirees with their retirement packages as and when such benefits fall due. Basically, the regulations of pension Schemes involve licensing, investing, governance and disclosing information to the members and the public at large. Licensing, according to the RBA,(2015), involves restricting and controlling pension schemes entry in to the pension industry. Miriti (2014) observed that fixing quantitative restriction is a global phenomenon. According to Miriti, Countries, all over the world have set up regulatory bodies to offer guidelines on the management of Pension Funds as well as controlling the financial activities. A study conducted by Njeru et. al.(2014), suggested that more

research on regulations can be conducted on the pension schemes to determine whether regulations have the same effects on the independent variables.

The challenges of occupational pension underperforming have been very common to many occupational pension schemes world over and especially in Kenya. Occupational pension schemes have grappled with the balancing act of paying benefits to the retirees without incapacitating their financial capabilities to carry out their core mandates (Chirchir,2007).It is therefore imperative to seek trustee related determinants of financial performance of occupational pension schemes. This chapter discusses the respective global ,regional and Kenyan perspectives of financial returns of occupation pension schemes .In addition, the chapter addresses the problem statement ,research objectives ,research questions and hypothesis , study justification ,the scope of the study and ends with the study limitations.

1.1.1 Global Perspective of financial Performance of Pension Schemes

Pension issues have received much attention in many countries over the past Decades especially to the policymakers (Ogoda, 2016).It is a global agenda because people in the formal and the informal sectors all over the world at one time in their lives would either retire or exit from employment. According to the Organization for Economic Co-operation and Development (OECD), life after retirement is a phenomenon that governments all over the world have been grappling with (OECD, 2016). In their study on "Private pensions and policy responses to the financial and economic crisis", Antolín & Stewart, (2009), indicated that most pension systems around the world consist of three pillars, namely Public, Occupational and private. The same observation was made in the study "*Annuities and other retirement products: Designing the payout phase"* (Rocha.,Vittas, & Rudolph,2011) . However, the relative compositions of these three pillars differ considerably between countries. Occupational pension plans were dominant in Western Europe, North America, Asia-Pacific countries (OECD, 2016). Studies carried out worldwide indicate that in order to perform better, Pension schemes

especially Occupational and Private ones, must be managed professionally under a regulated environment (Rocha *et. al.* 2011; Blake, Lehmann, & Timmermann, 2002).; Campbell & Viceira,2012). The professional services were provided for a fee that actually has a negative impact on the Pension schemes' cash flows. The greatest source of their income is the contribution from the members as well as top ups from sponsors particularly for registered Occupational Pension Schemes. A study in United Kingdom (UK), found that better investment returns from Pension Schemes attracts and retains senior members in the organization (Blake *et.al.*2002). Further, strategic Asset Allocation is a focal issue for the Pension Schemes world over (Campbell *et. al.* 2012). An asset allocation can bring either high or low returns depending on the investment choices made by the funds' managers.

Hlavac (2011) studied the financial returns of the Czech Private Pension Schemes and compared their Performance with the other CEE countries. About 400 private Pension Schemes selected using stratified sampling technique. The study revealed that the financial returns of these schemes were essentially affected by the contributions from members and the Operational costs incurred in the provision of the management Services. A study by Hustead (2009), on the "*Administrative Costs of State Defined Benefit and Defined Contribution Systems. The Future of Public Employee Retirement Systems"* it was observed that the impact of the administrative cost on cash flows for the Defined Contribution(DC) system was greater as compared to the Defined Benefits(DB) system. Initially, Occupational pension schemes in many OECD countries had customarily been structured as DB schemes. However, in recent years there has been a shift from DB to DC plans, especially in advanced countries such as U.K and U.S. (OECD, 2015). The major cause of the shift is because of accountability(Chirchir,2007). In the case of DB plans, terminal benefits were paid to the retirees as initially agreed irrespective of company's financial results. In the DC plans, retirees were paid their terminal benefits according to the performance of their respective schemes.

A study in Netherlands and Switzerland by Bovenberg,(2008) entitled "Dutch policies towards Aging;European view" it was observed that Public Pensions account for half or less of the income of retirees. The study further observed that in Germany and Southern Europe, the first pillar, a pay-as-you-go public pension scheme is large. The study also noted that Registered Occupational Pension Schemes in Netherlands and Switzerland, have a large presence and serve a relatively large proportion of employees while in the US, the works related and individual plans were more important than the other categories of the schemes (Francis,2009).The asset mix has greater impact on the Funded system than the unfunded system of Pension scheme (Knell ,2010) .This indicates that Asset mix is an issue that has been grappling the minds of both the practitioners and researchers in a bid to make the right asset mix that would assure optimal investment returns under the controlling regulatory framework.

In their study of "Redesigning regulation of Pension Schemes", Nugee & Persuaud, (2006), found that the regulations allowed Pension Schemes to invest in Government bonds and securities which were safer since Governments could not fail to refund the borrowings from the investors. The study argued that such a regulation was too conservative and thus could be a hindrance to the spirit of investment. The study recommended a redesigned regulation that was assertive and could allow investors of Pension Fund more opportunities for investment such as a higher percentage in Equities, real estate and offshore investments. The relatively under-developed capital markets such as in Latin American and Central and Eastern Europe countries, explain partially the strict investment regulation in these countries (OECD,2015). On the contrary, pension funds in countries with better-developed capital markets generally require only a moderate regulatory framework.

Studies conducted worldwide indicate that factors which determine the Financial returns of Pension Schemes were basically internal and more importantly, trustees -related, such as Operational costs, level of financial contributions, among others (Bovenberg,,2008). The external factors cited by various researchers include investment choices made by the

managers of the Pension Schemes together with the Risk preferences associated with the investment choices made as well as the regulatory environment that Pension Schemes operate in (Rocha *et. al.* 2011; Hustead,2012; OECD, 2016; Devesa-Carpio & Vidal-Meliá,2002).

1.1.2 Regional Perspective of financial Performance of Pension Schemes

In the African context, the role played by the Pension industry cannot be underrated (OECD, 2015). African culture socially binds its community members so much so that senior citizens as well as the unfortunate members of those communities expect to be supported by the working generation (Chirchir,2007; OECD, 2015). However, the uptake of the Pension arrangements as alternative to the traditional culture of catering for old age ranges between 24.7% to 31.2 % which is low in comparison to the Pension Schemes uptake globally which stands at 56.2% (Njuguna,2011; Ondundo ,2013; Mutua, 2013). Except for South Africa , Tunisia and Egypt, the Pension industry in Africa is generally not well established partly because issues related to retirement were not taken seriously. More importantly, the culture of saving for the future is not a virtue to majority of Africans (Njuguna, 2012).This is attributed the fact that majority of Africans live below the poverty line such that their major concern is survival which is a basic need (OECD, 2015).

Studies conducted by Palacios & Pallares-Miralles,(2000),entitled "International patterns of pension provision", the Pension industry in many countries is not well structured as in the case of the western Countries. According to Forbes (2013) in the study titled "Impact of Financial Services on Pension Schemes in Kenya",the Pension industry in the African countries, just like non-African countries, is well divided into three pillars; namely Public, Occupational and Private Pension Schemes .Studies conducted by Barros, (2006) in the work entitled "*Performance evaluation of pension Funds management*

companies" reveal that both Tunisia and Egypt have exceeded 80% of the workforce The studies also noted that the Pension industry in these countries were, to a large extent, privately managed. Thus the competitive spirit of investment in a supportive environment has brought about robust financial returns in the two countries. However, African countries such as Botswana, Mauritius, and Namibia have universal pension schemes. According to Hatchett (2010) thesis entitled "Pension fund riskfor DB pension funds", where public Pillar in the Pension industry is strong, it creates a universal system that reduces competition within the Pension Scheme industry. However, lack of competition has brought about low financial returns for pension schemes which translate to low retirement benefits for retirees (Barros, 2006).

To sum up, Occupational pension schemes from African countries experience hiccups similar to their counterparts in non-Africa countries. Countries that allow Occupational schemes to develop and invest freely have registered better financial returns unlike their counterparts that encourage universal Pension Scheme System. Asher,(2007) in a thesis entled "Design of retirement schemes:Possibilties and imperatives" reported that Occupational Pension Schemes were dependent on contributions from members and Sponsors and have controlled liberty to invest in restricted areas. Alongside these challenges, the thesis added that private pension schemes have been struggling with asset mix that would optimize returns due to various risk preferences and the conservative regulatory frameworks in various African countries (Mutua, 2013).

1.1.3 Kenyan Perspective of financial Performance of Pension Schemes

The current retirement benefits system in Kenya can be classified using the classification recommended and commonly applied by the Organization for Economic Co-operation and Development (OECD, 2015), as public pension and private pension plans. The public plans are social security schemes where the government is directly involved in the payment of pension benefits since it is the largest employer (Mutuku,2014). All the other types of pension plans are classified as private plans, which typically comprise personal

Pension schemes as well as occupational pension schemes. The weaknesses associated with the public pension system such as low and delayed payments of those benefits among other issues, were to be addressed by the private pension system (Forbes, 2013). In view of this, there has been a notable rapid expansion in the works-related pension system (Davis, 2013. Kenya, like many countries out to improve the welfare of their citizens, is in pursuit of an economic development programme adopted by the industrialized countries which have a capitalist economic system (Nyakundi, 2014). This capitalistic economic system has brought about crucial changes to social and economic lifestyles of its citizens. In other words, the new economic system has brought about a transition from an old system of living to a modem capitalistic lifestyle where older people were relatively less dependent on their communities and families for their daily needs (Chirchir, 2007). A change in lifestyles demands a change in the preparation for retirement (OECD, 2015).

Besides, in order for the retirement income to be a real and reliable employment income substitute, the Occupational Pension Schemes require to address the disparities of paying the management expenses, efficient and effective collection of members' contributions, making prudent asset allocation as well as managing risks. Additionally, the regulatory framework of the Pension industry is very restrictive for the growth of private schemes. It encourages Private schemes to invest in conservative markets such as Government bonds and securities. Financial returns from such markets are so low that retirees get relatively low retirement benefits in comparison to their salaries before retirement (Asher, 2013). The target population included Occupational Pension Schemes that are registered by the Retirement Benefits Authority (RBA).By the end of year 2014, RBA had registered over 1,232 Occupational Pension Schemes (RBA, 2015). They formed the units of the study. Since the RBA list did not have updated records of the key parameters like the updated number of members and even the amounts contributed, the researcher used statistical reports as provided by the pension schemes at the end of their accounting periods. In order to source a representative sample, a stratified sampling technique was

applied. The questionnaires were delivered to Trust secretaries of the registered occupational pension schemes and after two weeks, the questionnaires were collected for possible analysis.

To sum up, every independent variable had a significant influence on the Financial returns of the occupational pension schemes. The study assessed the nature of the relationship in the Kenyan context. Few studies on financial Returns of Occupational Pension Schemes in Kenya have been carried out (RBA, 2014). It is hoped that the findings , the conclusions and the recommendations of this thesis will be of benefit not only in Kenya but beyond the Kenyan boundaries since capital formation, employment income replacements and aging of the population will forever remain a global issue, particularly, in the developing countries such as Kenya.

1.2 Statement of the problem

Providing retirement benefits have been a critical issue not only to the employers but also to the governments worldwide. This is because pension benefits are so huge that whenever payments mature, they sometimes affect not only the operations of employers or organizations but also affect adversely their survival. In realization of possible existence of such payments and the consequences, Governments put up National Social Security Funds (NSSF) while majority of companies have been setting up their own Occupational pensions schemes respectively(Njuguna,2012).It is reported that between 2006 and 2015 many occupational pension schemes were created apparently as a response to frustrations encountered by the governments' managed security funds (Kiaritha,2015).

The occupational Pension Schemes, which are funded by the members and the sponsoring institutions, are independent institutional investors tasked with the responsibility of accumulating retirement savings for their employees on behalf of the companies. Initially, the design of occupational pension schemes was Defined benefits

which attached bigger responsibility of paying retirement benefits to the employers, whether they made profits or not (Chirchir,2007). However ,in 2007 all occupational pension schemes were required by law, to convert their designs from DB to DC plans apparently to shift the risks of payment of pension benefits from the companies to the members. In addition, the benefits were to be paid from the investment returns and not from members' contributions. Since investments bring returns, members' contributions were to be invested to generate income. Retirement incomes are therefore dependent on the performance of the assets which were expected to be invested (Oluoch,2013).The asset size of the occupational pension schemes mainly depended on the volume of contributions from the members and the sponsoring organizations.

Kigen, (2016) observed that accumulated fund assets have a significant effect on the financial performance of Pension fund in Kenya. The study by Oluoch(2013), revealed a strong positive correlation between contributions and financial performance of pension schemes in Kenya. Ichingwa & Mbithi, (2017) established that total contribution has a positive and significant effect on financial performance of pension schemes. The three studies indicate that the greater the volume of contributions the greater is the asset base and so is the financial returns. With the kind of contribution from the members and sponsors, it would be imperative to conclude that performance of occupational pension schemes would improve with the improvements of financial contributions. With the low investment returns from occupational pension schemes as recorded by the RBA, it is imperative to examine why the financial results were low despite the greater contributions from the members and the sponsoring companies.

Despite the fact that members make regular contributions, they receive their benefits either upon retirement or upon exiting the organization (RBA 2013). Therefore ORS hold in trust long term liabilities for their members until retirement time. This exposes members' contributions to investments uncertainties. Moreover, Occupational pension schemes are managed by registered professional service providers whose performance is mainly measured by their ability to bring in higher returns given the competitive

environment in the investment markets. According to Oluoch (2013), due to the challenges that have been witnessed in publicly managed pension schemes, Occupational Pension schemes world over have been registering significant growth in number .Such a growth in number of ORS is expected to increase further in the future.

Reports from the RBA (2015) indicate that there were over 4000 registered and unregistered occupational pension schemes with asset values amounting to over Sh.700.billion. The financial contributions from these Occupational Pension Schemes accounted to 51.4% of the total Gross Domestic Product (forbes ,2013). According to the RBA 2016 reports , the investment returns from the occupational pension schemes ranged between 6.7% to 15% .The average return being 10.67% .The median performance was 7.87%.However, the Pension industry investment performance was 16.33%.According to the RBA investment reports released for the years 2014 and 2015 respectively, about 62.3% of all the Occupational Pension Schemes in Kenya performed below expectation in comparison to the overall market performance.

Reports from Retirement Benefits Authority indicated that the total assets grew from 2010 to 2015 averaged 3%. However, the report indicated that the overall returns from pension industry had been inconsistent. The RBA further asserts that, in the year 2015, the investment returns from the Occupational Pension Schemes ranged between 5.45% and 14.9% .The median point and the average performance of occupational Pension Schemes were7.51% and 8.45% respectively. The general investment return in the Pension industry, however, rose to 19.45%.In the year 2016, there was a slight improvement in terms of the investment returns as posted by the registered Occupational Pension Schemes. Their investment returns ranged between 7.44% and 15.21%.The median point was 8.05%.The average performance of investments was 11.93% while the general investment return rose by a higher margin to stand at 20.99%.

From the RBA records it was concluded that here was a performance gap between the occupational pension schemes and the overall pension industry. The gap could be the

cause of complaints from members since some pension schemes were unable to pay their dues while others were on the verge of collapsing. The presence of the professional service providers implied that administrative and operational costs must be incurred to obtain such professional services. Such costs would be expected to be reduced to the minimum level within the limits prescribed by the RBA Act 1997. It could be that either the returns were too little or much of the returns was channeled towards paying the service providers. Either way operational costs could be a possible contributor to the performance gap observed in the RBA reports.

Where there is stiff competition in funds managers proofing that they can promise better returns than others, investment mix becomes a focal point for the members and the sponsoring companies. Those funds managers with aggressive asset mix would post better financial returns than those who were conservative in their investment approaches. Aggressive spirit has been encouraged by changing the pension plans from DB to DC where returns were based on the assets use (Chirchir,2007). The RBA 2013 and 2016 report indicated that there was an improvement in financial returns in between 2006 and 2014 which could be attributed to the improved investment strategies adopted by the service providers.

However, in 2015 there was a drop in investment returns which stood at 2.387% while the industry performance improved by 0.783% to stand at 9.684 .Such results could be partly attributed to the asset mix chosen by occupational pension schemes. Although it is not automatic that employers must establish ORS in their organizations, once ORS are formed they fall under the regulation of the RBA which control virtually all the activities of the ORS. This implied that the financial returns, of the occupational pension schemes in Kenya were affected by the regulations as set by the RBA. There is need to examine the effects of the regulations on those possible determinants and see how pension returns are affected.

Regrettably, literature on the occupational pension schemes in Kenya is scarce (Mutua,2013; Mutuku,2014, Ng'etich,2012;Kiaritha,2015).Despite the importance of pension to the employees and other stakeholders, few studies on the effects of these variables on the financial returns of ORS in a regulated environment in a developing country such as Kenya have been conducted. There is an urgent need to examine whether the suggested independent variables are actually determinants of performances in a regulated environment. If the issue is not addressed, financial returns of the Occupational pension schemes will remain low and trickle down to low retirement benefits for retirees. Retirees will thus, remain a financial burden to the society despite the fact that they had contributed well to their respective Occupational Pension Schemes during their employment time. The objective of this thesis was therefore to address the literature gap existing in the finance research on the trustees related determinants of financial performance of registered occupational pension schemes in Kenya .The study sought to examine whether operational costs, density of contributions, asset allocation, risk preferences were Trustee related determinants of the financial performance of occupational pension schemes in Kenya.

1.3 Research Objectives

The study was guided by the following general and specific objectives.

1.3.1 General objective

The general objective of the study was to assess the trustee-related determinants of financial returns of the registered occupational pension schemes in Kenya.

1.3.2 Specific objectives

The Specific objectives of the study were;

1. To establish the effect of the Operational Costs on the financial returns of Occupational Pension Schemes in Kenya.
2. To assess the effect of the Density of contributions on the financial returns of the Occupational Pension Schemes in Kenya.
3. To examine the effect of asset allocation on the financial returns of Occupational Pension Schemes in Kenya.
4. To identify the effect of risk preferences on the financial returns of Occupational Pension Schemes in Kenya.
5. To determine the moderating effect of the Regulatory Framework of Kenya on the relationship between trustees-related financial determinants and the financial returns of Occupational Pension Schemes in Kenya.

1.4 Research hypotheses

The Null hypotheses (H_o) tested in this study were as follows:

1. **H_{o1}**; There is no statistically significant effect of operational costs on the financial performance of an Occupational Pension Scheme in Kenya.
2. **H_{o1}**; There is no statistically significant effect of Density of Contributions on the financial performance of Occupational Pension Schemes in Kenya
3. **H_{o1}**; There is no statistically significant effect of asset allocations on the financial performances of Occupational Pension Schemes in Kenya.
4. **H_{o1}**; There is no statistically significant effect of risk preferences on the financial performance of Occupational Pension Schemes in Kenya.

5. **H_{o1}**; There is no statistically significant moderating effect of Pension Regulatory Framework on the relationship between trustees-related factors and the financial performance of Occupational Pension Schemes in Kenya.

1.5 Justification of the study

The thesis is very critical to the Trustees, Sponsors and Members of the Occupational Pension Schemes, policy makers and the Scholars. The most likely benefit to each group is highlighted below;

1.5.1 Trustees of the Occupational Pension Schemes

Sponsors and Trustees to critically assess these trustee-related determinants of investment incomes so as to make informed decisions on prudent management of funds collected from members and invested by the fund's managers.

1.5.2 Sponsors and Members

Members and Pensioners would really benefit from the study as it would educate and empower them on how to monitor the management of the funds and be able to make strategic retirement plans.

1.5.3 Policy Makers

The Government, through the policy makers too, would find the thesis invaluable since it would act as an eye-opener in formulating relevant policies in the face of ever-changing social, political and economic landscape.

1.5.4 Scholars and Researchers

The Academicians would as well find the thesis more relevant in their quest for more knowledge. To them, it would serve as a wake-up call for further studies to see the need to fill in the literature and performance gaps that the thesis did not exhaust in registered and unregistered Occupational Pension Schemes.

1.6 Scope of Study

The study was devoted to over 1,236 registered Occupational Pension Schemes by the Retirement Benefits Authority (RBA) precisely between 2006 and 2015. Through mixed sample design and systematic sampling, a sample of 293 units was obtained from the RBA list of registered Occupational Pension Schemes. Registered Occupational Pension Schemes have been preferred because they comply with the generally agreed Accounting principles (GAAP) and with the RBA regulations of submitting final income statements as well as statements of financial position of the occupational Pension schemes at the end of their accounting periods. In addition, their accounting reports were audited. This added credibility of the information provided by the RBA. The standardized format of presenting final accounting reports were easy to compare either from one year to another or from one company to another (Ondundo, 2013).Such standardized reports were easy to use as a source of secondary data. A period of Ten years was found reasonable enough to indicate a pattern of financial returns of the Occupational Pension Schemes. The data provided useful information on those trustee-related determinants of financial returns of registered Occupational Pension Schemes in Kenya.

1.7 Limitations of study

There were quite a number of limitations that were encountered as the research study was being conducted. First, apart from the background information, the rest of the research questionnaire constituted close-ended questions only; an aspect that dissuaded

the sampled Trust secretaries from giving their open and frank opinions. However, the researcher ensured that the questionnaire captured the most relevant and critical aspects of the study variables. Another challenge was the unwillingness of some of the sampled Trust secretaries to participate in providing the much needed data. The researcher encouraged them to take part in the release of the information. They were further assured that the study findings would be availed to interested parties in order to improve the financial Returns of their respective Occupational Pension Schemes. The quality of this thesis was, to a large extent, a function of not only the sampling techniques applied, but also of the quality of the information obtained from the Trust secretaries from the sampled Registered Occupational Pension Schemes. During the Factor analysis process, another challenge faced was about pairing factors according to the variables they were actually representing. Finally, the major challenge was the conceptualization of the variables into observable and measurable form.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examined the studies conducted on Trustee-related determinants of the financial Returns of registered Occupational Pension Schemes. The key areas in this chapter included; the theoretical framework, conceptual framework, review of the variables on financial Returns, research gaps, research critique and the summary of the chapter.

2.2 Theoretical Framework

The study was guided by theories which have previously been developed. These theories include the Post-modern portfolio theory, Systems theory and the Agency theory respectively. They point to the fact that the financial success of any occupational pension schemes are modeled on their ability to minimize Operational costs, to collect as much contribution (inputs) as possible and effectively – conversion (investment) – maximize returns (outputs) process. These theories were explained as follows;

2.2.1 Systems theory

This theory, which is also appropriately referred to as the general system theory, was founded by Ludwig von Bertalanffy in 1950 to address the general principles of dynamic interaction of organizations. The theory states that every organization that produces output is a system of sorts (Ludwig von ,1950). Thus Organizations, including occupational pension schemes, regardless of their size and purpose, and the management perspective adopted, were basically concerned with relationships, structures and interdependence rather than just constant attributes (Oso 2009). The systems theory approach indicated that there is always inputs – conversion – outputs process

(Jayeoba,2013). There were sub-systems which were interrelated with one another and the surrounding environment and all work as a whole unit (Mele, Pels & Polese,2010). Occupational pension schemes were organizations with input conversion- output conversion processes where the input include contributions from members and the sponsoring companies ,the conversion is the investment of the assets while the output is the amount of financial returns received by the Pension Schemes (Zamuee,2015). The occupational pension schemes were actually entities with sub-systems, with the members, sponsoring companies, trustees, service providers as the sub-systems.

The study by Njuguna (2012), indicated that occupational Pension schemes can be viewed as open systems since they collect and accumulate contributions from employees (members) and their sponsors (employers who establish the pension schemes), invest the contributions and hold the proceeds in stewardship for the benefit of the members upon retirement. In a study entitled " The role of Pension Funds as institutional investors in emerging market economies",.Davis (2005) indicated that pension funds have definite inputs which they convert to outputs. Nduruhu (2019) in the thesis titled "Influence of Financial Management Practices on Sustainability of Pension Funds Administrative Institutions in Kenya", added that Systems theory is critical to the funding management practice as it explains how the inputs the from pension funds were converted into outputs to ensure that members who leave the schemes were adequately compensated. This thesis was about trustee related determinants of occupational schemes. It therefore assessed the effectiveness of the choices made by the trustees in the management of the financial resources of the occupational pension schemes. This study was modeled on the postulates of systems theory since occupational pension schemes ,like other organizations, are always in constant exchange with the larger society. The study sought the synergy that arises from the separate administrative bodies as they engage their Professional services to a particular entity and for the ultimate good of both the sponsors and the members who exit the occupational pension schemes.

2.2.2 Agency Theory

Agency theory was advanced by two American Economists, Jensen and Meckling in 1976.In their book entitled "*Financial Theory and Corporate policy"* Copeland &Weston (2012), the two Economists viewed corporations as "sets of contracts" between management, shareholders and creditors. Precisely, management which provided stewardship was viewed as "Agent" while the shareholders and creditors who were providers of finances were viewed as the "Principals". Corporate governance is grounded on agency theory, which is founded on the relationship between agents and the principals. In the context of the occupational pension schemes, the scheme members and the sponsoring companies are the principals while the scheme managers are the agents.

The major challenge in Principal-Agent relationship in the context of Occupational Pension Schemes is the information asymmetry. Managers have information advantage regarding the investment markets, investment opportunities and financing policies over the members. According to a survey report titled "*Members' opinion on pension benefits. A surveyreport on 2014 by Retirement Benefits Authority",* Mutuku (2014) argued that this relationship exposes Occupational pension schemes to the agency problems where the interests of the agents are not necessarily the same as those of the principals. The shareholders want to maximize the returns on their investments, while the agents want to maximize their own compensations within the agreed compensation contract. This is referred to as the Agency conflict.

Extra resources must therefore be expended for monitoring the performance of Agents in order to minimize losses arising from the choice of an investment mix, the risks associated with such choices and the information asymmetries. Obviously, the Agency problem arises in organizations because the corporate decisions made by the Agents (the service providers) on behalf of the Principals (the Members) bind the latter. Mutuku (2014) argues that, in an agency scenario, tasks are well defined: Principals choose directors and auditors to guarantee efficient administrative system is realized, while

agents are accountable for the daily functioning of the enterprise. Extra resources must be expended for monitoring the performance of Agents in order to minimize losses arising from the choice of an investment mix, the risks associated with such choices and the information asymmetries. Previous researches conducted indicate that there exists a negative positive correlation between Transaction costs and the financial returns of Registered Occupational Pension Schemes (Copeland &Weston, 2012).This being a study on the trustee-related determinants on financial performance of occupational pension schemes ,this theory was highly relied upon because the choices made by the Trustees in terms of payments to the service providers, collections of the contributions, the asset allocations they choose and even the Trustees risk preferences ultimately affect the financial performances of the occupational pension schemes.

2.2.3 Post-Modern Portfolio Theory

In a journal paper entitled "*The Liquidity of the Bucharest Stock Exchange (BSEk Exchange (BSE) during the Financial Crisis",* Geambaşu & Stancu,(2010) indicated that the post modern portfolio Theory (PMPT) was developed in the 1980s at the Pension Research Institute (USA) in order to better the modern portfolio Theory (MPT) to the market reality .The modern portfolio Theory had been used for a long period of time in the financial literature and the investment practice. However, two conditions of MPT were desirable but usually do not exist .The first condition is that the return rates were normally distribution. Only in exceptional cases were the return rates normally distributed (Geambaşu & Stancu, 2010).According to PMPT, the distribution of returns may take any form and not necessarily normally distributed. The second condition according to MPT is that the assets' correlation over time is constant or stable (Beste, Leventhal & Williams,2002).

Further the MPT assumption that investors were rational beings and are out to maximize their wealth has been put to question. To clearly define an investor, the PMPT (or prospect theory) asserts that, an investor is not just rational but a human person with

emotions and perceptions (Barberis, Shleifer, & Vishny, 1998). Depending on the individual preferences of risks, the humanized investor can react, not necessarily rationally, whenever losses or gains arise from the investment. According to Tsai, Wang (2012), the humanized investor will always have in mind a minimum desired return .

A return below the minimum desired return is considered a loss, while gains higher than the expected level of return are considered a "good surprise". The post-modern portfolio theory defines risk as a possibility of return rates being beneath the minimum expected return. The treatment of an investor as a humanized person with expectations puts the PMPT closer to reality of the investment outcomes as compared to MPT (Chen, Tsai, & Lin, 2011). It is therefore better to apply PMPT in portfolio management because its closer to reality. The theory has a higher power in representing the economic reality than MPT (Dronin, 2012).Another greatest contribution of PMPT is the establishment of a formal risk/return framework for investment decision-making.

In order to address the weakness of MPT in not being realistic, the PMPT has the expanded risk/return framework. MPT thus becomes nothing more than a special (symmetrical) case of the PMPT formulation .PMPT is therefore a new method of allocating assets of an organization(Swisher & Kasten,2005).The investment portfolio were based on returns and the obsessed fear of an investor to reduce the risk that has a possibility of falling below the investors' expectation. Studies have been in support of the PMPT because MPT bases its allocation on the mean-variance optimization which ignores the investor as a human person with emotions and perceptions. Despite the relevance of PMPT in the modern times, many studies in occupational pension schemes have been using the MPT. However, thesis used the PMPT because of its strong predictive power and its inclusion of the human expectations in the asset allocation and in the assessment of risks.

2.3 Conceptual Framework

On the basis of the foregoing literature review and the underlying theories that have been highlighted, the following conceptual framework demonstrates the nature of the interrelationship between the financial returns and the proposed independent variables. The moderating effect of the Regulatory framework was factored in the matrix to indicate its influence on the independent variables. For the purposes of the study, the thesis assumed a linear relationship between the dependent variable and independent variables. From the conceptual framework in Figure 2.1, the variables which were abstract concepts in nature were operationalized in to observable and measurable constructs.

Trustees- Related Determinants of Financial Performance

Independent Variables

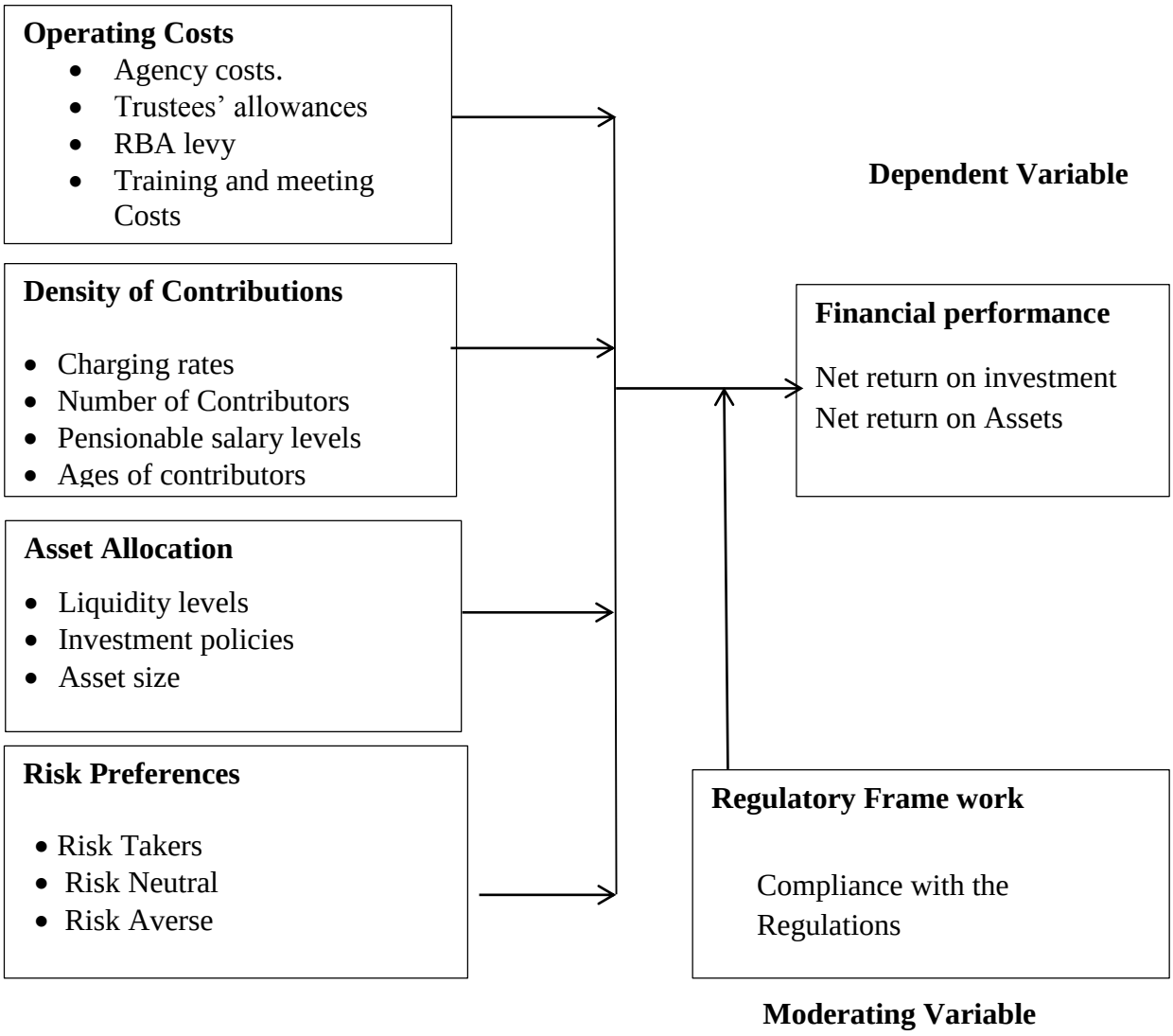

Figure 2.1: Conceptual Framework

2.4 Empirical literature

This section reviewed the empirical and noted the relevant findings on the variables considered to be the drivers of financial returns of the Occupational Pension Schemes.

They include Operating costs, density of contributions, asset allocations, Risk preferences and of course, the Pension Regulatory Framework. Each independent variable is a construct that has been used to describe the financial returns of registered occupational pension schemes. These constructs were defined in Operational terms that were needed to measure them and studies so far carried out have been summarized in each case (Orodho, 2009).

2.4.1Operating Costs

In the management of the Occupational Pension Schemes, Trustees incur operating costs which were divided into Administrative and Investment costs. Administrative costs include Payments to the Funds Administrators, Funds managers and the funds custodians, Trustees allowances**,** RBA levy and Other Overheads (Oluoch,2013). The investment costs were incurred in the investment of funds. Such costs include remuneration to the service providers who include the Funds Administrators, Funds managers and the funds custodians (Nyakundi, 2014).

The trustees' allowances, audit fee, actuarial charges and the levy payable to the RBA form part and parcel of the investment costs. These costs took sizeable amounts that were meant to benefit members and not outsiders. Studies conducted by Mutuku,2014, observed that high costs of administration lead to lower income on investments and a low annual rate of return to members. According to Mutuku (2014), all occupational pension schemes' expenses were paid from the investment returns of the invested members' contributions. For Occupational pension schemes to perform well, stringent measures should be taken to control such operational costs. According to Casey, Oxley,Whitehouse,Antolin,& Duval ,(2003), Pension scheme costs may be fixed, levied for each transaction or a combination of both methods. Improper management of these expenses is one of the major factors that negatively affect financial performance. According to the RBA report in the year 2013, the administrative expenses for the occupational Pension Schemes was Sh.1.861billion as opposed to the investment income

amounting to Sh.14.591billion.The expenses took 12.75% of the investment income .In the year 2014, the RBA report indicated that the administrative expenses went up by Ksh0.74billion to reach at Sh.2.601billion while the investment income rose to Sh.14.936billion. The expenses accounted for 17.41% of the investment income in that year. In the year 2016, the RBA report on administrative expenses was Sh.2.968 billion while the investment income was Sh.15.502billion.The expenses were 19.15% of the total investment returns. The Three reports indicate that the administrative expenses were on the rise.

It is instructive to note that these expenses were increasing at a faster rate than the investment income. The same report of 2013 indicated that Funds managers expenses amounted to Sh.366 Million. At the same time the RBA levy amounted to Sh.223.21 million, administration expenses incurred was Sh.218.73 million while the custodial fees was Sh.187,917 million. The RBA report of 2014 indicated that Funds managers expenses was Sh.381.16 Million while the RBA levy amounted to Sh.247.941million,administration expenses incurred was Sh.290.65 million while the custodial fees was Sh.210.3million.Once again these major expenses accounted for 85% of the total expenses in the Occupation Pension Schemes that year. Again the RBA report of 2015 indicated that Fund managers' expenses reached Sh.397.72Million while the RBA levy amounted to Sh.281.79 million, administration expenses incurred was Sh.311.51 million while the custodial fees was Sh.242.8million.Once again these major expenses accounted for 87.3% of the total expenses in the Occupation Pension Schemes that year. There is therefore a need to review these expenses in order to have more funds were channeled for investment.

In their journal, Gakure &Gakera (2015) used the term good governance to refer to Operational efficiency. Their study on the analysis of the financial returns of registered individual retirement schemes in Kenya, Gakure & Gakera (2015), focused their study on determining their influence of market volatility, Risk control policy, good governance among others on the financial returns of individual pension schemes. They concluded

that good governance had strong influence on the financial returns of individual pension schemes .An improvement both in policy and regulatory frameworks on individual pension schemes in Kenya ,was highly recommended. Njuguna (2011) examined the relationship between the financial returns of Pension Schemes and the agency costs. In particular, the paper investigated "the determinants of Pension Fund efficiency, agency costs were some of the factors". According to Njuguna,2012 , agency costs comprise the costs paid to service providers as well as the Trustees allowance. The study concluded that there is a significant influence of agency cost on Cost efficiency and thus on the financial returns of the Pension Schemes. Thus, in the absence of operational efficiency, money meant to benefit members goes to other unintended beneficiaries.

A study by Ng'etich (2012) investigated the factors that influence the growth of individual Pension Schemes in Kenya. According to this study, Pension Fund governance is measured by the use of board composition, the trustees training as well as the financial expertise brought in by the trustees. One of the findings of this paper about governance is the conflict of the interest on the part of the sponsor who happens to be the Trustees' employer, at the same time is a decision maker as far as deciding the contribution rates of employees is concerned. Such a case waters down the Pension Schemes' independence, thereby curtailing the operational costs of Pension Schemes. The paper recommended that since such a conflict of interest cannot cease completely, it should be reduced to manageable levels. It was noted that a reduction in the conflict of interest enhanced Cost efficiency as well as improving the financial performance of the Pension Schemes.

In addition, the paper recommended that a pension governance policy should be put in place to address any potential agency problems between Trustees and the professional service providers. The finding of the study showed that operational costs exert a significant effect on the financial returns of Pension Schemes. However, the study did not recognize the uniqueness of the Occupational Pension Schemes in terms of funding and management of the funds. In a study titled "Analysis of the Effect of Operating

Costs on Financial Performance of Occupational Pension Schemes in Kenya" by Muriithi(2017) ,indicated that operational costs are divided into administrative costs and investment costs. Such costs, according to the study, are significant since services rendered must be paid for. However, such costs have a potential of draining valuable resources from the intended beneficiaries. According to the study there was a strong inverse association between the operational costs and the financial returns of Pension Schemes. All the Pension Schemes in the Pension industry were covered in this particular study.

In a journal entitled "Employer related determinants of Scheme Design in Occupational Defined Contribution Schemes in Kenya", Tari (2014) used the terms employer-related determinants in the study of determinants of scheme design. The scheme designs are about Operational efficiency which has an implication of the operational costs of the occupational pension schemes. Thus choices made by the Trustees on governance have a direct bearing on Operational costs (Bikker, ,Broeders ,Hollanders & Ponds ,2012).The administration and regulation of pension funds must therefore focus on the cost minimization in order to ensure that Occupational Pension Schemes achieve their initial objective of serving the members upon retirement .This study assumed Njuguna's description of the Operational costs for showing the effects on the financial Returns of the occupational pension schemes. Theoretically, Operational cost is a variable construct because corporations were ordered from occupational pension schemes with high operational costs to occupational pension schemes with low operational costs. Good service provision has been cited as one of the key factors that contributes to the effective development of work- related pension schemes as it leads to improved investment performance and retirement benefits (Stewart, 2011).In a presentation entitled "Supervision of Pensions and Pension schemes,Kenyan Experience",Odundo (2016) indicates that the management of operational costs is a key issue which is always in the Trustees agenda .

The financial performance of the occupational pension schemes is judged based on how such costs are managed as well as how much returns are earned from a particular investment. In a study titled "Pension coverage in Kenya :Legal and Policy Framework required to encourage coverage in Kenya", Nyakundi (2014) indicates that financial performance is influenced by the administrative efficiency, part of it being how pension schemes manage administrative expenses. This implied that ,if both managerial and investment cost were maintained at their optimal levels, the processing of the Pension benefits were done promptly to avoid court litigations, internal control systems were closely and constantly monitored to ensure transparency ,and the autonomy of occupational pension schemes is ensured, would translate to good financial returns. Section 40 of the RBA Act 1997 requires the guarantee from Trustees and the service providers that the pension funds were administered in accordance with the RBA Act 1997. Similarly, the act requires that trustees take rational attentiveness and serve the pension schemes to the best interest of their members and the patrons (sponsors) of the scheme.

Furthermore, the Occupational Pension Schemes' independence has been guaranteed by this section of the Act. If internal operations were not insulated from the external influences by the act, the independence of the occupational pension schemes would certainly be compromised. These were the invisible forces that divert the formal flow of operations which become an impediment in the Operational costs of the occupational pension schemes. In particular, Section 38 of the RBA Act 1997, restricts the use of schemes' funds for personal benefits. It clearly states that no Pension scheme funds shall be used to make direct or indirect loans to any persons. Agency theory is very critical as far as management of operational Costs is concerned. Funds managers, who act on behalf of the members, were expected to provide the Trustees and members with credible and reliable information on the best possible ways of using the pooled funds. On the other hand, trustees can control the out flow of funds with the help of the funds' managers as well as following the statutory regulations.

Theoretically, if occupational pension schemes operational costs were managed efficiently the financial returns of these schemes would certainly become impressive. However, the moderating influence of the Pensions laws on the operations cannot be ignored by the thesis because the decisions made by the trustees have cost implications. In so far as the conceptual framework is concerned, the RBA Act 1997 forms the regulatory framework that moderates the management of operational costs related to the occupational pension schemes .A study of the relationship between operational costs and financial returns and especially under the moderating effect of the regulatory framework needs to be examined. Thus the first specific objective of this study was to establish the effect of the operational costs on the financial returns of Occupational Pension Scheme.

Taking the issues discussed above into consideration, there is a need to take the research to a higher level to cover the Occupational pension schemes. Guided by the Agency theory and the conceptual framework, this thesis endeavored to test the effect of the operational costs on the financial returns with specific regard to the Occupational Pension Schemes. The data was thus collected using secondary source from the RBA reports.as well as through a questionnaire from the sampled Occupational Pension Schemes. This thesis operationalized operational costs into investment costs, Agency costs., Trustees' allowances, RBA levy ,Training and meeting Costs. These were some of the elements used by other researchers in their endeavor to collect data through questionnaires (Nyakundi, 2014; Odundo,2016; Tari,2014).This thesis included more elements in order to get a clearer picture of the relationship between the two variables. The responses from elements of this variable were measured using the likert scale from strongly agreed up to strongly disagreed. The responses were analyzed to see the effect of operational costs on financial returns of occupational pension scheme in a moderated investment environment.

2.4.2 Density of Contributions

Section 33 of the RBA Act 1997 empowers the employers, with the approval of the employees, to pay any statutory deductions in respect of such employees into any pension scheme fund prescribed for that purpose. Various authors have defined density of contributions differently. According to Oluoch (2013), density of contributions is the total amount of contributions by the members and /or sponsoring organizations in a given period or month. However, Kigen (2016) defined density of contribution in terms of the nature of appointments, either temporary or permanent and pensionable. Those workers who join the companies on permanent and pensionable basis automatically become members of the Pension Scheme.

Such appointments were boosters to the Funds of the Occupational Pension Schemes. In addition any promotion or salary increase to a pensionable person is a boost to the funds of the pension scheme. However, if a Pensionable person exits the Company in which he or she was a member of its pension Scheme, either for another engagement or for retirement, the pension schemes loses part of their funds otherwise meant for investment. Tari (2014) on the other hand, defined density of contributions as employer related determinants and operationalizes it into Pension salary, Employers' budgetary constraint, recognition of service period, retirement age as well as the occupation. This thesis merges the three definitions and defines density of contributions as the members' contributions together with the Sponsors top-up less deduction from members' who exit either through retirement or transfers to other companies.

According to the 2016 RBA report, the Members financial contributions were as follows; year 2006 was Sh.1.222 billion, year 2007 Sh.1.326billion, year 2008 Sh.2.063billion, year 2009 Sh.2.352billion,year 2010 2.387billion,year2011 Sh.2.979billion,year 2012 Sh.3.111 billion, year 2013Sh.3.790 billion, year 2014 Sh.4.133billion and in the year 2015 the members financial contributions amounted to Sh.4.780billion.A comparative change from one year to another indicated that there was

8.51% rise from 2006 to 2007.There was an increase of 5.55% in contributions between 2007 and 2008.There was an increase of 14.06% in the members' contributions between 2008 and 2009. There was a marginal increase of 1.49% in contributions between 2009 and 2010.Between 2010 and 2011 there was an increase in the members' contribution of 24.8%. There was a marginal increase of 4.43% in contributions between 2011 and 2012. Between 2012 and 2013 there was a relatively higher increase in the members' contribution of 21.83%. There was a marginal increase of 9.05% in contributions between 2013 and 2014.Lastly, between 2014 and 2015 there was an increase in the members' contribution of 15.65%. The density of contribution improved from the year 2006 up to the year 2014.Taking year 2006 as the baseline, there was a general trend of 109%, 169%, 192%, 195%, 244%, 255%, 310%, 338% and 391% respectively from 2006 to 2015.There is thus a general rise in the amounts contributed by the members in that research period .

This improvement can partly be attributed to the Retirement Regulatory Authority (RBA, 2015) requirement which states that individuals cannot access their benefits until they attain 60 years of age, which is the compulsory retirement age in Kenya. As for the Occupational Pension Schemes' Members were not allowed by the Act to withdraw their retirement benefits from their pension funds even if they change their jobs or before they reach the retirement age, except in special circumstances such as ill health or those who suffer permanent disability RBA Act 1997, as cited by (Nyakundi ,2014). According to Claus, Lungu, & Bhattacharjee (2011) on the study entitled "The effects of individual, organizational and societal variables on the job performance of expatriate managers", the average ages of contributors play a very significant role in determining its performance of a pension schemes. Thus where majority of the contributors are young ,they are able to contribute more financial resources for investment activities. Ideally, such contributions enable occupational pension schemes earn more income at retirement time. Older contributors have less time to do so before attaining retirement

age. Consequently, the fund would spend more funds to service retirement packages for the older contributors .There will therefore be less funds available for investments.

Oluoch,2013 in the study entitled "The determinants of performance of pension funds in Kenya", studied the effects of Fund values, Asset values, age of the contributors on performance of pension funds . The study revealed a strong positive correlation between contributions and other independent variables. Thus density of contributions was key determinant of financial returns as far as Pension funds were concerned. The research recommended that the accumulated funds should be utilized in generating funds for the members of the Pension Schemes.

Kigen (2015) analyzed "The effect of fund size on the financial returns of pension funds in Kenya". The study found a very strong relationship between Pension contribution and their financial performance. The study thus recommended the need to develop new contribution models that would enhance more collection of funds for investment. Ngetich (2012) addressed the issue of density of contribution as one of the independent variables affecting financial returns of pension schemes. A presentation from Ogonda (2016), observed that "schemes with a low density of contributions were likely to have a relatively low accumulated asset portfolios when their members attain their retirement ages which translated to low retirement benefits to their retirees". It has been noted that sources of capital for investment vary in accordance with the age and size of the company (Ngugi, & Njuguna, 2018).This could also apply to Occupational Pension Schemes where those schemes whose members have contributed a lot for a long time ,have given their schemes the capacity to invest where young schemes cannot venture (Njuguna ,2011).In all the three researches done, it is evidently clear that the density of contribution is an important concept as far as pension schemes were concerned. This thesis used the density of contributions to test whether it is equally important as regards the Occupational Pension Schemes. Guided by Post-Modern portfolio theory, which encourages huge volumes of funds to be collected and invested prudently, it can be

concluded that financial performance is a function of volumes of financial contributions from members and the sponsoring institutions.

This thesis Operationalized its elements to include the percentages at which members were charged from their salaries, how much the sponsors top up their members' contributions, Pensionable salaries of the members and retirement ages of the members. The trust deed and rules, which were the constitutions governing the operations of occupational pension schemes, indicate the ceiling of the rate applied in charging members contributions. The rules also indicate the ceiling of how much the sponsoring institution will be topping up the members contributions. Institutions with a policy of charging the maximum approved rate of 10% on basic salary per month would have their pension schemes collecting more funds than those which charge less or even minimum rates. Moreover, pension funds with larger and youthful membership and/or members with high pensionable payments were likely to have a high financial contribution density as compared to those without.

Such schemes can achieve numerous benefits brought about by economies of scale in the investment of funds (Bikker *et al*., 2012)**.** In addition, those funds whose companies do not experience a high turnover and instead, were having more workers joining them than those who were exiting, their Pension Schemes were likely to receive more contributions than those with a reverse scenario(Chirchir,2007). Theoretically and from the background of this study, there appears to be a positive relationship between the financial returns of the Occupational Pension Schemes and members' contributions density. Moreover, the conceptual framework demonstrates that the density of contributions is one of the vital determinants of the financial returns of Occupational pension Schemes.

However, no empirical study has been conducted on the association Density of contributions and the financial returns in respect to Occupational Pension Schemes. This thesis therefore undertakes to carry out a research related to the Members' contribution

density and financial returns specifically in regards to Occupational Pension Schemes. Thus the second specific objective of this study was to assess the effects of the density of contributions on the financial returns of the Occupational Pension Schemes. This thesis operationalized Density of contribution into charging rates, Top-up rates by the sponsoring institutions, Pensionable salaries and retirement ages. These were some of the elements used by other researchers in their endeavor to collect data through questionnaires (Chirchir,2007; Njuguna ,2011; Ogonda 2016). The responses in the questionnaires were measured using the likert scale from strongly agreed up to strongly disagreed, analyzed to see the effect of density of contributions on financial returns of occupational pension scheme in a moderated investment environment.

2.4.3 Asset Allocation

Asset allocation is an investment strategy where assets were divided into diverse classes such as equities, fixed-income, cash-equivalent as well as real estate among others (Njeru, Dominic & Fredrick, 2015). It also refers to the asset mix chosen by investors while building up an investment portfolio (Oluoch,2013). According to Ng'etich,2012, it is an assortment of investments of total funds with the aim of having an optimum balance between investment risks and returns. It is a plan of action that guides an investor in the choice of the investment mix that would possibly guarantee maximum return at minimal level of investment risk (Njuguna, 2012). According to Nyakundi (2014), the Investment strategies guide the Funds' managers on the areas and maximum percentages of funds allocated for investments in any given investment category of Occupational Pension Schemes The post modern Portfolio theory indicates that if higher investment returns were expected, investments should be diversified as much as possible. In line with this theory, the principle policy of investment is that funds were allocated to the most profitable investment opportunities, at the lowest possible cost. The financial reports obtained from the RBA indicated that investments opportunities available for Occupational Pension Schemes include immovable properties, Government securities, Quoted Equity, Unquoted Equity, Commercial and Corporate bonds, fixed

and time deposits, Cash and Demand Deposits, offshore investments and even guaranteed funds among others. Schemes were, by law, required to diversify their investments thereby effectively managing investment risks (RBA, 2014). Thus many studies conducted in Kenya focused on pension schemes compliance with RBA investment regulations and the financial Returns.

Section 37 of the RBA Act 1997 requires all Pension schemes to have prudent Investment strategies .According to the RBA reports investment returns brought about by using various Asset allocations were as follows; year 2006 Sh.7.795billion, year 2007 Sh.6.417billion, year 2008 returns amounted to Sh.2.054billion, year 2009 Sh.3.814billion, year 2010 6.022billion, year2011 Sh.7.644billion,year 2012 Sh.8.044 billion, year 2013Sh.7.931 billion, year 2014 Sh.11.573billion and in the year 2015 the investment returns amounted to Sh.12.531billion.The percentage returns in comparison to the assets invested were as follows; 2006 was 3.348% while the industry performance was 9.711%. The year 2007 the annual investment return was 2.456% in comparison to the Pension Industry of 9.023%. In the year 2008, the occupational Pension Schemes performed dismally with an annual return of 0.092% while the Pension industry performance was 4.833% which was equally low but still way above the annual performance of the Occupational Pension Schemes

The year 2009 the annual investment return was slightly improved but was still low standing at 0.128% in comparison to the Pension Industry of 4.942% which was still equally low but still way above the annual performance of the Occupational Pension Schemes. In 2010 there was an improvement in investment returns which stood at 1.468% while the industry performance was 6.595%. The year 2011 the annual investment return was 2.34% in comparison to the Pension Industry' returns of 7.748% . The annual investment returns for the year 2013 dropped to 1.876% as compared to the Pension Industry with a return of 6.163% . However, in 2014 there was a slight improvement of 0.652% to stand at 2.528% while the industry improved by 2.738% to stand at 8.901%. In 2015 there was a drop in investment returns which stood at 2.387%

while the industry performance improved by 0.783% to stand at 9.684%. The returns from the investments by the pension schemes were erratic and far below the Pension industry performance. Empirical study by Njuguna (2011) sought to determine the strategies that would improve pension fund efficiency. It related investment strategy to the efficiency in terms of financial returns.

Guided by the Post-Modern portfolio Theory, the study argued that risky assets such as equity normally generate higher returns as compared to less risky ones such as bonds. Such a positive relationship between risks and returns create a dilemma in the choice of investment opportunities. Thus an optimal choice of investment mix is deemed necessary for pension schemes. The paper suggests four pillars appropriate for investment strategies, namely; ensuring that pension funds were channeled to investments which benefit members, diversification of investments (Pension funds should not be concentrated on a specific investment area), matching maturities (investments should mature at a point when liabilities become due) and existence of a clear investment policy that should be strictly followed unless there were weighty reasons for non-compliance. According to Njeru (2014), majority of Pension Funds in Kenya invest in the Nairobi Securities Exchange. However, there were some pension funds that also invest in property, offshore, quoted and unquoted securities. The study established that equities performed well especially in large funds while the offshore investments were poorest in performance in the category of medium pension funds. The study strongly recommended that both the trustees and members be trained on financial management skills.

The study indicates that a good investment strategy would results into higher returns even when the risks were high. Thus, the study shows that pension Schemes that invest more in equity perform better than those that invest more in bonds and other fixed securities .According to the study a research gap existed because there was no empirical evidence to relate the two variables especially as far as Occupational Pension Schemes were concerned and thus the need for the study to investigate the appropriate investment

strategies that would maximize operational efficiency. The study thus, hypothesized that an asset allocation exerts a positive influence on pension funds' performance. For purposes of setting a questionnaire, the researcher operationalized investment strategy in to investment regulations, liability insurance for trustees, investment policy and the discretion of Funds managers when making investment choices. The study used self-constructed measurement instruments based on secondary literature. It analyzed the data using Data envelopment analysis (DEA).

The empirical results indicated that contribution density had a significant statistical influence on the Cost efficiency of pension fund. However, no comparable study could be used to show the relationship between asset allocations and financial returns of the occupational pension schemes in Kenya. Gitundu (2014) conducted a study on "The assessment of asset selection and performance evaluation of pension funds in Kenya". The study found that asset allocations differ in various pension schemes. This indicated that the criteria used to develop optimum asset mix were different from one manager of funds to another. Funds managers tended to outdo others in terms of choosing asset mix and in their responses to changes in asset fortunes. Ng'etich (2012) in the study of "The determinants of the growth of individual Pension Schemes in Kenya", assessed whether investment strategies contribute to the growth of individual Pension Schemes. The study found that a sound investment strategy leads to an operational efficiency. In order that the latter is achieved, an investment strategy must be designed in such a manner that a mix of short and long term investment portfolio is available.

The short term investment returns are meant to cater for the maturing benefits and other operational costs while the long term investments strategy are meant to cater for the Pension schemes sustainability. Trustees prepare investment strategies for their respective pension schemes in consultation with the Funds' managers. In the study of "The employer-related determinants of scheme design", Tari,(2014),observed that most Pension schemes invested more in treasury bills and bonds. Their study also indicated that the key employer-related determinant of the scheme design was investment strategy.

The study however, did not indicate how scheme design, Asset allocations and the financial Returns were related. Kiplagat, 2014, studied "the impact of asset allocation on the fiscal performance of Pension funds in Kenya". The study observed that a research study of that nature had not been carried out in Kenya. Specifically, the study examined whether financial assets allocations as selected by the Fund managers had any significant statistical effect on either increasing or reducing the overall fiscal operation of the pension funds.

The report found that 58.3% of the variability in financial operation was attributed to the asset allocation as selected by the managers of the investment company. The study indicated a strong linear correlation between fund performance and the portfolio weights in government bonds, properties and quoted shares. Thus the study recommended more investment in Government securities, property, cash deposits and quoted shares as recommended by the RBA Act 1997, since these asset classes had a substantial impact on their financial Returns.

Once completed and agreed upon, the RBA Act 1997 requires that the document be submitted to the Authority for confirmation. The document is to be used as a source of references in case of any dispute arising from matters related to the Occupational Pension Scheme. The document should, however, not contradict the constitution of Kenya. In the Legal notice No. 61 of 2006, the Trustees of the Occupational Pension schemes were required to "submit their proposed Investment strategies to the RBA for approval every three years".

Ideally, an optimal asset allocation for Occupational pension Schemes, should be based on the principles of life cycle savings, Risk control, the characteristics of the schemes and their objectives, but within the framework of the law. This is done by hiring independent experts or consultants who were capable of conducting analytical studies on the strategic asset allocation for Occupational pension schemes .Such experts and consultants would do due diligence in the market performance and benchmark financial

returns with other Pension schemes in line with sponsors pension policies, the attributes of members as well as the legal requirements on investments by the Pension Schemes. According to Campbell *et.al.*(2012), "the benchmarks would be expected to be set for long periods but may need to be reviewed if major changes in investment markets occur". However, the main obstacle is to ensure that any asset allocation drafted is devoid of political interference (Chirchir ,2007).

The range of investment opportunities available to Kenyan pension schemes is very limited resulting to over-concentration of portfolios in two assets, namely equities and government securities (RBA, 2014). This has exposed Occupational Pension schemes to larger variations in terms of public presentation in line with market volatility. According to (Forbes, 2013), 51% of all Occupational Pension Schemes invest their funds in secured securities (i.e. Invested with insurers on a pooled basis) whilst the rest of the Occupational Pension Schemes invest their finances on a segregated basis. According to the RBA (2014), Investment breakdown for any Occupational Pension Schemes was that 31% was in Government securities,24% on quoted Equities,17% was on immovable properties while 14% was on Fixed and Time deposits. Such investment allocation is considered conservative and hence less risky.

From the above analysis, it is clear that the study of Investment choices is a core area of interest since it not only affects the operational efficiencies but affected the financial performance of Occupational pension schemes. There appeared to be a positive association exists between the asset allocations adopted by the trustees of schemes and the financial returns arising from the investments of such pension schemes. Unfortunately, the empirical study reveal that only a few studies have been conducted on the effects of Investment choices adopted by the Trustees on financial returns especially with respect to the Occupational Pension Schemes (Chirchir,2007; Nyakundi,2014). Thus the third specific objective of the thesis was to examine the nature of the relationship between Asset allocation and the financial returns of Occupational Pension Scheme. This thesis operationalized asset allocation into liquidity levels, investment

policies and the asset sizes. These were some of the elements used by other researchers in their endeavor to collect data through questionnaires (Chirchir,2007; Nyakundi,2014; Kiplagat, 2014; Ng'etich,2012; Tari,2014). The responses in the questionnaires were measured using the likert scale from strongly agreed up to strongly disagreed, analyzed to see the effect of Asset allocations acceptable to the Trustees on the financial returns of Occupational Pension Schemes so as to fill in the informational and investment gaps.

2.4.4 Risk Preferences

Putting members fund into investment for a long period of time exposes such funds into uncertainties. These uncertainties that surround an investment are termed as "risks".In the book by Orina,2011,titled "*Advanced Financial Management"* it is indicated that the greater the uncertainty or the longer the period, the greater is the risk. Just like any other institutions, occupational pension schemes have risks associated with them. Such risks were referred to as systemic risks. The commonest risks encountered by the occupational pens schemes include the longevity, Funding and investment risks (OECD,2011). However, Trustees of defined benefit pension funds have shifted their attention to the funding risk as well as the investment strategies employed by pension funds (Ngugi & Njuguna,2018). Due to the fact that some sponsoring companies are highly unpredictable in remitting members' contributions, trustees have to design a way of dealing with such delays. Securities makes are also unpredictable because they are affected by many internal and external factors (Beste, Leventhal,& Williams,2002). Risk preferences are commonly dependent on the managers attitudes toward risks (Oluoch,2013).The attitude towards risks include high risk takers, risk averse ,conservative risk takers (Pandey).

Some of the practices applied in on order to mitigate the effects of risks include diversification of investments, investment in Government Bonds and Securities, compliance with the Act in so far as investment limits were concerned, adopting a Defined Contributory rather than a Defined Benefit plan among others(Nyambere,2013).

Reports from the OECD insist on the urgent need to address the Risk preferences in the financial industry, Occupational Pension Schemes being amongst them (OECD 2011). Risks can be product specific, organization specific, country or even global related. In all the cases, investors have different attitudes associated with a particular area of investment(Omino,2014). However, majority expect an extra reward for taking on a risky investment (Steve & Lumby,2011). This is in line with the Post-Modern Portfolio Theory which stipulates that "the higher the returns the higher the risks" associated with such investments.

Njuguna (2011) sees the influence of Risk factor as of great concern especially in the bearish financial times. The study recognized three dimensions of Pension funds risks; namely default risks from the employers, market price volatility, Operational risks and liquidity risks. The Post-Modern portfolio theory indicates that the prices of financial asset move together either in a certain way or in the opposite way. These prices of assets were either positively or negatively correlated. For better financial Returns, the theory recommended investment in a number of financial categories that have negative relationship (co-variance) between the securities. Ideally, the choice of investments should be on the basis of how they interact with one another rather than how they perform in isolation (Orina, 2011).The Post-Modern Portfolio Theory asserts that Asset prices react differently in relation to the market performance. Such a reaction is called the sensitivity of asset prices. According to this theory, there is a linear relationship between returns and the risks associated with those returns. Thus a higher demand for returns requires taking higher risks (Omino,2014). Occupational Pension scheme managers will react differently in such cases depending on their attitude towards risks, thus affecting the financial performances of those schemes.

The funds that are collected from their members by the Pension schemes are pooled together and then invested in the income generating activities such as trading in stock exchange, government securities, real estates and even in the off-shore investments. The prices of stocks and bonds rise and fall over time depending on the behavior of the

interest rates, economic expectations among other factors (Mudida *et. al*. , 2010). The opportunity for any business to earn an income depends mainly on managers attitude toward risks. Risk takers who recognize and prudently use their risks well, are more likely to enhance the chances of their financial success unlike those who are neutral or conservative toward risks (Ngugi & Njuguna,2018). Since the financial returns of Occupational pension schemes would be compared to the Pension industry benchmark, the RBA would require to have a system in operation that would allow all stake holders to measure the risks of the pension schemes objectively and comprehensively at their convenience (Tari, 2014). A valuable decision must bring forth an accurate information and proper analysis of risks associated with the choice made (Hatchett,2010).

Research studies have indicated that investment securities offered by the Government are fully adequate for pension schemes investment funds. The risk neutral and conservative funds managers would find these areas to be safer for investments of funds. However, managers of pension schemes should be aware that although financial instruments, like the Treasury bills, are a risk-free financial assets for short-term investments, they are actually not risk-free assets in the long run. Both reinvestment risks as well as the inflation risk are associated with such types of long-term investments (Njuguna, 2011).

The influence of reinvestment risks are mitigated by investing in long term Government bonds. However, such investments do not promise an insulation of the real value of Pension funds. The inflation risk is a key challenge both to the value of the financial assets and the financial returns of the invested Pension Fund. According to Kiplagat (2014), "a normal yield curve indicates that the long term government bonds were often sold at higher yields than short term bonds". According to Campbell *et. al*.(2012) "this is because long-term inflation indexed bonds are the only true riskless assets for long-term investors." Thus Kiplagat suggests that, for long term investments, long term bonds are suitable for retirement funds. Their study on "The analysis of the financial returns of registered individual retirement schemes in Kenya", (Gakure & Gakera, 2015), argued

that Risk is one of the elements that is critical factor in the management of the financial assets of the Pension Schemes.

The study found that the inclination of funds managers towards risk had an enormous effect on the financial returns of the occupational Pension Schemes. Furthermore, they argued that some of the precautions taken by the individual pension schemes to deal with risks included investing in government bonds, allowing insurance companies to invest on their behalf and thus procuring guaranteed returns, fixed deposits with banks among others. Some of the reasons given for such choices were the search for higher returns, tax savings, and compliance with the RBA regulations to diversify their investments and, of course, to manage risks. The study further found that these schemes were not operating at optimum levels and thus recommended that a lot more needs to be done in terms of policy formulation so as to attain financial sustainability. There is therefore a need to examine the risky situations and in particular the managers risk aversion with respect to Occupational Pension Schemes.

Another risk associated with the sponsoring companies' is their inability to remit funds to the schemes as required of them by the RBA Act 1997, without delay or default. This particular type of risk is relatively common because all Occupational pension schemes heavily rely on contributions from members and the sponsoring companies for investment. At present time, it has been reported that some sponsoring companies were either ailing financially or were undergoing serious financial crises and stresses due to various reasons. This has affected the financial operations of Occupational Pension Schemes sponsored by those companies. The financial capacity of Occupational Pension schemes to deal with such situations is a critical factor worth consideration. More importantly, were the risks which arise from investment in various sectors and different types of financial assets (Orina, 2011).The risk aversion of the funds' managers play a crucial role in dealing with such type of risks. The attitude of the fund managers toward managing risks is therefore an important factor of not only controlling or eliminating risk, but mainly about making informed decisions about the available trade-off between

Portfolio returns-risk especially where multiple investment decisions were made. According to Rono, Bitok & Asamoah (2010), 71.8% of Pension Schemes invested the funds in government securities and quoted equity. This is an indication that these pension schemes were risk averse in terms of investment choices they make. The global market meltdown of 2008 had significantly reduced the value of equities and off-shore investments (Rono *et. al.* 2010). Such a fall in values of assets impaired the solvency of the Pension funds. Thus the meltdown forced the Pension schemes to realign their investment allocations to more conservative investments. A change in asset allocation could partly explain why the pension schemes were underperforming.

According to Hatchett (2012), since the uncertainty is unpredictable, managers and investors needed to continuously review the cash flows of the portfolio investments they deal with. More importantly, how cash flows were affected by the Pension fund risk factors (Pandey 2015).Graphically, one can indicate the relationship between the level of return in a portfolio against the various Risk preferences of the fund managers This is according to the post-modern portfolio theory of investment. There was an explicit relationship between the risk preferences in a particular scheme and the returns arising from such an Occupational Pension scheme. Both the theoretical framework and the background study in this thesis indicated that there existed a strong relationship between fund managers attitudes toward risks and the financial returns arising from the investments of such schemes. Unfortunately, few studies have been carried out on the effects of Risks on financial returns in the Pension industry (Mutuku, 2014; Tari, 2014).

No study on the effects of Risk preferences on the financial returns Occupational Pension Schemes has been conducted in Kenya. The fourth specific objective of this thesis was aiming at assessing the effect of risk preferences on the financial returns of Occupational Pension Schemes in Kenya. This thesis operationalized risk preferences into risk takers, risk neutral, risk averse of trustees and funds' managers. These were some of the elements used by other researchers in their endeavor to collect data through questionnaires (Mutuku, 2014; Nyakundi,2014; Rono *et. al.* 2010; Orina, 2011; Gakure

& Gakera,2015). The responses in the questionnaires were measured using the likert scale from strongly agreed up to strongly disagreed, analyzed and see the effect of Risk preferences of the Trustees on the financial returns of Occupational Pension Schemes in order to fill in the informational and literature gaps in the pension industry.

2.4.5 Pension Regulatory Framework

The Retirement Benefit Authority (RBA) is the regulatory body under the Ministry of Finance, established by an Act of Parliament, that is, the Retirement Benefits Act. The Authority became fully Operational in October 2000 when the Act came into effect and the Retirement Benefits Regulations were gazetted by the then Minister in charge of Finance .The Kenya government mandated the Authority to regulate the specific activities in the Pension industry such as funds governance, Risk control, contributions lock-ups and funds management. Chirchir (2007) argued that Governments put in place Pension Acts to regulate the pension industry. The major objective of Government doing so, was to provide consumer protection against misuse of Pension schemes' financial resources. In addition, government stipulates in the Act, the appropriate action to be taken in the event of market underperformance (or failures) owing to market dynamics, among other factors.

More importantly, is the role that the regulatory Authority plays in promoting the development of the pension industry in the field of investment. According to Njuguna 2011, Pension funds regulation involves the ensuring appropriate use of pension funds. The Government, through RBA, enforces the strict adherence to the regulations relating to the creation, management structures, operation and even termination of pension Schemes. The cardinal objective of the regulation is to promote the pension members' confidence as well as facilitating retirees with the retirement packages as and when such benefits fall due. From this definition, it can be observed that, Pension Funds laws prescribe the registration, administration and operational of pensions' Funds. These laws, therefore, ensure compliance with the prescribed regulations on Pension activities.

However, the supervision of Pension Funds should not be integrated with other financial institutions such as banks and insurance companies because their operational and mandates were significantly different (Njuguna,2011).Basically, the regulations of pension Schemes involve licensing, investing, governance and disclosing information to the members and the public at large. Licensing, according to the RBA,(2015), involves restricting and controlling pension funds entry in the industry. Regulations could also be interpreted to mean monitoring, communicating, analyzing performance, intervening and taking corrective measures which may be punitive or compensatory.

"Monitoring" involves tracking performance and taking appropriate actions against those found culpable. "Analyzing" refers to evaluating financial returns of pension funds against benchmarks in the Pension Industry .Thus, Trustees and Fund managers, who hold in trust huge amounts of money, should not be left entirely on their own to invest the funds without being monitored (Forbes, 2013). This is because pension funds were a public good that justifies a more elaborate framework of regulation and supervision. "Interventions" include imposing sanctions on pension schemes that were not complying with the Pension regulations. Moreover, maintenance of trust and financial stability in the pensions' industry is of paramount importance that makes the investors (members) in the industry have sustainable confidence. The investment regulations according to the RBA became effective in 2001.They classify investment assets into two, namely, fixed deposits and time(Current) deposits in institutions such as Banks and non-banking institutions (Gakure *et.al.*,2015).

Retirement Benefits Act allows Pension Schemes to invest their funds in corporate bonds, government securities, preference and ordinary shares of quoted companies in East Africa, immovable properties and units in property, Unit Trust Schemes incorporated in Kenya, guaranteed funds, offshore investments in bank deposits, and investment in any other approved investments (RBA, 2015) . In addition, the Retirement Benefits Act, mandates the authority to promote the development of the retirement benefits industry and to advise the Government of Kenya on policy relating to retirement

benefits (Mugambi,2014). These investment options stipulate the maximum limit in terms of percentages that provident pension funds should invest in each of the specified assets class. The regulative authority is meant to create a facilitative legal framework to enable product diversification and improve returns on savings. By virtue of being a regulator, the RBA's regulatory function becomes a moderating variable as far as this thesis is concerned. The regulatory role played by the RBA is crucial to this thesis as it was necessary to assess its moderating effects on the financial performance of Occupational Pension Schemes as they discharge their investment duty.

Miriti (2014), studied the relationship between Retirement benefits Authority guidelines and financial returns of Pension Schemes in Kenya. The paper observed that fixing quantitative restriction is a global phenomenon. Countries, all over the world, have set up regulatory bodies to offer guidelines on the management of Pension Funds as well as controlling their financial activities. Some regulatory Authorities offer excessive controls while others such as USA, "apply the prudent man rule" where Pension Funds have no set regulations on the investments (Miriti,2014). The study found that there was a positive relationship between investment guidelines by RBA and the financial performance. The study recommended publication of the industry results in order to empower the public with information to make informed decisions. It also recommended the strengthening of the compliance department that would ensure that retirement benefits schemes adhere to the investment guidelines. However, this paper did not address the moderating effect of the RBA which is a regulatory Authority. In addition, the paper did not capture the fact that each class in the Pension industry is regulated differently and thus the investment guidelines do not apply uniformly.

In order to improve the standard of living Tari, (2014), studied the determinants of scheme design with special reference to the Occupational Pension Schemes. The study analyzed three classes of determinants of Pension Schemes designs which included employer-related, employee-related and regulatory-related determinants respectively. The paper noted that majority of Occupational Pension Schemes had changed the design

from the Defined Benefits Design to Defined Contribution design in order to enhance efficiency and financial Returns. The findings of the paper were that, as far as regulatory–related determinants were concerned, incentive for participation, tax rules as well as public pillar as well as the gender should be factored in the design. The study, however, did not show how the other independent variables affect the financial Returns.

In their journal on "the impact of Retirement Benefit Act (RBA) on investment returns to Pension Funds in Kenya", Rono *et. al.(* 2010), found that there was growth in the financial returns of pension schemes after the RBA Act 1997 in 2010 was enacted as compared to their performance before enactment of the Pensions law.

By following the guidelines, the study found that members got higher dividends as well as high interest on the investments. In their conceptual framework, the journal indicated the managerial roles as the one that were the intervening variables. The journal noted that the Pension schemes do comply with the RBA regulations as far asset allocations were concerned. However, these Pension funds were unable to comply with the actuarial solvency requirement of 80% and above. Such non-conformity, in the long run, has rendered them unable to perform well financially. The journal noted that the investment portfolio of pension fund wass highly diversified but too restrictive with a high concentration of funds in government securities as well as quoted equities. Although the restriction is healthy in locking-out the risk of the portfolio losses, it delineates pension schemes from so many investment opportunities that have high returns (Rono *et. al.* 2010). The journal recommended that RBA should shift its mode of operation from a proactive supervision of schemes to a more risk based supervision approach. Such a move would help the RBA concentrate on those key areas where there were high chances of occurrence of risks such as funds loss, members' funds protection, as well as inefficiencies among others .The journal further suggests that instead of pension funds keeping on changing asset mix to reduce the risk of losing asset value, an insurance of the pension funds would be a better alternative.

The RBA Act 1997 and the Pensions Act have substantial influence to virtually all independent variables highlighted above. Since one of the objectives of the Pensions Act is to facilitate the growth of the pension industry through membership and investments, there is urgent need to relook at those clauses in the Act and realign them in accordance with the pension expectations as well as emerging investment opportunities, which in any case, provide better returns. The moderating characteristics of the Pension regulatory framework is noted since stringent pension fund regulations discourage flexibility whenever unexpected opportunities present themselves .At the same time, the regulations discourage taking the risks even if the financial returns promise to be high (Miriti 2014) .

From the above empirical studies, it can be concluded that the regulation of the Pension industry is, to a large extent, intended to ensure that there was efficient use of the funds as well as prudent and consistent investments of the pooled funds. Pension regulation has a great impact on the operational efficiencies of the Pension Schemes since it imposes limits on the numbers of statutory meetings, the investment and administrative charges by the service providers (Njuguna, 2011). Thus the operational costs of pension funds were anchored on the existence of the RBA regulatory laws. In the absence of regulation ,Pension funds' managers and Trustees would be at a loss on how to manage operational costs which would heavily compromise on their accountability(Tari, 2014) . Njuguna (2011),therefore advices that pension schemes should strictly adhere to the regulatory framework of the law to ensure there is accountability, a sense of direction in the management of funds among other factors .The influence of this moderating variable on the above-mentioned matrix of variables with regard to Occupational Pension schemes has scantly been addressed. This thesis strongly argues that the Regulatory Framework on Occupational Pension Schemes has a moderating effect on the suggested independent variables that affect the financial returns. Both the theoretical framework and the background study in this thesis showed that there exists an association between Regulatory framework and the financial returns of occupational pension schemes.

Regrettably, studies on the moderating influence of the Pensions Act on financial returns in the Pension industry as scanty (Miriti,2014; Njuguna,2011; Tari, 2014). In fact no study on the moderating influence of the RBA Act on financial returns Occupational Pension Schemes in Kenya has been carried out. Thus the fifth specific objective of this study was meant to determine the moderating effect of the regulatory framework on the financial returns of Occupational Pension Scheme. It has operationalized this moderating variable into regulation of operational fees charged by the service providers, density of contributions from the contributors, asset allocation, as well as the risk preferences of the trustees. It is hoped that the Policy makers and other players in the Pension industry would pay particular attention to the moderating role of the Pension Regulatory Framework and act to improve the financial performance of the Occupational pension schemes.

2.4.6 Financial Returns

The terms "financial returns" and "financial performance" have been used interchangeably to mean the results of a financial investment .Odundo (2013) defined financial performance as a measure of change of the financial state of an organization, or the financial outcomes that results from management decisions and the execution of those decisions by members of the organization. . According to Wamiori ,Namusonge &Sakwa 2016, the term is also used as a general measure of a firm's overall financial health over a given time frame, and can be useful in comparison to related firms across the same domain or to compare business or sectors in aggregation. Financial returns is an independent measure of how prudently a corporation can use assets from its main mode of business and make proceeds (Wamoiri *et.al.*2016). Generally, the Occupational Pension Schemes investments were backed by assets. Trustees and Funds' Managers were judged according to how efficiently (or otherwise) they utilize the assets at their disposal. A Pension scheme's financial returns were assessed either against the average performance in the Pension industry or the general performance in the market (Mutuku, 2014).Thus a pension scheme can be said to be under-performing, performing at par, or

out-performing the average performance in the Pension industry or the general performance in the market.

Financial performance is a bit broader term as compared to financial returns which is more specific and focuses on the actual output of financial investments. This thesis endeavored to examine the financial returns specifically of registered Occupational Pension Schemes which were required to invest their funds mainly in the long term assets since, ordinarily, retirements were rare occurrences. There is therefore, a long period of time for investment of Pension funds which were continually being received from members and investment returns. This time-frame difference is critically important when deciding the choice of the techniques that measure the financial returns of the Pension Schemes. It is purely a managerial arrangement that strategizes on the optimal investment of pooled fund. Rocha *et. al.* 2011 observes that the development of performance measurement framework specific to the pension funds industry is a relatively new topic in the academic literature. Occupational Pension Schemes were required by the Pensions Act to measure their financial returns against the financial returns of optimal long-term Bonds. This is essential for optimizing the value of the benefits received at the retirement of their members. The most common techniques used to gauge the Portfolios performance were closely related to those used in other types of investment opportunities (Hlavac, 2011),Many empirical research works carried out in evaluating pension funds' performance mostly apply the rate of return as a measuring instrument (Rocha *et. al.* 2011; Hlavac, 2011). The accumulated funds from one year to another were what would be measured as financial returns (Njuguna ,2011).Oluoch,2013 observed that the difference between Pension fund assets and other forms of collective investment ,is that pension fund provide income replacement upon retirement of members while the form of collective investment is concerned with the short term objective of wealth maximization. Thus, there is a difference in terms of time frame and attitude towards the risk. Despite those differences, the performance measures were the same (Oluoch,2013).

This thesis adopts accumulated funds as one of the measuring tool of the financial returns of Occupational Pension Schemes .According to Wamiori ,*et. al.(*,2016), the essential idea behind performance evaluation is to compare the returns obtained by the investment manager through active management with the returns that could have been obtained for the client if one or more appropriate alternative portfolios had been chosen for investment. According to Gakure *et.al.*(2015), for an organization to be able to measure its financial returns properly, there is need to identify the various performance measures that should be used. One of the measures of performance is the return on investments. It is used to determine the effectiveness of the trustees related determinants such as Operational efficiency, the density of contributions, investment strategies, Risk preferences and the Pension Regulatory Framework that govern the entire Pension Industry. In addition, individuals will select pension Schemes that optimize their own risk-reward preferences.

Rocha *et. al.* (2011) suggested that productivity which is measured using the inputs and outputs arising from a period of years can also be considered as an alternative technique of measuring returns from investment. Pension funds receive inputs (financial resources in the form of contributions and investment funds) and convert these inputs to outputs (pension fund value and retirement benefits) .For Chansarn (2014), a pension fund would be regarded as performing efficiently if it optimizes financial outputs by the efficient use of the financial resources (inputs).Financial efficiency is therefore conceptualized as the ability to balance between costs and benefits of operation (Cinca,2012). Other measures of financial Returns suggested for long term investments include Trend analysis which examines the performance of a particular occupation Pension scheme for a period of years, such as ten years (Orina,2011; Pandey,2015). Industry analysis assesses the functioning of the scheme against the general operation. Comparative Financial statement analysis standardizes the financial statements and then analyses the operation of the pension schemes either by taking one point as the base point or by comparing the standardized financial Returns of other Occupational Pension

Schemes. The trend and the industry analysis were very popular and have been advocated as suitable measures of performance where Funds managers' performances were assessed according to how others were performing in the industry.

From the above mentioned, it is clear that financial returns is a popular area of interest to many researchers. However, few studies on financial returns have been carried out especially regarding the Occupational Pension Schemes (Nyakundi, 2014). The objective of the study was to examine variables that affect the financial Returns of Occupational Pension Schemes in Kenya. This thesis operationalized this dependent variable into return on investment and Return on Financial Assets. These were some of the elements popularly used by other researchers in their endeavor to collect data through questionnaires (Nyakundi,2014; Njuguna ,2011; Wamiori ,*et. al.*,2016); Gakure & Gakera,2015). The responses in the questionnaires were measured using the likert scale from strongly agreed up to strongly disagreed, analyzed to assess the effect of independent variables which were commonly cited by the Trustees. Upon assessing the effects of these variables on the financial returns of Occupational Pension Schemes, conclusions were made and possible ways of filling in the informational and investment gaps were suggested. It is hoped that the Policy makers and other stakeholders associated with Pension industry would address the determining variables of financial returns of the Occupational pension schemes.

2.5 Empirical Literature Review

The first specific objective of the study was to establish the effect of the Operational Costs on the financial returns of Occupational Pension Schemes in Kenya. Studies examined gave various findings. Gakure &Gakera (2015) in their journal ,used the term good governance to refer to Operational efficiency. Their study on the analysis of the financial returns of registered individual retirement schemes in Kenya, Gakure & Gakera (2015), focused their study on determining their influence of market volatility, Risk control policy, good governance among others on the financial returns of individual

pension schemes. Their research adopted a descriptive survey .A population of 30 individual pension schemes was used as the sample. Thus the study used census since the population size was small. The study used both primary and secondary data for analysis. The study concluded that good governance had strong influence on the financial returns of individual pension schemes .An improvement both in policy and regulatory frameworks on individual pension schemes in Kenya ,was highly recommended.

Njuguna (2012) examined the relationship between the financial returns of Pension Schemes and the agency costs. In particular, the paper investigated "the determinants of Pension Fund efficiency, agency costs were some of the factors". According to Njuguna,2011 , agency costs comprise the costs paid to service providers as well as the Trustees allowance. The paper sampled and analyzed, using Data Envelopment Analysis (DEA) approach, 749 pension schemes which were in operation between 2001 up to 2008 .The study concluded that there is a significant influence of agency cost on Operational costs and thus on the financial returns of the Pension Schemes. In the absence of operational efficiency, money meant to benefit members goes to other unintended beneficiaries.

A study by Ng'etich (2012) investigated the factors that influence the growth of individual Pension Schemes in Kenya. By targeting a population of 22 registered individual Pension Schemes, the study adopted a descriptive research design. According to this study, Pension Fund governance is measured by the use of board composition, the trustees training as well as the financial expertise brought in by the trustees. One of the findings of this paper about governance is the conflict of the interest on the part of the sponsor who happens to be the Trustees' employer, at the same time is a decision maker as far as deciding the contribution rates of employees is concerned. Such a case waters down the Pension Schemes' independence, thereby curtailing the Cost efficiency of Pension Schemes. The paper recommended that since such a conflict of interest cannot cease completely, it should be reduced to manageable levels. A reduction in the conflict

of interest enhances Cost efficiency as well as improving the financial returns of the Pension Schemes. In addition, the paper recommended that a pension governance policy should be put in place to address any potential agency problems between Trustees and the professional service providers. The finding of the study showed that fund governance exerts a significant relationship on the financial returns of Pension Schemes. However, the study did not recognize the uniqueness of the Occupational Pension Schemes in terms of funding and management of the funds.

In a journal written by Muriithi (2017) ,operation costs have been divided into administrative costs and investment costs. Such costs, according to the journal, were significant since services rendered must be paid for. However, such costs have a potential of draining valuable resources from the intended beneficiaries. The study used secondary data from 164 registered pensions Schemes in existence between 2007 and 2009.The pension schemes were classified into small, medium and large using Stratified Sampling technique to classify data. According to the study there was a strong inverse association between the operational costs and the financial returns of Pension Schemes. All the Pension Schemes in the Pension industry were covered in this particular study. However, the paper did not take into consideration the various classes of Pension Schemes in the pension industry and the unique management costs brought about by their different management structures.

A study by Mutuku (2014) on the trends and challenges of pension schemes asserted that some the challenges that the pension industry in Kenya face include high charges by the service providers, inadequate returns, ability to meet pension promise requirements. According to Mutuku, high costs of administration normally lead to low benefits upon retirement for those retiring and low annual rates of return to members .This is especially so with defined contribution schemes since their expenses were paid from the pension funds (Mutuku, 2014). The operating costs increase further as there were no standard rates recommended by the authorities to be applied by the service providers. Such operating costs and other expenses pose a risk to the pension payouts.

The study challenged the pension industry regulators to come up with standard guidelines of rates chargeable by the service providers such as administrators and investment teams for the services rendered.

The second specific objective of the study was to assess the effect of the Density of contributions on the financial returns of the Occupational Pension Schemes in Kenya. Studies examined in this thesis show various findings. Oluoch,2013 examined "the determinants of performance of pension funds in Kenya". Specifically, the researcher studied the effect of Fund values, Asset values, age of the contributors on performance of pension funds .The secondary data, which was largely quantitative in nature, was obtained from a sample of 29 pension schemes out of 1216 registered pension schemes with the RBA from 2000 and 2012.The study used pension funds from one Administrator for consistency purposes and to keep the influence of the administrator constant .The study revealed a strong positive correlation between contributions and other independent variables. Thus density of contributionswere key determinants of financial returns as far as Pension funds were concerned. The research recommended that the accumulated funds should be utilized in generating funds for the members of the Pension Schemes.

Kigen (2016) analyzed "The effect of fund size on the financial returns of pension funds in Kenya". The study operationalized fund size into the size (number) of members, the retirement age of members, costs and the members' density contributions. A sample size of 93 registered pension schemes was selected through purposive sampling from a population of 1232 registered pension schemes. The data collected ranged from year 2011 up to 2015.The data collected was analyzed using random effect model and the correlational analysis. The study found a very strong relationship between Pension contribution and their financial Returns. The study thus recommended the need to develop new contribution models that would enhance more collection of funds for investment.

A presentation from Ogonda (2016), observed that "schemes with a low density of contributionswere likely to have a relatively low accumulated asset portfolios when their members attain their retirement ages which translated to low retirement benefits to their retirees". It has been noted that sources of capital for invest vary in accordance with the age and size of the company (Ngugi, & Njuguna, 2018).This could also apply to Occupational Pension Schemes such those schemes whose members have contributed a lot for a long time ,have given their schemes the capacity to invest where young schemes cannot venture (Njuguna ,2011).In all the researches done, it is evidently clear that the density of contribution is an important concept as far as pension schemes were concerned. This thesis used the density of contributionsto test whether it is equally important as regards the Occupational Pension Schemes. Guided by modern portfolio theory, which encourages huge volumes of funds to be collected and invested prudently, it can be concluded that financial performance is a function of volumes of financial contributions from members and the sponsoring institutions.

In the study by Were, Iravo & Wanjala (2017) Determinants of Financial Performance on Pension Schemes, indicated that the financial performance of pension funds in Kenya was wanting. That raised doubts as to whether they were able to achieve their primary objective. The objective of the study was to analyze the determinants of financial performance of pension schemes in Kenya. The dependent variable was financial performance while the independent variables of the study were capital, firm size, retained earnings and leverage. The target population was 818 registered occupational pension schemes in Kenya by the Retirement Benefits Authority by the end of the year 2016. A sample size the 261 Pension schemes were selected through Random sampling method since the population was heterogeneous. Secondary data that targeted the financial statements such as income statements and statements of financial position were examined. The financial ratios were used to measure productivity, liquidity, profitability, Fixed assets performance among others. The study also assessed financial performances

by examining the returns on investments as well as operating costs, risks and even contributions.

Gakure &Gakera (2015) in their study on the analysis of the financial performance of registered individual retirement schemes in Kenya, indicated that low coverage of contributors was highly associated with the underperformance of the individual pension schemes. According to the study, Low coverage of contributors rendered operations ineffective and unsustainable in the long-run.

The third specific objective of the study was to examine the effect of asset allocation on the financial returns of Occupational Pension Schemes in Kenya. Studies examined in this thesis found various findings. Gitundu (2014) conducted a study on "The assessment of asset selection and performance evaluation of pension funds in Kenya". The study found that asset allocations differ in various pension schemes. This indicates that the criteria used to develop optimum asset mix were different from one manager of funds to another. Funds managers tend to outdo one another in terms of choosing asset mix and in their responses to changes in asset fortunes. Ng'etich (2012) in the study of "The determinants of the growth of individual Pension Schemes in Kenya", assessed whether investment strategies contribute to the growth of individual Pension Schemes. The study found that a sound investment strategy leads to an operational efficiency. In order that the latter is achieved, an investment strategy must be designed in such a manner that a mix of short and long term investment portfolio is available.

Kiplagat, 2014, studied "The impact of asset allocation on the fiscal performance of Pension funds in Kenya". The study observed that a research study of that nature had not been carried out in Kenya. Specifically, the study examined whether financial assets allocations as selected by the Fund managers had any significant statistical effect on either increasing or reducing the overall fiscal operation of the pension funds. The report found that 58.3% of the variability in financial operation was attributed to the asset allocation as selected by the managers of the investment company. The study indicated a

strong linear correlation between fund performance and the portfolio weights in government bonds, properties and quoted shares. Thus the study recommended more investment in Government securities, property, cash deposits and quoted shares as recommended by the RBA Act, since these asset classes had a substantial impact on their financial Returns.

According to Njeru (2014), majority of Pension Funds in Kenya invest in the Nairobi Securities Exchange. However, there were some pension funds that also invest in property, offshore, quoted and unquoted securities. The study examined the performance of the portfolio holdings of 35 Pension schemes. The study established that equities performed well especially in large funds while the offshore investments were poorest in performance in the category of medium pension funds. The study strongly recommended that both the trustees and members be trained on financial management skills.

The fourth specific objective of the study was to identify the effect of attitude towards risk on the financial returns of Occupational Pension Schemes in Kenya. Studies in relation to this specific objective gave various findings. According to Rono, Bitok & Asamoah (2010), 71.8% of Pension Schemes invested the funds in government securities and quoted equity. This is an indication that these pension schemes were risk averse in terms of investment choices they make. The global market meltdown has significantly reduced the value of equities and off-shore investments (Rono *et. al.* 2010). Such a fall in values of assets impairs the solvency of the Pension funds. Thus this meltdown, has forced the Pension schemes to realign their investment allocations to more conservative investments. Such a change in allocation can partly explain why the pension schemes were underperforming.

The fifth specific objective of the study was to determine the moderating effect of the Regulatory Framework of Kenya on the relationship between trustees-related financial determinants and the financial returns of Occupational Pension Schemes in Kenya. Studies in relation to this specific objective gave various findings. Miriti (2014), studied

the relationship between Retirement benefits Authority guidelines and financial returns of Pension Schemes in Kenya.

The paper observes that fixing quantitative restriction is a global phenomenon. Countries, all over the world have set up regulatory bodies to offer guidelines on the management of Pension Funds as well as controlling the financial activities. Some regulatory Authorities offer excessive controls while others such as USA, "apply the prudent man rule" where Pension Funds have no set regulations on the investments (Miriti,2014). The study used a population of 1188 Occupational retirement benefits Schemes which were in existence as at November 2013.Using Systematic sampling, the study collected a sample of 28 units registered by the RBA. The data collected was from a period of seven years. The study found that there was a positive relationship between investment guidelines by RBA and the financial Returns. Thus the study recommended publication of the industry results in order to empower the public with information to make informed decisions. It also recommended the strengthening of the compliance department that would ensure that retirement benefits schemes adhere to the investment guidelines.

In order to improve the standard of living Tari, (2014), studied the determinants of scheme design with special reference to the Occupational Pension Schemes. The study analyzed three classes of determinants of Pension Schemes designs which included employer-related, employee-related and regulatory-related determinants respectively. The paper noted that majority of Occupational Pension Schemes had changed the design from the Defined Benefits Design to Defined Contribution design in order to enhance efficiency and financial Returns. Targeting a population 1339 occupational pension schemes which were in existence in the financial years 2011-2012, the paper was guided by the modern portfolio theory in its search for the key determinants of Pension Design. The study used primary data which was collected using a Questionnaire from 200 registered and unregistered occupational pension schemes. For analysis, the study used Descriptive statistics as well as logistic econometric model. The findings of the paper

were that, as far as regulatory–related determinants were concerned, incentive for participation, tax rules as well as public pillar as well as the gender should be factored in the design. In their journal on "the impact of Retirement Benefit Act (RBA) on investment returns to Pension Funds in Kenya", Rono *et. al.(* 2010), found that there was growth in the financial returns of pension schemes after the RBA Act in 2010 was enacted as compared to their performance before enactment of the Pensions law. The journal used Survey design to collect primary data. Using random sample design the journal selected 350 registered pension schemes from a population of 1753 registered pension schemes. By examining the financial returns of the pension funds from 1986 to 2007 the research paper targeted Trust secretaries serving those registered pension schemes as the respondents.

2.6 Critique of the existing Literature

In view of the empirical literature examined on pension schemes, this section provided a critique in terms of titles, methodologies, samples collected, populations of interest and even the findings of those studies. A study by Gakure &Gakera (2015) on the financial performance of registered individual retirement schemes in Kenya, focused on determining the influence of market volatility, Risk control policy, good governance and low coverage of contributors on the financial returns of individual pension schemes. Their research adopted a descriptive survey .The study sampled 30 individual pension schemes. However, given that there were over 4000 pension schemes, according to RBA 2016,30 units were not a good representation of the entire population. Occupational pension schemes were about 1232 units. These were more representative units for analysis of such a study. The study should have considered more units in order to make a better conclusion .Again, individual pension schemes were funded by individuals who pay according to their ability to pay. Occupational pension schemes were financed by the members and the sponsoring companies. Such funding differences could have a difference in the effect of financial performance.

Njuguna (2011), who carried out a study on the determinants of pension fund corporate governance, did not narrow down to Occupational pension scheme when identifying those determinants. The uniqueness of occupational pension schemes justifies a separate research in order to make specific recommendations tailored for them. Ng'etich (2012) who investigated the factors that influence the growth of individual Pension Schemes in Kenya, should have dealt with a bigger and more representative category in the pension industry such as the occupational pension schemes. A target a population of 22 registered individual Pension Schemes is too low for a generalization to be made. the study adopted a descriptive research design. There were common and better measures of governance instead of use of board composition, the trustees training as well as the financial expertise brought in by the trustees. The compositions of the board and the Training of Trustees weren't good measures of growth. A conflict of the interest is not a key finding as this paper the study asserts. There were strict regulations which must be observed accordingly.

The study by Muriithi (2017) on the effect of operation costs on the financial performance of pension schemes covered all of them. There were funded and unfunded pension schemes and the effects of the operating costs were felt differently by different categories of pension schemes. Thus studies should have been conducted according to the categories in the pension industry. There were more than 164 registered pensions Schemes in existence between 2007 and 2009.Again the study used secondary data alone for analysis .Primary data was necessary for a balanced opinion.

Mutuku (2014) examined the trends and challenges of pension schemes that the pension industry in Kenya faces. Some of the challenges highlighted included high charges by the service providers, inadequate returns, and ability to meet pension promise requirements. Mutuku did not differentiate the various classes of pension schemes in the pension industry. Each category of pension schemes has funding and management structure different from other classes. Such differences create different cost implications and financial performance on each class of pension scheme.

A study by Oluoch,2013 that examined "the determinants of performance of pension funds in Kenya", did not identify the various categories of pension schemes in the pension industry. The independent variables used such as Fund values, Asset values, age of the contributors were very few which could be summed as Fund size .The secondary data of 29 pension schemes out of 1216 registered pension schemes with the RBA from 2000 and 2012 was representative of the entire population comprised 4000 Pension schemes. Again the choice of one Administrator for consistency purposes and to keep the influence of the administrator constant is not is not good enough for a research. Different Administrators have different policies, approaches toward the management of pension schemes.

The study by Kigen (2016) on "The effect of fund size on the financial returns of pension funds in Kenya" talked on only one independent variable, namely the sizes of the pension schemes. The study left out other independent variables such as operational costs, asset allocation, management of risks as well as which have bigger effect on the financial performances of pension schemes. The study used a sample size of 93 registered pension schemes from a population of 1232 registered pension schemes. Such a sample size is very small going by ideal size from a formular suggested by Kothari (Kothari,2011).Again, the study did not identify the various categories of pension schemes in the pension industry which include NSSF, Occupational Pension Schemes and the individual pension schemes. Each category has a different kind of administrative and funding structures.

In the study by Were *et. al*. (2017) "Determinants of Financial Performance on Pension Schemes", the objective was to analyze the determinants of financial performance of pension schemes in Kenya. The independent variables of the study were capital, firm size, retained earnings and leverage were few than the conventional determinants of financial performances of pension schemes. The study did not indicate the period when the study and if it was 2016,one year period was not adequate for the study. Apart from using the secondary data, the study should have also used the primary data to collect

information such as ages of the contributors, asset sizes, salary scales which were important for the determination of the density of contributions. Again, the study should have categorized the pension schemes into NSSF, Occupational Pension Schemes and the individual pension schemes since each category has a different kind of administrative and funding structures.

The study by Miriti (2014), on the relationship between Retirement benefits Authority guidelines and financial returns of Pension Schemes in Kenya, did not categorize the different schemes in the pension industry The paper used 28 units from a population of 1188 Occupational retirement benefits Schemes which were in existence as at November 2013.The paper should have indicated the specific years under study and not just indicating seven years. The paper did not address the moderating effect of the RBA which is a regulatory Authority.

Tari, (2014), studied the determinants of scheme design with special reference to the Occupational Pension Schemes. However, the study would have been more relevant if it had examined the influence of the scheme design on the primary role of Occupational pension schemes. The study targeted a population of 1339 occupational pension schemes which were in existence in the financial years 2011-2012,out of which 200 registered and unregistered occupational pension schemes were sampled. From Kothari's formular a population of 1339 units would attract a sample size of over 290 units. Thus a difference of 90 units would make a difference in the outcome of the study. Further, the study was based on modern portfolio theory whereas there is a post-modern portfolio theory which is more realistic than the modern portfolio theory. Finally the study combined both the registered and unregistered Occupational Pension Schemes. It is not clear how an Occupational pension scheme can remain unregistered yet all pension schemes must be registered before they start operation (RBA Act 1997).

The journal by Rono *et. al.*(2010) on "the impact of Retirement Benefit Act (RBA) on investment returns to Pension Funds in Kenya", that found that there was growth in the

financial returns of pension schemes after the RBA Act 1997 was enacted in 2001 did not consider other variables such as new schemes coming in, new investment opportunities, growth of existing schemes as a result of new contributors and salary increases. Those changes could also stimulate the growth that was witnessed in the study. A Survey design to collect primary data was not appropriate for the collecting data from 350 registered pension schemes. A questionnaire would have been a better tool for data collection. In addition, a secondary data relating to registered pension schemes could have complimented the results from the primary data.

2.7 Research Gaps

The first specific of the study was to establish the effect of the Operational Costs on the financial returns of Occupational Pension Schemes in Kenya. From the empirical literature examined in this thesis indicate that majority of studies focused on individual pension schemes which had populations of around 30 units (Gakure &Gakera,2015;Ng'etich,2014;Muriithi,2017;Mutuku,2014).The studies thus did not tackle the occupational pension schemes in the pension industry. Areas covered by the studies included corporate governance, growth and trends and challenges (Ng'etich,2014;Njuguna,2012;Mutuku,2014).In addition, some studies did not use the primary data, even when it was necessary to do so. (Muriithi,2017).Only few studies covered the financial performance ,but it was in respect to individual pension schemes. Since no studies have been done on operating cost as a determinant of financial performance of occupational pension schemes, there was a literature gap as far as Occupational pension schemes were concerned.

The second specific objective of the study was to assess the effect of the Density of contributions on the financial returns of the Occupational Pension Schemes in Kenya. Although studies of financial performance have been conducted, not much has been done on occupational pension schemes (Oluoch,2013; Were *et. al.*2017; Njuguna,2012) The independent variables covered included fund values, asset values, age of

contributors. However, it was not clear how capital, retained earnings and leverage applied to the pension schemes since such independent variables applicable in commercial enterprises. The fund sizes were common in those studies, but various measures of fund sizes were used. Since no studies have been done on density of contributions as a determinant of financial performance of occupational pension schemes, there was a literature gap as far as the causal relationship was concerned. Thus, this thesis used density of contributions to assess its effect on the financial performance of occupational pension schemes.

The third specific objective of the study was to examine the effect of asset allocation on the financial returns of Occupational Pension Schemes in Kenya. The studies that were examined focused on the pension schemes in the pension industry (Njeru,2014;Gitundu,2014;Ng'etich.2012;Kiplagat,2014)).Such studies did not, however, take into consideration the unique characteristics of the occupational pension schemes in the Pension industry (Gitundu,2014;Ng'etich.2012;Kiplagat,2014). Asset allocation has been given prominence but no study has been carried out in occupational pension schemes. Since no studies have been done on asset allocation as a determinant of financial performance of occupational pension schemes, there was a literature gap as far as this relationship was concerned.

The fourth specific objective of the study was to identify the effect of attitude towards risk on the financial returns of Occupational Pension Schemes in Kenya. Despite the importance of awareness of existence of risk in any venture, investments and particularly pension schemes that handle long term assets and liabilities, studies that have examined the effect of risk on financial performance were very few (Rono *et. al.*2010; Ng'etich,2012;Mutuku,2014;Njeru,2014).It was noted that some of the researchers included the issue of risks under scheme design or discussed the subject under returns(Njuguna,2011;Tari,2014;Njeru,2014). Since no studies have been done on aversion of risk as a determinant of financial performance of occupational pension schemes, there was a knowledge gap brought about by lack of literature as far as

occupational pension schemes were concerned. The fifth specific objective of the study was to determine the moderating effect of the Regulatory Framework of Kenya on the relationship between trustees-related financial determinants and the financial returns of Occupational Pension Schemes in Kenya. Studies have indicated that the regulatory framework has a positive impact on the financial performance and growth of pension schemes since RBA Act 1997 came into effect in 2001(Rono *et. al.*2010;Miriti ,2014; Tari, 2014) .

The studies contend that the regulation brought order in the pension industry. However, there could be other factors such as increase in the number of pension schemes and favourable investment market. It is important to note that some studies used smaller unrepresentative samples for analysis. Some studies used 28 units out of a population of 1188 units (Miriti ,2014; Tari, 2014).The studies heavily relied on the secondary data for analysis. Primary data through questionnaire was not collected. The period that was examined was too far from the present times. There a need to update the studies preferably with the occupational pension schemes. The moderating effect of the regulatory authority has not been examined especially with the occupational schemes. Once again there were both literature and methodological gaps identified in the moderating effect of the regulatory framework on the independent variables that have effects on the financial performance of occupational schemes.

2.8 Summary

Occupational pension schemes were meant long term investment vehicles meant to cater for the retirement needs of retirees. However, from the above discussions, there were glaring gaps affecting the financial performances of occupational pension schemes in Kenya. One of the gaps identified, is lack of literature that deals specifically with occupational pension schemes in the Kenyan context. Majority of the studies have either examined the performance of the entire industry or the individual pension schemes alone. This has created a contextual gap as far as occupational pension schemes were

concerned. One has to rely on the literature from the developed world to make references regarding the performance of occupational pension schemes. It clear that researches conducted so far have been either on the financial performance in the Pension industry as a whole or narrowed down to Individual Pension Schemes. In addition. the area of Retirement benefits and conversion from Defined benefits to Defined contribution in the Pension industry has been given a lot of prominence (Ogonda,2016;Kusewa 2013; Forbes ,2013;Chirchir, 2007).

This thesis addressed the contextual gap by building up information related to the financial performances of Occupational Pension Schemes in Kenya. A theoretical gap was identified in the sense that many researches on financial performances used portfolio or modern portfolio theories for their studies. This thesis used Post-Modern portfolio theory as one of the guiding theories. This is because the theory captured the human feelings in investments and particularly the risk attitudes of the Trustees and Fund managers.

No study has addressed the financial performance in the context of Operational costs, density of contributions, asset allocation and Pension risks with the regulatory framework as the moderating variable in the Kenyan context. Guided by the Agency and the Post-Modern portfolio theories respectively, this thesis addressed the financial management and contextual gaps by paying more attention to the trustee-related determinants of financial returns of Occupational Pension Schemes. By addressing these gaps, this thesis would provide valuable insights on financial performance of the occupational Pension Schemes.

CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

This chapter explains how the research process was conducted. It included a discussion on research philosophy, research design, the population, the sample and sampling methods, data collection methods, coding, tests of reliability and variability, measures of variables and data analysis.

3.2 Research philosophy

A Research philosophy is the underlying basis of data collection methods (Thornhill *et. al.*,2009). Assumptions were always made at every stage of research work. Research designs should be philosophically informed so that one can defend the choices made amongst many alternatives. The two major ways of thinking in research philosophy include Ontology and Epistemology (Mayer,2015). Ontology is the philosophical study of the nature of reality. The two areas covered under ontology were Objectivism and Subjectivism (Hirschman, 1986). Objectivism implied that social realities exist external to those actors who study them. In this thesis, the variables under investigation were real, external and were independent of this researcher. Operating costs, contributions, assets, risks as well as financial results are all real variables, social realities which were external to the researcher studying them. Ontology helped the researcher to study the variables and their interrelationship and more importantly how they affect the financial results (Hughes, and Sharrock, 2016). Subjectivism, on the other hand, is our own

meanings that we attach the social realities that we interact with in our daily lives (Creswell & Clark, 2017).The meanings attached to those variables depended on the researcher's perception towards social realities. The researcher tried as much as possible to reduce the subjective views in order to allow objectivity in data collection, analysis of data and interpretation.

Epistemology is the study of what is considered acceptable knowledge in a given field of study (Thornhill *et. al.,*2009).In a particular case, a researcher would pay more attention to the resources while another would be interested in the persons working in the organization. Resources were more objective and easy to get independent information about them while persons' feelings, emotions, attitudes were obtained through interactions such as interviews (Hughes & Sharrock,2016). This puts the researcher into the feelings of the respondents. Due to the two focuses, that is resources and persons working in the occupational pension schemes, different research philosophies and approaches were deemed necessary. Each focus, created a thinking process with its own way of influencing the research process for purposes of development of knowledge (Thornhill *et. al.,*2009). By following a particular research thought process, the researcher's understanding of the performance of occupational pension schemes was greatly enhanced. This justified the adoption of the research design, sampling method as well as methods of selecting primary and secondary data (Baronov,2015),

Owing to the fact that both resources and persons were considered in the performance of occupational pension schemes, three philosophical positions were considered. They

included positivism, realism and interpretivism. The study adopted positivism and realism approaches. The latter has been discussed under ontology (Thornhill *et. al.*,2009). "Positivism" is basically about using an existing theory to generate a hypothesis. It also deals with causal relationships (Hughes & Sharrock,2016).This study was informed by the agency theory, systems theory and the post-modern theory upon which the hypothesis were based. The causal relationship between operating costs and financial returns is based on agency and systems theory because agency has a cost implication in it, while the system has sub-systems roles that can be duplicated or avoided. Both contributions and asset allocations and their respective relationship with the financial performance are based on the post-modern portfolio theory .This results to a cost being minimized or increased. With the approach of positivism, the hypothesis was tested empirically to confirm or disapprove a given proposition. Thus data collection, data analysis and conclusions were objectively done for knowledge development (Padilla,2015).

From the three research approaches, namely deductive, inductive and abductive approaches, this thesis adopted the deductive approach. The reason was that the research was using sampled data which was used to infer about the population , which were all the registered occupational pension schemes in Kenya. After testing and confirming normality and independence of the distribution ,the sample characteristics were taken to represent those of the population(Creswell & Clark, 2017).Thus, since the research was about resources, it can now be justified that the thesis relied on Epistemology, positivism

and deductive approach for research design, choice of sampling technique, data collection and data analysis .Any choice made on research design, data collection and analysis in this chapter was guided by the research philosophy. Thus the outcome of this thesis was objectively done to make logical conclusions in line with the general objective of the research.

3.3 Research Design

A research design has been defined as a master plan that explains the procedures and techniques that are applicable to collect and analyze the required information (Kothari,2011).A mixed research design was adopted to assess the trustee-related determinants of financial returns of registered Occupational Pension Schemes in Kenya (Orodho 2009).The mixed research design included the descriptive, cross-sectional and the correlational designs (Gichure,2016). A descriptive design is frequently used method for collecting information about people's attitudes and opinions on social issues by interviewing or administering a questionnaire to a sample of individuals (Orodho 2009;Oso *et al*., 2013). As the term suggests, the study described the state of affairs as it were in financial Returns of Occupational Pension Schemes and accordingly made recommendations. Empirical studies on pension schemes have applied descriptive designs in their work (Muriithi,2017;Tari,2014; Ng'etich,2012).This design was therefore deemed appropriate because it involved collecting, summarizing, presenting and interpreting data pertaining to the determinants of performance of occupational pension schemes in Kenya.

A cross-sectional research design was also applied since this thesis examined the performance of occupational pension schemes for the period of ten (10) years from 2006 upto2015.Such a period provided a strong that illustrated the relationship between the independent variables and the dependent variable. Since the study was examining the

nature of relationships between the dependent variable and one or more of the independent variables, a correlational design was also deemed necessary (Oso *et al*., 2013).The study sought to establish a correlational between operational costs, density of contributions, asset allocation and risk preferences of trustees respectively on the performance of occupational pension schemes. Although majority of the studies have applied the correlational design in their work, no mention of correlational design had been indicated in their research designs.

3.4 Target Population

A population is defined as a set of well-defined set of people, group of things, elements services, households under investigation events (Field,2005). This refers to the full set of units from which a probability sample was drawn (Thornhill *et. al.* 2009, Gaur & Gaur ,2006).A population is homogeneous and has a bell-shaped distribution of units (Sekaran & Bougie,2013).According to Levy and Lemeshow,(2013),a target population is the entire set of units about which the study findings would be generalized The target population for the study was all registered Occupational Pension Schemes in Kenya as per the RBA records available in 2014.The list and records of all registered occupation pension schemes were accessible from the RBA office in Nairobi. Since the financial performance heavily depended on the assets sizes, Occupational Pension schemes were categorized according to their asset values .Thus asset values were divided into four categories as shown in Table 3.1 According to Sekaran & Bougie,2013, a sample size of at least 10% of the population is considered representative.

Table 3.1: Categorization of Registered Occupational Pension Schemes.

Categories according to Asset values	Number of Pension Schemes	Percentage (%)
Sh. Million		
Below Sh.100M	300	24.35
Sh.100M- Sh.500M	633	51.38
Sh.500M- Sh.900M	232	18.84
Above Sh.900M	67	05.43
TOTAL	**1232**	**100**

Source (RBA 2014)

3.5 Sampling frame

The population list of 1232 registered Occupational Pension Schemes was obtained from the Retirement Benefits Authority register from the year 2006 up to the year 2015, (RBA, 2016).A period of ten(10) was felt to be appropriate for the thesis as seasonal, periodically would not be biased on the research outcome. The list from the RBA was assumed to be complete, accurate, and current without any bias. All duly registered Occupational Pension Schemes that were in operation in the periods stated were assumed to conform to the company's act, accounting and auditing standards. Moreover, all final accounts were always audited, discussed and approved in the Annual General Meeting before submitted to the RBA .Such financial information was comparable and thus ,reliable for probability sample selection

3.6 Sample and Sampling Techniques

According to (Kothari 2011), the sample size in a finite population was determined using the formula given as-

$$n = \frac{z^2 pqN}{e^2(N-1)+z^2 pq} \qquad \text{(Equation 1)}$$

(Source; Kothari 2011)

Where; n= sample size

N= Universe size

Z= standard variate at a given confidence level and was worked out from table showing area under normal curve.

e= acceptable error

p= the proportion the sampled units from the registered occupational pension schemes

q=1-p

In the absence of an estimate of proportion (p) in the target population, then proportion (p) is assumed to be 50% (Mugenda & Mugenda, 2003)

Therefore, (q) was 1- 0.5 =0.5

Taking acceptable error of 5% and 95% confidence level with an approximate active population of 1,232, the sample size was computed as follows.

$$n = \frac{(1.96)^2(0.5)(0.5)(1232)}{(0.05)^2(1231) + (1.96)^2(0.5)(0.5)} = 293$$

The researcher took a sample of 293 Occupational pension schemes. They were Sampled as shown in table 3.2. This sample was therefore 24% of the total population which was way above the prescribed figure of 10% by (Sekaran & Bougie,2013)

Table 3.2: Categorization of Sampled Occupational Pension Schemes.

Categories according to Asset values **Sh. Million**	Number of Pension Schemes	Percentage (%)	Number of Sample units
Below Sh.100M	300	24.35	71
Sh.100M- Sh.500M	633	51.38	151
Sh.500M- Sh.900M	232	18.84	55
Above Sh.900M	67	05.43	16
TOTAL	**1232**	**100**	**293**

Source (RBA 2014)

and assumed that there was one Trust secretary in each of the sampled occupational pension scheme. Since a sampling frame (list) was obtained from the RBA office, the sample units were clustered into four categories based on their asset values. For each category a systematic sampling technique was applied to select the required units. The first unit in each category was numbered 0000 since the sample frame is a four-digit number (1232 units).The subsequent units in the categories were systematically selected at regular intervals of every 4^{th} unit in each category (Mark *et al*., 2012:Tari *et. al.* 2015).The regular interval of fourth unit was determined by dividing the actual sample by the total population. That is;

Sampling fraction = Actual sample size/Total population

(Source Thornhill *et. al.*, 2009)

=293/1232 = .234

Approximately .25 Or 1/4

Since the sample frame exist and that the population was finite, this technique of sampling had been recommended by various Authors (Adams, Khan and Raeside,2014; Thornhill *et. al.*,2009; Maina, 2012; Gaur & Gaur,2006;Cooper *et.al*.,2011). More importantly, researchers such as (Maina 2012, Njuguna,2011) had used this technique in their respective research work. This justified the use of the technique in this thesis.

3.7 Data Collection Instruments

Occupational pension schemes were sampled to be able to collect primary data by means of the questionnaires. Where there were doubts, clarifications were done through interviews, E-mails as well as telephone interviews. The researcher collected the secondary data from audited quarterly reports obtained from the RBA offices in Nairobi city as well as the Pension schemes offices which were within reach.

3.8 Data Collection Procedures

The thesis used both the primary and secondary data collection methods.

3.8.1 Primary Data

Navarro, Sada,& Maldonado,(2007) defined primary data as those items collected which are original to the problem being addressed. According to Ember (2009) primary data is that data collected by a researcher from the various fields for comparison purposes. Orodho (2009) indicated that primary data collected is the most adequate to fulfill the aims of the research since gathering data is directed towards to answer precisely the questions raised by the researcher. Cohen, Manion,& Morrison,(2013) added that collecting data from participants with different experiences prevents bias in information used for the research. From these definitions the researcher found it imperative to collect primary data from various Trust secretaries in different occupational pension schemes in order to avoid information bias.

For purposes of collecting primary data a self-administered questionnaire was used. A questionnaire is defined as a document that has a number of questions that are either printed or typed in a definite order (Mugenda and Mugenda 2003). Schwab, (2013) opines that a questionnaire as a data measuring instrument with a set of questions to be responded to by individuals. Orotho (2009), added that a questionnaire can be used to source large volumes of data within a short period of time. All the researchers concur that there is huge savings even where huge populations are involved, respondents have enough time to give a thought to respond to the questions as well as those inaccessible respondents can be accessed and respond at their convenience.

For this reason a questionnaire was found to be a necessary tool for collecting primary data related to the determinants of occupational pension schemes in Kenya. The questionnaire was close-ended and used 5-points likert scale (Thornhill *et. al.*,2009).The respondents were required to express their feelings about operating costs, density of contributions, asset allocation, risk preferences ,regulatory framework as well as financial performances of the occupational pension schemes. The respondents were to state whether they strongly agreed, agreed, disagreed or even strongly disagreed to a particular statement. Other units of analysis were the period of operation since the operational pension scheme was registered, length of service, level of education of the trustees and the scheme design. The respondents were required to state a yes or no, or ticking a response where appropriate.

3.8.2 Secondary data

According to Dawson &Simpson (2002) secondary data is information gathered from studies conducted by other researchers. Orodho (2009) indicated that secondary data is collected by other researchers in connection with other researches or as part of routine gathering of data. The author, however, cautions that their adequacy for a particular research problem may not be very good because the purpose of their collection might have been slightly different from the research at hand. Ng'ang'a (2017), indicated that

secondary data is used to cross validate the primary data collected through the questionnaire. According to Thornhill *et. al.*(2009),when a researcher uses a questionnaire to collect data from a sample, secondary data can be used to assess the generalizability of the findings. A secondary data should be suitable, valid reliable and should enable a researcher to answer the research questions as well as meet their objectives (Ember, 2009). The benefits arising from the secondary data collected should be greater than the costs incurred to collect the data.

This thesis therefore used the secondary data for cross validation of primary data. A secondary data selection sheet was developed and discussed with the supervisors. The researcher collected secondary data from 293 occupational pension schemes that formed the sample size of the study. The data was sourced from the RBA Headquarters. The audited annual reports considered were between 2006 up to 2015.The units of study collected were in regards to Agency costs, Trustees allowances, RBA levy, and Training and Meeting costs. Also collected was the information regarding the total contributions, active contributors, investment returns asset size as well as the asset allocation from the sampled units. A sample secondary data collection sheet has been attached at appendix IV. The Kolmogorov–Smirnov (K–S) test was used to determine the normality of the secondary data. A H_o hypothesis was formulated to indicate that the secondary data collected was normally distributed. The p-value was compared with 0.05 at 95% level of confidence. The secondary data was then triangulated with the primary data in order to assess the outcome of the two data sets. The objective was to increase the validity of the findings from the primary data.

3.9 Pilot Study

A pilot study was conducted to examine the reliability and validity of the questionnaire used in the collection of the primary data (Ng'ang'a, 2017).According to Kothari (2011), a pilot test is a replica and rehearsal conducted prior to the actual test. It is a trial run or a small scale version that is used to test whether the questionnaire will provide the desired

results (Gichure,2016). The questionnaire was pre-tested for reliability and validity in ten (20) Occupational Pension Schemes selected at random from the same population frame. Two (4) Occupational Pension Schemes with asset sizes below Sh.100M, four (8) Occupational Pension Schemes with asset sizes between Sh.100M- Sh.500M, two(4) Occupational Pension Schemes with asset sizes between Sh.500M- Sh.900M and two(4) Occupational Pension Schemes with asset sizes above Sh.900M. The selected occupational pension schemes for pilot study formed 6.8% of the sampled Pension schemes.

The proportion of the sampled Occupational pension schemes was within the range of 5% to 10% of sampled Occupational Pension schemes (Cooper& Schindler, 2011; Creswell & Clark, 2017).According to Ng'ang'a (2017) ,the objective of a pilot study is not only to examine whether the questionnaire would bring the intended results but also to enhance the training of field officers, reviewing the measurement instruments as well as preventing wasteful expenditures when full blown measurements are conducted. Since the thesis included field officers, qualitative and quantitative data, a pilot study was inevitable. This was done in order to assess the effectiveness of the questionnaire as a data collecting instruments (Cooper& Schindler, 2011). The outcomes of the pilot test were discussed with respective my supervisors and Trust secretaries. Their constructive inputs were incorporated in the revised questionnaire. Appropriate modifications were made on the questionnaires after the pilot study was carried out so as to achieve the desired study objectives (Thornhill *et. al.*,2009). The pilot test was used in training the Research Assistants, in order to boost the response rates as well as the completion times.

3.9.1 Validity

Validity in this context refers to whether the questionnaire developed is the right one for assessing the concepts being examined (Sekaran & Bougie,2013).It is a measure of the goodness of the measuring instrument. According to Adams *et.al.*,2014, assessing validity assisted the researcher to determine the accuracy of the relationship between the

measure and the trait/characteristic it was measuring. In simpler terms, validity is about whether the measuring instrument measured what it was intended to measure (Maina, 2012; Sekaran & Bougie,2013).The validity of the measuring instrument indicates whether the set of questions set would help a researcher tap the concepts that one anticipates to measure and not something else. The researcher paid particular attention to three types of validity, namely; face validity, content validity and construct validity (Guar *et al,*2006).The face validity tested whether the questionnaire measured the correct characteristics of each variable(Cooper& Schindler, 2011).

The researcher consulted the two supervisors on the suitability of the questionnaire as a measure of the variables. They approved it upon assessing the content of the questionnaire (Thornhill *et. al.*, 2009). Furthermore, the correlational analysis of the outcomes of the piloted tests confirmed the same. Factor analysis technique was used to extract the dimensions of the concepts that had been operationally defined. Content validity tested whether the questionnaire developed reflected the whole domain of the characteristics of each variable (Creswell & Clark, 2017). It tested the adequacy of the set of the questions asked under each variable. Finally, the construct validity examined the expected pattern of relationships amongst the variables and the relationship between the questionnaire and the theoretical framework (Gichure, 2016). In chapter 4, through orthogonal rotation of factors, Factor analysis technique indicates the items that were most appropriate for each dimension. These were treated as the latent trustee-related determinants of financial returns of occupational pension schemes (Sekaran & Bougie,2013). The Pilot study indicated that there was a high causal-effect relationship between the respective independent variables and the dependent variable. According to (Mugenda *et. al.*2003), a pilot study enhances the validity of the instrument by revealing vague questions in the questionnaire.

3.9.2 Reliability

According to the various authors (Cronbach,1951;Adams *et.al.*,2014; Thornhill *et. al.*,2009; Kothari,2011; Maina,2012; Guar *et. al.*,2006), reliability is a measure of consistency .It is defined as the degree to which one may expect to obtain the same results from the sample if a measurement is repeated once or several times . Among the several methods suggested to test reliability the Pearson correlation coefficient was used since it was recommended by various authors (Maina,2012; Adams *et.al.*,2014;Thornhill *et. al.*,2009).Reliability was tested through a questionnaire from the pilot-tested samples. The questionnaire results from the pilot-tested sample were paired and correlated (Ng'ang'a,2017).The Cronbach's alpha was used because of its suitability in continuous and non-dichotomous data such as a Likert scale (Cronbach,1951).The alpha coefficient which measures internal consistency, increases with increase in correlation.

The correlation values obtained were around 0.9 which were way above the Cronbach's alpha criterion which states that a reliability coefficient of 0.7 or above is acceptable. This indicated that the questions in the measurement scale were measuring the same construct (Cronbach, 1951; Thornhill et. al., 2009; Maina, 2012). Thus pre-testing greatly assisted the researcher in enhancing the reliability of the instrument as a consistent measure of the concepts being studied, (Guar et. al., 2006; Maina, 2012; Thornhill et. al., 2009).

3.10 Diagnostic Tests

Prior to conducting factor analysis, correlational and regression analyses respectively, three diagnostic tests were conducted to test the adequacy of sample size for factor analysis and multi-collinearity for testing whether two independent variables were interrelated.

3.10.1 Normality Tests

For Normality tests, the researcher was interested in finding out whether the sample was adequate for factor analysis. The KMO Test index ranges from 0 up to 1 and was recommended when the cases to variable ratios were less than 1:5. A KMO index of 0.5 is considered appropriate for the factorization process. Again for factors to be appropriate for factor analysis, the Bartlett's Test of Spherity ,the $p<0.05$ (Osborne,2015).

3.10.2 Multi-Collinearity.

An often encountered statistical phenomenon is Multi collinearity (Sekaran & Bougie,2013).It features where two or more independent variables in a multiple regression model are highly correlated. Bikel & Hogan (2011), also indicated that a multi-Collinearity exists when two independent variables are highly correlated. In most severe cases especially where correlation between independent variables is either 1 or -1,such coefficient makes the estimation coefficient impossible (Sekaran & Bougie,2013). A model free from mult-collinearity can be used to estimate its coefficients (DeFusco *et. al*, 2015).Further, the coefficients of the models remain stable best linear unbiased estimates

Since this thesis used multiple regression model, a test of multi collinearity was imperative. A Variance inflation Factor (VIF) and Tolerance level were applied to test whether there was any Multi-Collinearity between independent variables. Variance inflation Factor (VIF) is defined as an index that measures the amount of variance of a coefficient relative to the change of a predictor variable (Cohen *et. al*., 2013).According to Sekaran & Bougie (2013) the two measures indicate the degree to which one independent variable can be explained by another independent variable. If two or more variables had a Variance inflation Factor greater than 5, there is strong multi-Collinearity between the independent variables (DeFusco *et. al*, 2015). One of the

variables must be removed from the regression analysis in order to remain with non-collinear independent variables. However, this may create an omitted variable gap which also a serious problem. Sekaran & Bougie (2013), thus suggests merging the two highly correlated independent variables in order form a new independent variable.

3.10.3 Autocorrelation

This is defined as the correlational between members of a series of observations ordered in times space (Kendall & Buckland,1982).In time-series data observations tend to follow natural ordering over time such that successive observations are inter correlated (Gujarati, 2009). The disturbance terms are of a particular period are affected by the disturbance term of previous period. The commonest test for autocorrelation is the Durbin and Watson test (Jović, 2016). Nduruhu,(2019) applied the Durbin and Watson test to determine whether the residual of a model are auto correlated or not. The use of a panel data can be affected by the auto correlation which is manifested in the unobservable disturbance in the residuals of the regression models. This thesis used a time series data and a multiple regression model in its search for the trustee related determinants of occupational pension schemes. It was imperative to assess whether the residuals in the multiple regression models were auto correlated or not. The Durbin and Watson coefficient interval is from 0 up to 4.The rule of the thumb is that a coefficient tending towards zero indicates that the residuals in the model are positively auto correlated .A value above 2 indicates absence of autocorrelation, while if the coefficient tends towards 4,then there exists a negative autocorrelation.

3.10.4 Factor Analysis

This is an SPSS data reduction technique which reduces a given data set into fewer manageable variables (Adams *et. al*. 2014).New variables are formed by combining highly correlated variables. According to Pallant (2013),Factor analysis reduces large number of related variables into manageable variables prior to applying other analytical

techniques such as multiple regression and multivariate analysis of variance. The objective is to develop objective instruments that can be used to measure constructs which are not directly observable in real life (Gaur& Gaur, 2006). Factor analysis is concerned with data whose sample sizes are of at least 300 units (Tabachnick, Fidell, & Ullman, 2007).However, other research have indicated that sample sizes of 150 units are also appropriate for factor analysis as long as they have several high loading marker variables (Fan, 2001).This thesis found the need to use factor analysis since this the sample size was 293 units. There was a need to objectively reduce the number of questions in the questionnaire into manageable questions (Osborne, 2015).

3.11 Data Analysis and Presentation

Before analyzing the questionnaires, a pre-processing of data to correct any errors in the raw data as well as ensuring that the data captured was not lost or duplicated in the process of obtaining the needed data characteristics, was done (Thornhill *et. al.* 2009; Kothari, 2011) .The data was coded by assigning a number to the participants' responses before entering the responses in the database (Sekaran *et. al.,* 2013). Data transformation was necessitated by the fact there were several questions that were used to measure a particular concept or construct (Sekaran *et. al.,* 2013). Both descriptive and inferential statistics were applied for data analysis.

3.11.1 Descriptive Data analysis

The questionnaire gathered background information regarding the sampled occupational pension schemes (Thornhill *et. al.* 2009). According to Orodho (2009), data collected may be so overwhelming that difficult to make any sense or see any trend out of them. The author indicates that descriptive analysis performs this purpose. In this study the background information included how long a scheme has been in operation, the length of stay in the service by a trustee, the composition of the Board of Trustees, the Trustees' level of education, the type of fund adopted by the Trustees as well as the

Funds Administrator of the pension scheme. The responses were “yes” or “no” or ticking the appropriate response. A descriptive data analysis was applied in order to describe the characteristics of the occupational pension schemes in this study (Kothari ,2011) More so the results of the descriptive analysis were used to assess the normality and the independence of the data collected (Sekaran *et. al.,* 2013).Thus frequencies and graphs, frequency distribution and bar charts were used display the profiles of the respondents in the study.

3.11.2 Inferential Data analysis

According to Orodho (2009) inferential statistics are applied whenever a researcher wishes to infer things about the population from the information sourced from a small sample derived from the population. A sample is studied in order to make a conclusion about the large population from which the sample was extracted. Thus inferential statistics is about generalization about bigger situations or total population, that has not been studied (Sekaran *et. al.,* 2013).This study was about trustee-related determinants of financial performance of registered occupational pension schemes. A sample of 293 units was selected from a population of 1232 registered Occupational Pension Schemes in order to infer about the financial performance. Thus inferential data analysis was important in this study in order to generalize about the performance of the bigger population (Thornhill *et. al.* 2009).

Using statistical packages for social sciences (SPSS) version 22, Ordinary Least squares or the correlational technique was used to test the cause-effect relationship between the dependent variable and the independent variables. Simple regression analysis was conducted to assess the effect of one independent variable on the dependent variable while the multiple regression analysis were conducted to establish the strength, direction and significance of the relationship between financial returns and more than one independent variables (Gupta & Gupta, 2007).For testing all the five hypotheses, the researcher adopted the (Analysis of Variance) ANOVA to test the overall robustness of

the simple regression model. The P-values associated with each variable were used for determining statistical significance of each independent variable on the dependent variable. The rule of the thumb was to reject Ho_i if p-values ≤ 0.05 otherwise fail to reject if p-value is not ≤ 0.05.(At 95% confidence level, level of significance,α=0.05) (Tabachnick, *et al*, 2007). The Karl-Pearson's Coefficient of correlation was applied to test the partial correlation between the variables while T-test was used to test the significance of the relationship between the variables. The was assumed that the coefficients (that is the $\beta_i \neq 0$) of the variables were not equal to zero otherwise the model would have been of no effect in its predictive power. According to Cohen *et. al.*,(2013) these are the most suitable inferential statistical tools which are popularly used to test whether a there are a significant relationships or not..

3.11.3 Empirical Model

According to Faraway (2016), multi linear regression models are applied whenever there more than one independent variables affecting one dependent variable. One can therefore assess the effect of independent variables on one dependent variable. Okougbo, (2011) applied the multi-regression analysis when studying corporate governance and firm performance from selected registered firms in Nigeria. Nduruhu (2019) developed a multiple regression model when studying the effects of financial management practices on the sustainability of pension funds in Kenya. The model was therefore important to this study as it involved a dependent variable and several independent variables which were linearly related.

$Y=\beta_0 + \beta_1$ Cost. $+ \beta_2$Cont $+ \beta_3$ Strat.$+ \beta_4$ Risk $+e$……..Equation 3.1

Where,

Y= is the financial Returns

$\beta_{0=}$ Constant term

β_1 Cost =The sensitivity of financial returns to Operations Costs

β_2Cont= The sensitivity of financial returns to the density of contributions

β_3 Allocation =The sensitivity of financial returns to Asset Allocations

β_4 Risk = The sensitivity of financial returns to the Risk Preferences

e= The disturbance term with an expected value of zero.

β_1- β_4 represent the sensitivity of performance for a unit change of each variable. A t-test at 95% confidence level was applied to assess the statistical significance of β_1- β_4 respectively. At the same time, F-test was used to assess the statistical importance of the multiple regression model at 95% confidence interval. The R-Squared, the adjusted R-Square and the coefficient of determination were used to determine how the independent variables explained variation in the dependent variable.

For any specific value of the independent variable, the regression model assumed normality and independence and equal variance for the variables of the **Y.**Since the regulatory framework was assumed to have a moderating influence on other selected independent variables, a linear multiple regression model was generated to see its extent of moderation.

$Y=\beta_0 + \beta_1$ Z.Oper.. + β_2Z..Cont + β_3 Z.Strat.+ β_4 Z.Risk +e……..Equation 3.2

Where the moderating variable,

Z= Regulatory framework of the Occupational Pension Schemes

Y= is the financial returns in a regulated environment

β_0= Constant term

β_1 Z.Oper =The sensitivity of financial returns to operational costs in a regulated environment

β_2Z.Cont= The sensitivity of financial returns to the Density of Contributions in a regulated environment

β_3 Z.Strat =The sensitivity of financial returns to asset allocations in a regulated environment

β_4 Risk = The sensitivity of financial returns to the Risk preferences in a regulated environment.

The error term represents the effect of the variables that were omitted from the regression equation (Kothari, 2011).It provides a combined effect that assumes that the omitted variables were independent of each other and were independent of those independent variables that were included in the above- stated equation. Moreover, the sum total of their combined effect is zero. The Regression coefficients (The Beta values) that were generated from the model were used for assessing both the direction and the magnitude of the relationship between the dependent variable and the independent variables. The sensitivity index ($\mathbf{R^2}$) of the financial returns in a regulated environment was calculated using the multiple regression model. The $\mathbf{R^2}$ in equation 3.2 was compared with the $\mathbf{R^2}$ in equation 3.1 to see the extent of influence of the moderating variable on the financial returns of the Occupational Pension Schemes (Thornhill et. al., 2009).

3.12 Variable Definition and Measurement

In the absence of a generally agreed upon measures of the independent variables ,the thesis heavily relied on the Likert scale that ranges from 1-strongly disagreed to 5-strongly agreed .The measurement instrument for the variables was as shown in Table 3.2;

Table 3.3: Variable Definitions and Measurement

Variable	Indicators	Type of Data	Scale
Operating costs	• Operating costs/investment returns • Operating Costs/contributions	Quantitative Data Primary and Secondary Data	5-Point Likert scale Interval Scale
Density of contributions	• Charging rates • Number of Contributors • Pensionable Salary Levels • Age profiles of Contributors	Quantitative Data Primary Data and Secondary Data	5-Point Likert scale Interval Scale
Asset Allocation	• Investment policies • Asset sizes	Quantitative Data Primary Data and Secondary Data	5-Point Likert scale Interval Scale
Risk Preferences	• Trustees risk attitude • Investment diversification	Quantitative Data Primary Data	5-Point Likert scale
Pension Regulatory Framework	• Compliance with the Regulations	Quantitative Data Primary Data and Secondary Data	5-Point Likert scale Interval Scale
Financial Returns	• Return on Assets • Return on Equity	Quantitative Data Primary Data and Secondary Data	5-Point Likert scale Interval Scale

Table 3.3 indicates the summary of the statistical test and the Hypothesis.

Table 3.4: Summary of the Statistical Test and the Hypothesis.

Hypothesis	Hypothesis Tests	Decision Rule
Ho_1; There is no statistically significant effect of Operating Costs on the trustee-related determinant of financial returns of an Occupational Pension Scheme.	(i)ANOVA -To test the overall robust of the simple regression (ii)Karl-Pearson's Coefficient of correlation-To test the partial correlation between the variables (iii)T-test –To test the significance of the relationship between the variables Assumption;Ho_1 $\beta_1 \neq 0$	Reject Ho_1 if p-values ≤ 0.05 otherwise fail to reject if p-value is not ≤ 0.05.(At 95% confidence level, level of significance,α=0.05) The Analytical model $Y= \beta_0+\beta_1X_1+e$ Where β_0=constant, β_1=correlation coefficient, X_1= Operations Costs e=error term
Ho_2; There is no statistically significant effect of density of contributions on trustee-related determinants of financial returns of Occupational Pension Schemes	(i)ANOVA -To test the overall robust of the simple regression (ii)Karl-Pearson's Coefficient of correlation-To test the partial correlation between the variables (iii)T-test –To test the significance of the relationship between the variables Assumption;Ho_2 $\beta_2 \neq 0$	Reject Ho1 if p-values ≤ 0.05 otherwise fail to reject if p-value is not $\leq$ 0.05. .(At 95% confidence level, level of significance,α=0.05) The Analytical model $Y= \beta_0+ \beta_2X_2+e$ Where β_0=constant, β_2= Density of Contributions e=error term
Ho_3;There is no statistically significant effect of asset allocations on the trustee-related determinants of financial Returns of Occupational	(i)ANOVA -To test the overall robust of the simple regression (ii)Karl-Pearson's Coefficient of correlation-To	Reject Ho1 if p-values ≤ 0.05 otherwise fail to reject if p-value is not $\leq$ 0.05. .(At 95% confidence level, level of significance,α=0.05) The Analytical model

Pension Schemes	test the partial correlation between the variables (iii)T-test –To test the significance of the relationship between the variables Assumption;Ho_3 $\beta_3 \neq 0$	$Y=\beta_0+ \beta_3X_3+e$ Where β_0=constant, β_3= asset allocation e=error term
Ho_4; There is no statistically significant effect of Risk Preferences on the financial returns of Occupational Pension Schemes.	(i)ANOVA -To test the overall robust of the simple regression (ii)Karl-Pearson's Coefficient of correlation-To test the partial correlation between the variables (iii)T-test –To test the significance of the relationship between the variables Assumption;Ho_4 $\beta_4 \neq 0$	Reject Ho1 if p-values $\leq$ 0.05 otherwise fail to reject if p-value is not $\leq$ 0.05. .(At 95% confidence level, level of significance,α=0.05) The Analytical model $Y= \beta_0+ \beta_4X_4+e$ Where β_0=constant, β_4 = Risk Preferences e=error term
Ho_5;There is no statistically significant moderating effect of Pension Regulatory Framework on the relation between trustees-related factors and financial returns of Occupational Pension Schemes, Kenya.	(i)ANOVA -To test the overall robust of the simple regression (ii)Karl-Pearson's Coefficient of correlation-To test the partial correlation between the variables (iii)T-test –To test the significance of the relationship between the variables Assumption;Ho_5 $\beta_5 \neq 0$	Reject Ho1 if p-values $\leq$ 0.05 otherwise fail to reject if p-value is not $\leq$ 0.05. .(At 95% confidence level, level of significance,α=0.05) The Analytical model $Y=\beta_0+ \beta_5X_5+e$ Where β_0=constant, β_5=correlation coefficients X_5= trustees-related factors e=error term

3.13 Ethical Issues

According to Thornhill *et. al.*,2009,Ethics were the standards of behavior that guides ones conduct in relation to the rights of those who become the subject of ones work or were affected by it. In this thesis, the researcher was cautious in observing and respecting the rights of those that had an input in the research work (Baku, 2018). In particular, at topic formulating level, the researcher chose a non-controversial research area that is considered helpful to not only the trustees, service providers, members of the occupational pension schemes as well as the researchers. The research was basically intended to shed more light on investment of their financial contributions. This was considered by many as a worthwhile undertaking.

While drafting the questionnaire the researcher observed the rights of the respondents by avoiding those embarrassing questions and unnecessary intrusions to the respondents' personal data (Varma,2019). In addition, the researcher's questions were carefully drafted not to harm the respondents either by stressing them or causing any form of discomfort or even embarrassing them by assuring them of the confidentiality of their responses as well as keeping their names anonymous(Baku,2018). In order to avoid being biased the researcher consulted the supervisors for their input. In order to enhance openness and transparency, a letter of introduction was sourced from the university. They were submitted to the respondents before questionnaires were handed over to them (Thornhill *et. al.*, 2009). The letter assured the respondents of the confidentiality of their responses and that the research was purely for academic discourse (Oso & Onen, 2011). The respondents were debriefed by assuring them that the research outcome would be kept in confidence but would be availed to those who would need to know outcome of the research work.

At collecting of the data stage, the researcher respected the rights of those who did not wish to respond to the questionnaire. Nobody was coerced to complete the questionnaire. According to Orodho (2009), lack of co-operation from respondents can

be disastrous. However, respondents have a basic right to refuse to openly participate in the research work. Orodho contends that this is a basic human right which researchers have to respect. The researcher acted openly and truthfully in order to enhance integrity and objectivity in the when collecting the data (Nuseir, 2017). This was deliberately done to enhance credibility, the level of responses as well as the quality of the research work. The researcher tried everything possible to preserve the data as it was collected in order not to distort the quality and the outcome of the results. In the processing and analyzing the data, the researcher was careful to maintain objectivity of the data as well as the confidentiality and anonymity of the data and its source. The responses were therefore coded and after the data was analyzed, it was kept where it could be accessed by authorized people.

At reporting and making recommendations stage, the researcher avoided being biased by not distorting the information. By so doing, objectivity and credibility of the research outcomes were enhanced (Thornhill *et. al.*, 2009). Thus in the whole of the research work the researcher upheld right to privacy, avoidance of deception and unnecessary intrusion, being open and transparent, maintaining confidentiality and being objective (Sekaran & Bougie,2013). Over and above, the researcher took care not to protect the research assistants who participated in the data collection from any form of harassment or intimidation either physical or psychological.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter provides presentations in line with the study specific objectives and the questionnaires. The findings of analyzed data and discussions follow those presentations. First, a summary of the background information of the Trust secretaries is first presented followed by the descriptive and inferential findings. The descriptive statistics include the range, means, variance and standard deviations while the inferential statistics include factor analysis, linear correlations and multiple linear regressions. The data collected on study constructs were measured on a five point Likert scale where integers 1 to 5 represented strongly disagree, disagree, neutral, agree, and strongly agree respectively.

4.2 Response Rate

This study had a sample size of 293 Trust secretaries requiring distribution of 293 structured questionnaires to the potential Trust secretaries working with various registered Occupational Pension Schemes in Kenya classified into four categories according to their asset values. The distribution and filling-in of the questionnaires to the sampled registered Pension Schemes took about two weeks and two days. Thereafter the filled-in questionnaires were collected from the Trust secretaries. Out of 275 collected, 250 had been duly and correctly filled as indicated in Table 4.1.

Table 4.1: The responses table

Category	Posted Questionnaires	Percentage %	Returned questionnaires	Percentage responses
Below Sh.100M	71	24.35	65	91.5
Sh.100M- Sh.500M	151	51.38	148	98.0
Sh.500M- Sh.900M	55	18.84	50	90.9
Above Sh.900M	16	05.43	12	75.0
Total	**293**	**100**	**275**	

This meant that that the response rate was 85.32%.This response rate was not only high, representative and sufficient but well above the minimum threshold of 80% .(Mugenda and Mugenda, 2003).

4.3 The background information

The descriptive information regarding the length of time the scheme had been in operation, how long that one has been in this service, the composition of the Board of Trustees, the highest educational level attained by each Trust secretary, whether the Trust secretaries had undergone any Training programme conducted by the RBA, whether the scheme is sponsored by the employer, the type of the scheme, and whether funds were remitted to an independent organizations were outlined in that order in this section.

4.3.1 The length of time the scheme been in operation

This section of the background information was to determine the length of the period that the registered pension schemes have been in existence. Table 4.2 indicates the length of time the schemes have been in operation.

Table 4.2: The length of time the schemes have been in operation

No. of years	Frequency	Percentage	Cumulative Percentage
Less than one year	34	12.4	12.4
1 -4 yrs	82	29.8	42.2
5- 9 Yrs	104	37.8	80
10 yrs and above	55	20	100
Total	**275**	**100**	

This aspect of background information is crucial because experience in the management and operation of the registered Occupational Pension Schemes largely depends on how long a scheme has been in operation. It was found that majority (37.8%) of the registered pension schemes have been in existence for a period between 5 and 9 years.42.2% have been in operation for the period between 1 and 4 years . Those that have weathered the storms and settled were 20% while those at nascent period were relatively few for they account for 12.4% of the entire sample of registered Occupational Pension Schemes. A test for the goodness of fit, the $\chi 2$ value for this data was 8.084 .The $\nu=3$ the $\chi 2 =7.81$,which is less than the computed value .Thus the length of time that a scheme has been in operation is a critical factor for consideration. If 57.79% of the registered Occupational Pension Schemes were over 5 years since inception, they have matured and thus their information is relatively credible and trustees in those schemes were more likely to make informed choices as regards management structures, investment choices among others.

4.3.2 How long a Trust Secretary has been in the service of the Pension Schemes

The length of service that a Trust secretary has in serving an Occupational Pension Scheme was meant to obtain the length of exposure that one has in managing the schemes resources. Table 4.3 provides this information.

Table 4.3: Period that Trust secretaries have served in their respective Pension Schemes

No. of years	Frequency	Percentage	Cumulative percentage
Less than one year	35	12.7	12.7
1 -3 yrs	83	30.2	42.9
4-6 yrs	137	49.8	92.7
6 yrs and above	20	7.3	100
Total	**275**	**100**	

This is in line with the objective of Pension fund Risk control which largely depends on an individual experience as a result of staying in service. From the above distribution, it can be noted that majority (49.8%) of the Trust secretaries have been in the service of the Occupational Pension Schemes between 4 to 6 years. Thus over half of the sampled Trust secretaries in the occupational pension schemes were in their second term of their service in the Pension Schemes.57.1 % of the Trust secretaries had served their respective occupational pension schemes between 1 and 3 years. These were in their first term of service. Those who had served Occupational Pension Schemes for less than 1

year were 12.7% of the total number of Trust secretaries. A test for the goodness of fit, the $\chi 2$ value for this data was 8.753 .The $\nu=3$ the $\chi 2 = 7.81$,which is less than the computed value .Thus the length of time that a Trust Secretary has been in the service of an Occupational Pension Scheme is a critical factor for consideration. Surprisingly, even though the Pension rule is that, no one should serve a pension scheme for more than two terms, there were 7.3% of the Trust secretaries who had served for more than 6 years. The length of time that Trust Secretaries serve in the Occupational Pension Schemes gives them invaluable experience that is not only vital for the Trustees but also for research purposes.

4.3.3 The composition of the Board of Trustees

The researcher sought to know the composition of the Board of Trustees that run the affairs of the Pension Schemes. Table 4.4 provides the information.

Table 4.4: The composition of the Board of Trustees

	Men	Women	Total
Average Proportion	0.6728	0.3282	**1**
Percentage	67.28	32.82	**100**
Cumulative percentages	67.28	100	

From the Table 4.4,it is evident that the Men make up 67.28% of the entire composition of management of occupational Pension schemes. The rest is taken up by women. A test for the goodness of fit, the $\chi 2$ value for this data was 3.55 The $\nu=1$ the $\chi 2 = 3.84$,which is less than the computed value .Thus the gender composition in the service of an Occupational Pension Scheme is a critical factor for consideration. Gender representation plays a crucial role in the management of organizations, including the

Occupational Pension Schemes. It's a constitutional requirement that leadership of any organizations must have a 2/3 gender representation. The representation ratio is closer to the constitutional requirement but more needs to be done to bring the composition closer to 2/3 gender representation.

4.3.4 The Education Levels of the Trustees.

The study further sought to establish the Education Levels of the Trustees. The results of the analyses were illustrated in Table 4.5

Table 4.5: The Education Levels of the Trustees

Educational Qualifications	Frequency	Percentage	Cumulative Percentage
Post graduate	78	28.4	28.4
Undergraduate	122	44.4	72.8
Diploma	58	21.1	93.9
Secondary Education	17	6.1	100
Total	**275**	**100**	

In the context of the education level, 27.2% of the Trustees were non-graduate. The rest had attained either undergraduate, or post graduate levels education respectively. The caliber of the Trustees would help the schemes to make better and informed decisions. This is in line with the educational level that enables one to understand the concepts of Pension Schemes easily, interpret Pension issues accurately and communicate issues of concern to the stakeholders clearly. Where 72.8% of the Trustees constituted the undergraduate and post graduate holders, it can be concluded that trustees make decisions from an informed point of view. A test for the goodness of fit, the $\chi 2$ value for this data was 8.04 The $\nu=3$ the $\chi 2 = 7.81$,which is less than the computed value .Thus the education levels of the Trust secretaries in the service of an Occupational Pension Scheme is a critical factor for consideration.

4.3.5 Type of fund in a Pension Scheme

This background information is necessary because it addresses three specific objectives. The first specific objective sought to establish the impact of Operational costs on the financial returns of Occupational Pension schemes It also touches on the third and fourth objectives that deal with Asset allocations and Risk preferences respectively. The results of the analyses were illustrated in Table 4.6.

Table 4.6: Type of fund in a Pension Scheme

Type of fund	Frequency	Percentage	Cumulative Percentage
Umbrella	101	36.7	36.7
Stand-alone	156	56.7	93.4
Unfunded	18	6.6	100
Total	**275**	**100**	

From the data collected, it is evident that a majority (56.7%) of Pension Schemes sampled manage their own affairs by choosing their own service providers. They pay the management fees and make investment choices. However, they take the risks associated with this type of Pension fund arrangement. Their returns depend largely on the expertise of the Pension funds Managers and the market performance. Members of such Occupational Pension Schemes therefore expect higher returns since the risks associated with such arrangements were higher. Pension Schemes under the Umbrella Pension Service Providers were about (36.7 %). They get relatively low but guaranteed returns no matter how the investment climate looks like. Such Occupational Pension Schemes incur relatively minimal Operational expenses and their risks were not as high as the stand-alone category. The proportion of the unfunded Pension Schemes in the sample was 6.6% .These pension schemes were generally managed by the sponsors who pay

retirees on the Pay as you go basis. A test for the goodness of fit, the $\chi 2$ value for this data was 6.12 The $\nu=2$ the $\chi 2 = 5.99$,which is less than the computed value .Thus the type of Plan adopted by the Trustees of an Occupational Pension Scheme is a critical factor for consideration especially in regards to management of Pension risks.

Only a few organizations choose to re-invest the members Pension contributions in their own financial activities at an agreed rate. They have relatively very little Operational expenses because they don't have Pension Schemes, trustees or even the service providers to pay management(or Agency) fees .However, this is a very risky arrangement of investment because in the event that the companies go under or the Sponsoring organizations were not supportive the whole retirement arrangements were greatly curtailed. In this case members lose their jobs as well as their retirement savings. This could partly explain the reason why these pension arrangements were not popular and instead for their own independent for Occupational Pension Schemes. Understanding the type of fund in the Occupational Pension scheme was crucial for assessing the cost-cutting strategies of organizations.

4.4 Pilot Test

A pilot study was conducted on twenty (20) randomly sampled units to examine the validity and reliability of the questionnaire used in the collection of the primary data (Ng'ang'a, 2017). The selected occupational pension schemes formed 6.8% of the sampled Pension schemes. The proportion of the sampled Occupational pension schemes was within the range of 5% to 10% of sampled Occupational Pension schemes (Cooper& Schindler, 2011; Creswell & Clark, 2017).

4.4.1 Validity

Validity in this context refers to whether the questionnaire developed is the right one for assessing the concepts being examined (Sekaran & Bougie, 2013). The researcher paid particular attention to three types of validity, namely; face validity, content validity and

construct validity (Guar *et al*,2006).The face validity tested whether the questionnaire measured the correct characteristics of each variable(Cooper& Schindler, 2011). The questionnaire was structured in a manner to rhyme with the philosophy of the research, the objectives of the research as well as the conceptual framework (Nduruhu, 2019). The researcher consulted the two supervisors on the suitability of the questionnaire as a measure of the variable (Thornhill *et. al.*, 2009).In addition three Trustees from different Occupational Pension Schemes which were not sampled were consulted on the adequacy of the questionnaires. Their views were incorporated in order to improve the quality and relevance of the questionnaire. They all approved the questionnaire upon assessing its construct and content. Apart from approval, the questionnaire was used from training research assistants on how to collect data from the sampled respondents (Ng'ang'a, 2017).

4.4.2 Reliability Results

In order to test the reliability of the questionnaire, the Cronbach alpha was computed to assess the internal consistency. Since the variables being studied were measured with multi-item scales, it was imperative to test the consistency of the respondents' answers to the scale items using the Cronbach's alpha test of the inter-item consistencies. The Cronbach alpha coefficient indicated how well the scale measuring the items hangs together as a set.

Table 4.7: Reliability of the variables measures

Variable	Number of Items	Cronbach's alpha	Accept/Reject
Operational Costs	11	0.752	Accept
Density of contributions	04	0.831	Accept
Asset allocations	04	0.807	Accept
Risk Preferences	06	0.766	Accept
Regulatory Framework	04	0.759	Accept
financial Returns	05	0.841	Accept

Extraction Method: Principal Component Analysis

Table 4.7 indicates the Reliability of the variables measures using the Cronbach alpha test. The recommended value was more than 0.7(Sekaran, 2009).Since all the variables in the questionnaire gave a value higher than 0.7, suggested that the items in the questionnaire were "cohesive" and thus the questionnaire was a reliable tool for gathering data. Therefore, the internal consistency measures used in this thesis was considered acceptable for financial returns measure.

4.5 Descriptive Results

In this section, the results and discussions of descriptive statistics such as mean, variance and standard deviation obtained for the interval –scaled items of the 275 Occupational pension schemes were presented as indicated in Table 4.8. From the Table 4.8, The mean of 48.661 for the financial returns represents the average for all the variables. It represents the average percentage returns for all the 273 occupational Pension Schemes registered by the RBA. The standard deviation represents the spread or variability of returns from the average score.

Table 4.8: Descriptive Results

Variable		Valid	Mean	St. Dev.	Var.
Financial Returns		275	48.661	5.022	25.22
1.	Operational Efficiency	275	4.111	0.942	0.887
2.	Density of Contributions	275	4.007	1.291	1.667
3.	Investment Strategies	275	4.235	0.996	0.992
4.	Risk control Practices	275	3.456	0.987	0.974
5.	Regulatory Framework	275	4.310	1.104	1.219

The Operational costs had a mean of 4.111 indicating the average changes in Operational costs in the period under study. The average variability from the mean was 0.942 .This indicated that the variability of the scores was not erratic. The density of contributions had a mean of 4.007 indicating the average changes in density of contributions in the period under study. The average variability from the mean was 1.291.This indicated that the variability of the scores was a little more erratic as compared to the Operational efficiency. The Asset allocations had a mean of 4.235 indicating the average changes in Asset allocations in the period under study. The average variability from the mean score was 0.996.This indicated that the variability of the scores was a little more erratic as compared to the Operational costs but less erratic as compared to the Density of contributions.

The Risk preferences had the least mean of 3.456 indicating the average changes in Risk preferences in the period under study. The average variability from the mean was 0.987.The variability of the scores was a little more erratic as compared to the Operational costs and the density of contributions respectively. The Regulatory Framework had a mean of 4.310 indicating the average changes in Regulatory Framework in the period under study. The average variability from the mean was 1.219. It is imperative to note that the Density of contributions, Asset allocations have the

highest variability values. This indicates that the three independent variables could have a higher influence on the changes of financial Returns of the Occupational Pension Schemes. For each variable, the Likert scores were analyzed to see the effect of each measurement instrument in the variable.

4.5.1 Effect of Operational costs on financial Returns

The first objective of the study sought to determine the effect of Operational costs on the financial Returns of Occupational Pension Schemes in Kenya. The results were as indicated in Table 4.9.

Table4.9: Effect of Operational costs on Financial Returns

	Statement	1 SD	2 D	3 NAD	4 A	5 SA
1.	Appointment of trustees has brought efficiency in operational costs	5.1	8.1	19.9	32.2	34.7
2.	Appointment of funds Administrators has brought efficiency in operational costs	-	5.6	23.7	43.2	27.5
3.	Appointment of funds' managers has brought efficiency in operational costs.	33.9	41,8	13.6	12.5	2.2
4.	The internal control system has improved the operational Costs of the scheme.	7.7	14.2	18.8	21.3	38.0
5.	Cooperation between Trustees and the service providers has reduced the operational costs of the schemes.	18.9	22.8	17.5	16.2	24.6
6.	Statutory meetings for Trustees have brought Operational efficiency	15.2	12.5	21.9	23.8	26.6
7.	The RBA training of Trustees has reduced the operational costs of the scheme.	8.9	13.8	17.1	25.3	34.9

8.	Timely reporting to the members has reduced the operational costs of the scheme.	6.9	26.1	20.4	19.1	27.5
9.	Involving members in decision-making process has reduced the operational costs of the scheme.	5.3	19.3	23.1	21.6	30.7
10.	Compliance with the Pension laws has reduced the Operational costs of the scheme.	15.1	19.1	20.6	24.9	20.3

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed

66.9% of the respondents agreed that appointment of trustees has brought efficiency by reducing operational costs while only 13.2% disagreed with the statement.59.3% of the respondents agreed that the appointment of funds Administrators has brought efficiency by reducing Operational costs. 60.9% of the respondents agreed that Appointment of funds' managers have brought efficiency by reducing operational costs. 64.5% of the respondents did not agree with the statement that the training did not bring an impact on the performance of the Trustees. None agreed with the statement. The results indicate that choices made by the Trustees determine the effectiveness by reducing operational costs. The effectiveness of these operations is thus a contributor to good financial returns by reducing operational costs especially as regards the Occupational Pension Schemes.

4.5.2 Effects of The Density of contributions on the Financial Returns

The second objective of this study was to assess the effects of the density of contributions on the financial returns of the Occupational Pension Schemes in Kenya The study sought to determine whether the density of contributions had a significant statistical effect on the financial Returns of Occupational Pension Schemes in Kenya. The key elements in the study were Salary grades of the members, The percentage of contribution charged to the members' salaries, Members' turnover and late remittances

of members' contributions to the Funds custodian The results were as indicated in Table 4.10. 75.5% of the respondents agreed that the salary grades of the members affected their volume of contributions while only 1.1% of the respondents disagreed with the statement.67.4% disagreed with the statement that the percentage of contribution charged to the members' salaries did not affect their total contributions while only 3.5% strongly disagreed with this statement. On the effect of Members' turnover on the total financial Returns, 78.3% disagreed that the turnover had a serious effect on the financial Returns. This is true because very few members do exit occupational pension schemes for any particular year.

Table 4.10: Effects of Density of contributions on the Financial Returns

	Statement	**1 SD**	**2 D**	**3 NAD**	**4 A**	**5 SA**
1.	Salary grades of the members affect their total contributions.	1.1	7.0	16.2	34.1	41.6
2.	The percentage of contribution charged to the members' salaries do not affect their total contributions.	38.2	29.2.	30.6	5.5	3.5
3.	Members' turnover affects the total Financial contributions to the scheme.	46.5	31.8	15.3	12.7	6.3
4.	Late remittances of members' contributions to the Funds custodian affect the total Financial contributions to the scheme.	10.3	6.0	19.1	28.6	48.0

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed.

Only 6.3% of the respondents agreed with this statement. As to whether late remittances of members' contributions to the Funds custodian had an affect the total financial contributions to the schemes, 76.6% of the respondents agreed to this statement.

However, 10.3% disagreed with this statement. The results indicate that choices of rate of contributions made by the Trustees determine the volume of funds for investment. Thus the Density of contributions from members and delayed remittances were noted to be determinants to good financial returns especially as regards the Occupational Pension Schemes.

4.5.3 Effects of the Asset allocations on the financial Returns

The third objective of this study was to assess the effects of the Asset allocations on the financial returns of the Occupational Pension Schemes, Kenya. The study sought to determine whether the Asset allocations had a significant statistical effect on the financial Returns of Occupational Pension Schemes in Kenya. The results were as indicated in Table 4.11.

Table 4.11: Effect of Asset allocations on financial Returns

		1	2	3	4	5
	Statement	**SD**	**D**	**NAD**	**A**	**SA**
1.	The Investment limits stipulated by the RBA affect the investment returns.	1.9	11.4	17.6	28.3	40.8
2.	The choice of the investment mix affects the investment returns.	-	5.6	23.7	43.2	27.5
3.	Regular change of the investment mix does not affect the investment returns.	33.9	41,8	13.6	12.5	2.2
4.	Larger investments in the Government Securities affect the investment returns.	7.7	14.2	18.8	21.3	38.0

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed

69.1% of the respondents agreed that The Investment limits stipulated by the RBA affect the investment returns, while only 13.2% disagreed the statement.70.7% of the respondents agreed that the choice of the investment mix affects the investment returns of the schemes .Only 5.6% disagreed with this statement.75.7% of the respondents disagreed with the statement that regular change of the investment mix does not affect the investment returns. 21.9% of the respondents did not agree with the statement that more investment in the Government Securities affects the investment returns. 59.3% did not agreed with the statement. The results indicate that investment choices made by the Trustees determine the financial returns especially as regards the Occupational Pension Schemes.

4.5.4 Effect of Risk preferences on financial Returns

The study sought to determine the Risk preferences on the financial Returns of Occupational Pension Schemes in Kenya. The results were as indicated in Table 4.12.

Table4.12: Effect of Risk preferences on financial Returns

	Statement	1 SD	2 D	3 NAD	4 A	5 SA
1.	The risk of default by the members in remitting funds affects the financial returns of the scheme.	5.0	11.0	18.3	24.1	41.6
2.	The risk of default by the sponsoring companies in remitting funds affects the financial Returns.	4.6	10.7	23.8	29.4	31.5
3.	Investing in government Bonds is safer than in other forms of investments	6.5	14.5	15.3	31.7	32.0
4.	The risk of liquidity affects the financial returns of the scheme	7.4	8.2	17.6	27.5	39.3
5.	Aggressive investment choices affect the financial Returns	13.8	15.8	20.1	24.9	25.4

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed

65.7% of the respondents agreed that the risk of default by the members in remitting funds affects the financial returns of the scheme, while 16.0% disagreed with the statement.60.9% of the respondents agreed that the risk of default by the sponsoring companies in remitting funds affects the financial Returns. 15% of the respondents did not agree with the statement. 63.7% of the respondents agreed that the risk of default by the sponsoring companies in remitting funds affects the financial Returns. Only 4.6% disagreed with the statement. 21% of the respondents did not agree with the statement

that the investing in government Bonds is safer than in other forms of investments. 63.7% agreed with the statement. 50.3% of the respondents agreed that the aggressive investment choices affect the financial Returns, while only 29.6% disagreed with the statement. The results indicate that Risk preferences of the Trustees determine the financial returns especially as regards the Occupational Pension Schemes.

4.5.5 Moderating Effect of Regulatory Framework on Financial Returns

The study sought to determine the effect of pension regulatory framework on the financial Returns of Occupational Pension Schemes in Kenya. The results were as indicated in Table 4.13. 58% of the respondents agreed that the regulatory framework on funds remittance dates affect the financial returns of the scheme, while 24.6% disagreed with the statement.60.9% of the respondents agreed that the regulatory framework on fees charged by the service providers affects the financial Returns. 15.3% disagreed with the statement .65.7% of the respondents agreed that the regulatory framework on Investment limits affects the financial Returns. 21% disagreed with the statement. 16.6% of the respondents did not agree with the statement that the Regulatory Framework on contributions affects the financial returns of the Occupational Pension Schemes. 66.8% agreed with the statement.

Table 4.13: Effect of Pension Regulatory Framework on financial Returns

	Statement	1 SD	2 D	3 NAD	4 A	5 SA
1.	The Regulatory Framework on funds remittance dates affect the financial returns	5.0	19.6	23.1	27.8	30.2
2.	The Regulatory Framework on fees charged by the service providers affects the financial Returns	4.6	10.7	23.8	29.4	31.5
3.	The Regulatory Framework on Investment limits affects the financial returns	6.5	14.5	15.3	31.7	32.0
4.	The Regulatory Framework on contributions affects the financial returns	7.4	8.2	17.6	27.5	39.3

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed

The results indicate that pension regulatory framework moderates the effects of the independent variables on the financial returns especially as regards the Occupational Pension Schemes.

4.5.6 Financial Returns

The general objective of the study was to analyze the trustee-related determinants of financial returns of the registered occupational pension schemes in Kenya

The results of the descriptive analysis from the questionnaire is indicated in Table 4.14

Table 4.14: Descriptive analysis of financial Returns

	Statement	1 SD	2 D	3 NAD	4 A	5 SA
1.	Inclusion of members in the management of Pension funds has reduced agency conflict	8.1	13.7	16.2	26.8	35.2
2.	Strict adherence to the RBA guidelines has improved the financial returns for the last Ten years	17.5	11.4	23.1	20.6	27.4
3.	Members' financial contribution improved the financial returns in the last Ten years	5.4	8.6	20.9	31.4	33.7
4.	Investment choices made by Trustees have improved the returns on invested funds.	2.2	17.8	12.9	23.1	44.0
5.	Prompt remittance of collected funds has improved the financial returns for the last Ten years.	10.1	14.3	16.2	19.4	40.0
6.	Information provided in the AGMs has improved the financial returns for the last Ten years	12.6	13.8	17.0	20.2	36.4

SD=Strongly Disagree, D=Disagree, Not agreed or disagreed, A=Agreed, SD=Strongly agreed

62.0% of the respondents agreed that inclusion of members in the management of Pension funds has reduced agency conflict, while 21.8% disagreed with the statement.48% of the respondents agreed that strict adherence to the RBA guidelines has improved the financial returns for the last Ten years 28.9% of the respondents did not agree with the statement. 65% of the respondents agreed that the Members' financial contribution improved the financial returns in the last Ten years. However, 14% disagreed with the statement. 20% of the respondents did not agree with the statement that Investment choices made by Trustees have improved the returns on invested funds. 67.1% agreed with the statement. 24.4% of the respondents did not agree with the statement that prompt remittance of collected funds has improved the financial returns for the last Ten years 59.4% agreed with the statement. 56.6% of the respondents agreed

that information provided in the AGMs has improved the financial returns for the last Ten years while 26.4% disagreed with the statement. The results indicate that financial returns were an important factor for consideration especially as regards the Occupational Pension Schemes. It is measured through a return on investment, Return on Financial Assets and return on the changes in the funds value. Table 4.14.

4.6 Analysis of Secondary Data

Secondary data was used to cross validate the primary data collected through the questionnaire (Ng'ang'a 2017).The data can be used to assess the generalizability of the findings (Thornhill *et. al.*2009). The Kolmogorov–Smirnov (K–S) test was used to determine the normality of the secondary data. The Null Hypothesis was Ho: The data set was normally distributed. The p-value was compared with 0.05 at 95% level of confidence. The results of the normality tests are indicated in Table 4.15.

Table 4.15 Normality Tests for Secondary data

Variable	Number sampled	Kolmogorov Smirnov Z	p-value
ROA	275	2.344	0.000
Operational Costs	275	2.308	0.000
Density of Contributions	275	2.579	0.000
Asset allocations	275	2.633	0.000
Risk Preferences	275	2.411	0.000
Regulatory framework	275	2.582	0.000

Table 4.15 indicated that all the independent variables from the secondary data were normally distributed since the p-values were less than 0.05. The secondary data was therefore suitable, valid reliable and would enable the researcher to answer the research questions as well as meet their objectives. The secondary data collected from the RBA reports for 275 sampled data included the financial Performances, the operational costs the contributions of members, their asset allocations, as well as their risk preferences

from the year from 2006 upto 2015.The linearity of the data was assumed in the model such that;

$Y=\beta_0 + \beta_1$ Cost. + β_2Cont + β_3 Strat.+ β_4 Risk +e……..Equation 4.1

A panel data for the 275 sampled units which were in existence for the ten(10) years. This ensured that there was a balanced panel data since the results of each sample was collected for the 10 years. For analysis purposes, the least squares equation was used for the 2750 units. The residual term, indicated absence of the autocorrelation and the Fixed Effects (EF) owing to the passage of time did not affect the outcome of the data analysis. Using the Least Squares method, from the SPSS version 22,the multiple regression was

Financial Returns=30.077+ 0.003 Operational costs + 0.008 Density of contributions + 0.006 Asset allocations + 0.002 Risk preferences

4.7 Normality Tests

4.7.1 Sample adequacy for Cost efficiency factors

For this independent variable, the researcher was interested in finding out whether the sample was adequate for factor analysis. The Kaiser-Meyer-Olkin (KMO) Test index ranges from 0 up to 1 and is recommended when the cases to variable ratios were less than 1:5. A KMO index of 0.5 is considered appropriate for the factorization process. Again for factors to be appropriate for factor analysis, the Bartlett's Test of Spherity ,the $p<0.05$ (Osborne,2015). Cost efficiency measures were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5.The results were presented in Table 4.16.

Table 4.16: KMO and Bartlett's Test for Cost efficiency Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.725
Bartlett's Chi-Square	302.473
Bartlett's df	42
Bartlett's sig.	0.000

The sample adequacy according to KMO measure was 0.725 which indicated that the set of variables were suitable for further statistical tests. Bartlett's test of Sphericity (Chi-Square 3022.473, $p < 0.000$) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.7.2 Sample adequacy for Density of Contributions Factors

For this independent variable, the researcher was interested in finding out whether the sample was adequate for factor analysis. Financial contribution densities measures were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5.The results were presented in Table 4.17.

Table 4.17: KMO and Bartlett's Test for Density of Contributions Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.736
Bartlett's Chi-Square	719.552
Bartlett's df	42
Bartlett's sig.	0.000

The sample adequacy according to KMO measure was 0.736 which indicated that the set of variables were suitable for further statistical tests. Bartlett's test of Sphericity (Chi-Square 719.552, p< 0.000) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.7.3 Sample adequacy for Asset allocation factors

For this independent variable, the researcher was interested in finding out whether the sample was adequate for factor analysis. Asset allocation measures were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5.The results were presented in Table 4.18.

Table 4.18: KMO and Bartlett's Test for Asset Allocation Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.818
Bartlett's Chi-Square	992.740
Bartlett's df	42
Bartlett's sig.	0.000

The sample adequacy according to KMO measure was 0.818 which indicated that the set of variables were suitable for further statistical tests. Bartlett's test of Sphericity (Chi-Square 992.740, p< 0.000) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.7.4 Sample adequacy for Risk Preferences factors

For this independent variable, the researcher was interested in finding out whether the sample was adequate for factor analysis. Risk control practices measures were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5.The results were presented in Table 4.19.

Table 4.19: KMO and Bartlett's Test for Risk Preferences Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.830
Bartlett's Chi-Square	979.582
Bartlett's df	42
Bartlett's sig.	0.000

The sample adequacy according to KMO measure was 0.830 which indicated that the set of variables were suitable for further statistical tests. Bartlett's test of Sphericity (Chi-Square 979.582, $p < 0.000$) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.7.5 Sample adequacy for Regulatory Framework Factors

For this independent variable, the researcher was interested in finding out whether the sample was adequate for factor analysis. Regulatory Framework measures were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5. The sample adequacy according to KMO measure was 0.786 which indicated that the set of variables were suitable for further statistical tests. The results were presented in Table 4.20. Bartlett's test of Sphericity (Chi-Square 952.771, $p < 0.000$) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

Table 4.20: KMO and Bartlett's Test for Regulatory Framework Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.786
Bartlett's Chi-Square	952.771
Bartlett's df	42
Bartlett's sig.	0.000

Bartlett's test of Sphericity (Chi-Square 952.771, p< 0.000) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.7.6 Sample Adequacy for Financial Returns Factors

For this dependent variable, the researcher was interested in finding out whether the sample was adequate for statistical analysis. Financial returns factors were subjected to KMO and Bartlett's Test to check whether they met the minimum threshold of 0.5.The results were presented in Table 4.21.

Table 4.21: KMO and Bartlett's Test for Financial Returns Factors

Indicator	Coefficient
Kaiser-Meyer-Olkin Measure	0.701
Bartlett's Chi-Square	722.819
Bartlett's df	42
Bartlett's sig.	0.000

The sample adequacy according to KMO measure was 0.701 which indicated that the set of variables were suitable for further statistical tests. Bartlett's test of Sphericity (Chi-Square 722.819, p< 0.000) indicated that the variables were uncorrelated and thus were suitable for factor analysis.

4.8 Diagnostic Tests

These included factor analysis, collinearity and ANOVA tests.

4.8.1 Factor Analysis Results

Factor analysis was conducted using the Principal Components Method (PCM) on the six (6)financial returns measures in order to determine whether the variables were significant to the financial returns of the Occupational Pension Schemes. The aim was to retain a small number of factors which had the highest influence on the financial Returns. Each factor was assigned a communality value of 1.0 .The communalities were assigned to show the proportion of variance that the factors contributed to explaining a particular variable.

Statistically, communality is the sum of squared loadings for a variable across all the factors. The SPSS provided two major extraction methods, namely the Principal factor analysis and the principal axis factoring. This thesis adopted the principal factor method for factor extraction. The higher the value of communality for a particular variable after extraction, the higher it is the amount of variance explained by the external factor. Table 4.22 gives the initial and extraction communalities which were obtained using the extracted factors. Extraction of communalities for each variable gave the total amount of variance in that variable as explained by all factors. The results were as presented on Table 4.22.

Table 4.22: Communalities

Component	Initial	Extraction
1	1.000	0.759
2	1.000	0.639
3	1.000	0.558
4	1.000	0.842
5	1.000	0.627
6	1.000	0.759

Extraction Method: Principal Component Analysis.

From the Table 4.16, it is clear that all the factors analyzed indicated a value above 0.5.Thus all the factors were in support of the study of financial returns.

4.8.2 Total Variance Explained

The summaries of the percentages of the original variation explained by the Factor Analysis in this thesis were indicated in Table 4.23 .This table gives an indication of the number of useful factors. Although there were 6 components that were considered, the first 4 proved to be useful since their Eigen values were above one (1). The rating given to any one attribute is partially the result of the variables (rows) and factors (columns).The squared factor loading is the percent of variance in that indicator variable as explained by the factor.

Table 4.23: Total Variance Explained Financial Returns Factors

	Initial Eigen values			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.958	57.13	57.13	4.958	57.13	57.13
2	0.781	15.02	72.15			
3	0.710	8.85	82.00			
4	0.314	9.29	91.29			
5	0.388	6.56	97.85			
6	0.122	2.15	100.00			

Extraction Method: Principal Component Analysis

Out of the four factors subjected to factor analysis, only three factors scored 0.4.Thus only three factors were retained for analysis. However, there was one critical factor that accounted for 57.13% of the total variance in the construct. This is above the recommended 50% of the total variance.

4.8.3 Rotated Factor Matrix

The rotated component financial returns measures were as indicated in Table 4.24. From the Table 4.24, financial returns had six components with very high loadings and thus very significant to the study of financial Returns. Other factor not included in the study of factor loadings were deemed insignificant and as such their influence were explained by the studied factors.

Table4.24: Rotated Component Financial Returns Measures

Statement	Component
	1
1.Inclusion of members in the management of Pension funds has reduced agency conflict	0.795
2.Strict adherence to the RBA guidelines has improved the financial returns for the last Ten years	0.783
3.Members' financial contribution improved the financial returns in the last Ten years	0.686
4. Investment choices made by Trustees have improved the returns on invested funds.	0.772
5. Prompt remittance of collected funds has improved the financial returns for the last Ten years.	0.803
. 6.Information provided in the AGMs has improved the financial returns for the last Ten years	0.695

4.8.4 Multi collinearity

This thesis used Variance inflation Factor and Tolerance level to test whether there existed any Multi Collinearity between independent variables. Either ,a Variance inflation Factor of less than 10 or a Tolerance level greater than 0.1 was considered acceptable. Table 4.25 summarizes the results. All the independent variables indicated a tolerance level greater than 0.1 with Risk control practice having the highest score while investment choices scoring the least.

Table 4.25: Multi Collinearity Diagnostics

Independent Variable	Tolerance Level	VIF
Operational costs	0.813	1.230
Density of Contributions	0.784	1.276
Asset allocations	0.766	1.305
Risk Preferences	0.829	1.206

At the same time all the independent variables indicated a VHF of less than 4 with investment choices scoring the highest factor of 1.305 and Risk preferences recording the lowest score of 1.206.These results indicated an absence of Multi collinerity between independent variables. Thus all the variables were statistically significant for the inclusion in the prediction model.

4.8.5 ANOVA for Financial Asset Returns and Independent Variables

The results of Analysis of Variance for all the independent variables and the Return on Financial Assets were presented in Table 4.26.

Table 4.26: The ANOVA Test

Model	Sum of Square	df	Mean Square	*F*	Significance of *F*
Regression	17.426	3	5.809	129.956	0.000[b]
Residual	12.104	271	0.0447		
Total	29.53	274			

a. Predictors: (Constant), Operational efficiency, density of contributions, Investment strategies, Risk control practices

b. Dependent Variable: Return on Financial Assets

The ANOVA test results on the trustee-related determinants of financial returns of Occupational pension schemes revealed F-statistic of 129.956 which was significant at 0.05 ($p < 0.05$).The p-value was 0.000 which was less than 0.05.The researcher concluded that the four independent variables were critical factors in the determination of Return on Financial Assets and thus the financial returns of occupational pension schemes in Kenya. The fitness of the model was also examined. Table 4.28 indicates the results of the findings.

Table 4.27: Model Summary for Return on Financial Assets

R	"R" square	Adjusted "R" square	Std. Error of the Estimate	Durbin-Watson Sig. F. Change
0.699	0.488	0.576	0.421	2.311

From Table 4.27, the R-Squared which represents the coefficient of determination was 0.488.Thus all the independent variables assessed accounted for 48.8% of the total change in the Return on Financial Assets. The variables were statistically significant in explaining the financial returns of Occupational Pension Schemes in Kenya. The Durbin Watson test results were 2.311.This was within the statistical range of 0 to 4.There was therefore no autocorrelation in the model residue.

4.8.6 ANOVA for Equity Returns and Independent Variables

The results of Analysis of Variance for all the independent variables and the Return on Equity were presented in Table 4.28. The ANOVA test results on the trustee-related determinants of financial returns of Occupational pension schemes revealed F-statistic of 220.0212 which was significant at 0.05 ($p < 0.05$). The p-value was 0.015 which was less than 0.05.The researcher concluded that the four independent variables were critical factors in the determination of Return on Equity and thus the financial returns of occupational pension schemes in Kenya.

Table 4.28: The ANOVA Test

ANOVA[a]

Model	Sum of Square	df	Mean Square	*F*	Significance of *F*
Regression	5394.67	3	1798.223	220.0212	0.015[b]
Residual	2215	271	8.173		
Total	7609.67	274			

a. Predictors: (Constant), Operational efficiency, density of contributions, Investment strategies, Risk control practices
b. Dependent Variable: Return on Equity

The fitness of the model was also examined. Table 4.29 indicates the results of the findings.

Table 4.29: Model Summary for Return on Equity

R	"R" square	Adjusted "R" square	Std. Error of the Estimate	Durbin-Watson Sig. F. Change
0.711	0.505	0.487	1.361	3.024

From Table 4.29, the R-Squared which represents the coefficient of determination was 0.505.Thus all the independent variables assessed accounted for 50.5% of the total change in the Return on Equity. The variables were statistically significant in explaining the financial returns of Occupational Pension Schemes in Kenya. The Durbin Watson test results were 3.024.This was within the statistical range of 0 to 4.There was therefore no autocorrelation in the model residue.

4.8.7 ANOVA for Independent Variables and Return on Investment

The results of Analysis of Variance for all the independent variables and the Return on investment were presented in Table 4.30. The ANOVA test results on the trustee-related

determinants of financial returns of Occupational pension schemes revealed F-statistic of 29.786 which was significant at 0.05 ($p < 0.05$). The p-value was 0.028 which was less than 0.05.The researcher concluded that the four independent variables were critical factors in the determination of Return on investment and thus the financial returns of occupational pension schemes in Kenya.

Table 4.30: The ANOVA Test

ANOVA[a]

Model	**Sum of Square**	**df**	**Mean Square**	***F***	**Significance of *F***
Regression	12679	3	4226.33	29.786	0.028[b]
Residual	38452	271	141.889		
Total	51131	274			

a. Predictors: (Constant), Operational efficiency, density of contributions, Investment strategies, Risk control practices
b. Dependent Variable: Return on Equity

The fitness of the model was also examined. Table 4.31 indicates the results of the findings. From Table 4.31, the R-Squared which represents the coefficient of determination was 0.4529.Thus all the independent variables assessed accounted for 45.29% of the total change in the Return on Investment. The variables were statistically significant in explaining the financial returns of Occupational Pension Schemes in Kenya. The Durbin Watson test results were 2.619 .This was within the statistical range of 0 to 4.There was therefore no autocorrelation in the model residue.

Table 4.31: Model Summary for Return on Equity

R	"R" square	Adjusted "R" square	Std. Error of the Estimate	Durbin-Watson Sig. F. Change
0.673	0.4529	0.4387	1.462	2.619

This outcome shows that much of the financial returns of occupational pension schemes is affected by the predictors such as Operational costs, density of contributions, investment strategies, and Risk preferences associated with the Occupational Pension Schemes. This finding is in tandem with that of Ng'etich (2012) who established that Density of contributions lead to high scheme performance which was also established by Ogonda (2016) who revealed that when contributions of the employer and employee intensify, the financial returns of the pension scheme responds positively.

4.9 Inferential statistics

According to Orodho (2009) inferential statistics are applied whenever a researcher wishes to infer things about the population from the information sourced from a small sample derived from the population. Thus inferential data analysis was important in this study in order to generalize about the performance of the bigger population (Thornhill *et. al.* 2009).

4.9.1 Correlation Results for Financial Returns

The secondary data obtained from the RBA records relating to the Occupational Pension Schemes were analyzed using Correlation analysis. A Pearson correlation coefficient (r) determines the strength of the linear relationship between the components. The analysis of the strength of the relationship is important since it increases the predictive power of the model. Ordinarily, a correlation coefficient of 0.7 and above is usually considered positively or negatively strong. The six test instruments for measuring financial returns which included members' involvement, RBA guidelines, Financial Contributions,

investment choices and AGM information were all correlated to determine the nature of the correlation between the components. Table 4.32 indicates the results.

Table 4.32: Correlation Coefficients

Pearson Correlation	Members' Involve.	RBA Regul.	Fin. Contr.	Invet. Choices	Prom. Rem.	AGM Inf.
members' involvement	1					
RBA guidelines	0.51*	1				
Financial Contributions	0.76*	0.43*	1			
investment choices	0.88*	0.96*	0.52*	1		
Prompt remittance	0.79*	0.72*	0.74*	0.63*	1	
AGM information	0.57*	0.65*	0.58*	0.74*	0.49*	1

**Correlations significant at 0.05 level of Significance.*

There is a moderate correlation between adherence to the RBA regulations and involvement of members in the management of occupational pension schemes. The correlation coefficient was 0.51 with a p-value of 0.001 at 5% significance level. This implied that whenever members were engaged in the management of Occupational Pension Schemes, there is a marked improvement in adhering to the RBA regulations. There is a high correlation of 0.76 between members' involvement in the management of the Pension Schemes and the financial contributions from the members. The p-value was 0.000 at 5% significance level.

Thus, the level of contributions improves whenever members were involved in overseeing how the funds were utilized. There is a moderate correlation index of 0.43 with a p-value of 0.001 at 5% significance level, between adherence to the RBA regulations and the financial contributions from the members. The RBA regulations seem to be a hindrance in the attempt to collect contributions from the members. The correlations coefficients between investment choices and the members' involvement, RBA regulations and financial contributions were 0.88, 0.96 and 0.52 respectively. Their p-values were 0.002, 0.000 and 0.003 respectively at 5% significance level. Thus whenever members were engaged in the management of Occupational Pension Schemes they were bound to make better investment choices.

However, strict adherence to the RBA regulations seems to be a significant deciding factor in deciding the investment choices made. The correlation coefficients between prompt remittances of funds collected to the funds' managers were 0.79, 0.72, 0.74 and 0.63 respectively. Their p-values were 0.000, 0.001, 0.000and 0.001 respectively at 5% significance level. There is a high correlation between prompt remittances of funds collected to the funds' managers and involvement of members in the management of occupational pension schemes. Members were able to put pressure on the management to remit funds promptly. The RBA regulations were very strict on the remittance of the collected funds to the funds' managers for investment.

The information collected from the AGMs is highly correlated to Members involvement in the management of Pension Schemes, strict adherence to RBA regulations, the investment choices, improves remittances of funds. The correlation coefficients between information provided in the Annual General Meetings and the members' involvement in management of Pension funds, RBA regulation, financial contribution, investment choices and prompt remittances of Funds respectively were 0.57, 0.65, 0.58, 0.74 and 0.49 respectively. Their p-values were 0.001, 0.000, 0.000, 0.001 and 0.001 respectively at 5% significance level.

4.9.2 Regression between Dependent Variable and the Independent Variables

Multiple regression attempts to determine whether a group of variables together predict a given dependent variable (Mugenda &Mugenda, 2003). The general purpose of multiple linear regressions (the term was first used by Pearson, 1908) is to learn more about the relationship between several independent or predictor of variables and a dependent or criterion variable (Namusonge, 2010). In the study, multiple regression analysis was done since the study had more than one independent variable. Table 4.33, indicates the regression coefficients.

Table 4.33: Regression Coefficients

Model of the variables	Unstandardized coefficients		Unstandardized coefficients	t	Sig.
	B	Std. Error	Beta		
1(constant)	1.537	0.427		1.222	0.117
Operational costs	0.726	0.002	0.523	2.740	0.002
Density of Contributions	0.508	0.318	0.771	2.415	0.001
Asset allocation	0.681	0.266	0.706	2.643	0.000
Risk preferences	0.567	0.403	0.565	2.976	0.000

Extraction Method: Principal Component Analysis

The coefficients were both standardized and unstandardized. Values under the column "B" represent the unstandardized coefficients. There is a constant term of 1.537 with a standard error of 0.427.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \ldots\ldots\ldots \text{Equation 4.2}$$

Thus, Financial Returns=1.537+ 0.726 Operational costs + 0.508 Density of contributions + 0.681 Asset allocations + 0.567 Risk preferences

However, the values presented under column Beta, in this table, had been converted to Z-scores by first subtracting the mean of variables from the variable and then dividing the resultant difference by the standard deviation for a particular variable in a sample. This is referred to as the standardization process. When all the variables were in standardized form, the Y-intercept thus reduces to Zero as indicated in the *beta* column from an SPSS Output.

4.10 Moderating effect of the Regulatory Framework.

The fifth objective specific objective of this thesis was to determine moderating effect of regulatory framework on the relation between the independent variables and the financial returns of the Occupational Pension Schemes. Since each independent variable interacted with the moderating variable the estimation equation for the model was as indicated in Equation. 4.1

$$Y = \beta_0 + \beta_1 X_1 *. M + \beta_2 X_2 *. M + \beta_3 X_3 *. M + \beta_4 X_4 *. M + e \ldots\ldots \text{Equation 4.1}$$

The results of the regulatory framework (moderating variable) on the relationship between the independent variables and the financial returns (dependent variable) were indicated in Table 4.34 From the results in Table 4.35,the prediction model under moderated environment would be;

$$Y = 31.64 + 0.002 X_1 *. M + 0.009 X_2 *. M + 0.007 X_3 *. M + 0.004 X_4 *. M$$

From this regression equation ,it can be noted that if Operational Efficiency, Density of contribution, Asset allocations and Risk preferences to a constant zero, financial returns would be 31.64%.A unit improvement in the Operational costs would result to an improvement of factor 0.002 in the improvement of financial returns of occupational pension schemes in Kenya.

Table 4.34: Multi linear Regression after Moderating

Variable	B	Std. Error	t	Sig.
	275			
(Constant)	31.640	1.082	27.04	0.000
Operational costs and financial Returns (X_{1*}.M)	0.002	0.005	2.011	0.001
Density of contributions and financial returns(X_{2*}.M)	0.009	0.003	2.341	0.012
Asset allocations and financial returns(X_{3*}.M)	0.007	0.006	3.512	0.014
Risk preferences and financial returns(X_{4*}.M)	0.004	0.001	2.874	0.003
R Square = 67.23%				
F statistics(p-value) =10.657(0.002)				

Unit changes in the density of contributions, Investment choices and Risk preferences result to a positive 0.009, 0.007 and 0.004 units in the improvement of financial returns of the occupational pension schemes. After moderation $\mathbf{R^2}$ improved to 63.23%. The interaction was statistically significant since the p-values were less than 0.05. Thus, the Regulatory Framework was a moderating factor on the on the relationship between the independent variables and the financial returns (dependent variable).

4.11 Triangulation of the Primary and the Secondary Data Results.

The findings from the primary data, which was largely about perceptions, were cross validated with the secondary data which represented the actual data. Table 4.35 shows the comparative results from the different data related to the same sampled units.

Table 4.35: Triangulation of the Primary and the Secondary Data Results

Independent Variables	Primary Data Results(Perceptions)	Secondary Data Results (Financial Data)	Level of consistency between Primary and Secondary Data
Operational Costs	0.002 Not very significant	0.003 Not very significant	Consistent
Density of Contributions	0.009 very significant	0.008 very significant	Consistent
Asset Allocation	0.0007 very significant	0.006 very significant	Consistent
Risk Preferences	0.004 Significant	0.002 Not very significant	Inconsistent

From the Table 4.36, there was consistency in opinion and actual financial data in the case of operational costs, Density of Contributions and Asset allocation. However there was no consistence in the opinion and actual financial data in the case Risk Preferences. This thesis therefore concluded that both density of Contributions and Asset allocation are the greatest contributors to the financial performances of occupational pension schemes. Operational costs and Risk preferences are not very big contributors but their respective influences are considerable.

4.12 Hypothesis Testing

Hypothesis Testing was conducted using simple regression model for the four independent variables and the financial Returns(the dependent variable)The results of hypotheses testing showed that all the four hypothesized relationships were statistically significant at 0.05 level of confidence as follows;

Research Hypothesis One

H_{o1}; There is no statistically significant effect of Operational costs on the trustee-related determinant of financial returns of an Occupational Pension Scheme in Kenya. Using the factor scores from questionnaire this particular hypothesis was tested**.** The research findings indicated that Operational costs had a β_1=0.726 with a p-value of 0.002 which was less than the critical P-value,α=0.05.In addition, the t-test value on the effect of Operational costs on the financial returns was 2.740,which implied that the effect of Operational costs on financial returns surpasses the critical t-value of 2.353 at 0.05 level of significance. The results of the relationship between Operational costs and the financial returns of an Occupational Pension Scheme were indicated in Table 4.36.The results indicate a positive relationship between Operational costs and the financial returns since "r" was 0.611.This implied that if the Operational costs is improved, then the financial returns of Occupational Pension schemes would no doubt improve if other factors were held constant. A simple regression analysis based on the factors was conducted with Operational costs as the predictor variable and the financial returns as the dependent variable. The simple model was;

$$Y_1 = \alpha + \beta_1 X_1 + e$$

Table4.36: The Correlation between Operational Costs and the Financial Returns

Component	**Correlation**	**Operational Costs**	**Financial Returns**
Operational Costs	Pearson Correlation	1	0.611
	Sig.(2-tailed)		0.002
	N	**275**	**275**

The R^2 was 0.3733 indicating that Operational costs contributes 37.33% on the changes of financial of Occupational Pension Schemes. These results imply that we reject the

null hypothesis and accept the alternative hypothesis, that the effect of Operational costs on the financial returns of an Occupational Pension Scheme in Kenya is statistically significant.

Research Hypothesis Two

H_{o1}; There is no statistically significant effect of Density of contributions on the trustee-related determinants of financial returns of Occupational Pension Schemes in Kenya. The research findings indicated that the Density of contributions had a β_2=0.508 with a p-value of 0.001 which was less than the critical P-value,α=0.05.In addition, the t-test value on the effect of Density of contributions on the financial returns was 2.415,which implied that the effect of Density of contributions on financial returns surpass the critical t-value of 2.353 at 0.05 level of significance. The results of the relationship between Density of contributions and the financial returns of an Occupational Pension Scheme were indicated in Table 4.37.The results indicate a positive relationship between Density of contributions and the financial returns since "r" was 0.798.This implied that if the Density of contributions is improved, then the financial returns of Occupational Pension schemes would no doubt improve if other factors were held constant.

Table 4.37: Correlation between Density contribution and Financial Returns

	Correlation		
Component	**Density of Contributions**		**Financial Returns**
Density of Contributions	Pearson Correlation	1	0.798
	Sig.(2-tailed)		0.001
	N	**275**	**275**

A simple regression analysis based on the factors was conducted with density of contributions as the predictor variable and the financial returns as the dependent variable. The simple model was;

$$Y_2 = \alpha + \beta_2 X_2 + e$$

The R^2 was 0.6368 indicating that densities of contributions contribute 63.68% on the changes of financial of Occupational Pension Schemes. These results imply that we reject the null hypothesis and accept the alternative hypothesis, that the effects of density of contributions on the financial returns of Occupational Pension Schemes in Kenya were statistically significant.

Research Hypothesis Three

H_{o1}; There is no statistically significant effect of Asset allocations on the trustee-related determinants of financial Returns of Occupational Pension Schemes in Kenya. The research findings indicated that the Asset allocations had a β_3=0.681 with a p-value of 0.000 which was less than the critical P-value,α=0.05.In addition, the t-test value on the effect of Density of contributions on the financial returns was 2.643,which implied that the effect of Asset allocations on financial returns surpasses the critical t-value of 2.353 at 0.05 level of significance. The results of the relationship between Asset Allocation and the financial returns of an Occupational Pension Scheme were indicated in Table 4.38The results indicate a positive relationship between Asset allocations and the financial returns since "r" was 0.757.This implied that if the Asset allocations is improved, then the financial returns of Occupational Pension schemes would no doubt improve if other factors were held constant.

Table 4.38: Correlation between Asset Allocation and Financial Returns

	Correlation		
Component	**Asset Allocation**		**Financial Returns**
Asset allocations	Pearson Correlation	1	0.757
	Sig.(2-tailed)		0.000
	N	**275**	**275**

A simple regression analysis based on the factors was conducted with Asset allocations as the predictor variable and the financial returns as the dependent variable. The simple model was;

$$Y_3 = \alpha + \beta_3 X_3 + e$$

The R^2 was 0.573 indicating that Asset allocations contribute 57.3% on the changes of financial of Occupational Pension Schemes. These results imply that we reject the null hypothesis and accept the alternative hypothesis, that the effects of Asset allocations on the financial returns of Occupational Pension Schemes in Kenya were statistically significant.

Research Hypothesis Four

H_{o1}; There is no statistically significant relationship between Risk preferences and the financial returns of Occupational Pension Schemes in Kenya. The t-test value on the effect of Risk preferences on the financial returns was 2.643, which implied that the effect of Risk preferences on financial returns surpasses the critical t-value of 2.576 at 0.05 level of significance. The results of the relationship between Asset allocations and the financial returns of an Occupational Pension Scheme were indicated in Table 4.39.The results indicate a positive relationship between Asset allocations and the financial returns since "r" was 0.631.This implied that if the Asset allocations is improved, then the financial returns of Occupational Pension schemes would no doubt improve if other factors were held constant.

Table 4.39: Correlation between Risk Preferences and Financial Returns

Component	Correlation Risk preferences		Financial Returns
Risk Preferences	Pearson Correlation	1	0.631
	Sig.(2-tailed)		0.000
	N	**275**	**275**

A simple regression analysis based on the factors was conducted with Asset allocations as the predictor variable and the financial returns as the dependent variable. The simple model was;

$$Y_4 = \alpha + \beta_4 X_4 + e$$

The research findings indicated that the Risk preferences had a β_4=0.567 with a p-value of 0.000 which was less than the critical P-value, α=0.05.The R^2 was 0.3982 indicating that Risk preferences contribute 39.82% on the changes of financial of Occupational Pension Schemes. These results imply that we reject the null hypothesis and accept the alternative hypothesis, that the effects of Asset allocations on the financial returns of Occupational Pension Schemes in Kenya were statistically significant.

Research Hypothesis Five

H_{o1}; There is no statistically significant moderating effect of Pension Regulatory Framework on the relation between trustees-related factors and financial returns of Occupational Pension Schemes in Kenya. The moderating effect of Pension Regulatory Framework can be noted by comparing Table 4.33 on regression coefficients and Table 4.34 on the results of the Multi linear Regression coefficients after moderating the independent variables. The β_1 of Operational costs was 0.567 as compared to β_1 of Operational efficiency being 0.002 under moderated environment. This means that, the effect of Operational costs on financial returns is drastically reduced when the regulatory framework is in place. Again, the β_2 of the Density of contributions was 0.508

as compared to β_2 of Density of contributions being 0.009 under moderated environment. This means that, the effect of density of contributions on financial returns is drastically reduced when the regulatory framework is in place. The β_3 of Investment strategy was 0.681as compared to β_3 of Investment strategy being 0.007 under moderated environment. Thus the effect of Investment strategy on financial returns is drastically reduced when the regulatory framework is in place. Finally, the β_4 of the Risk preferences was 0.567 as compared to β_4 of Risk preferences being 0.004 under moderated environment. This means that, the effect of Risk preferences on financial returns is drastically reduced when the regulatory framework is in place.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study investigated the trustee-related determinants of pension scheme performance. In particular, the study focused on Operational efficiency, density of contributions, investment strategies, Risk preferences, and the Pension Regulatory Framework. This chapter gives a summary of the information collected and statistical treatment of analysis, discussion with reference to the specific objectives and assessment of the meaning of results by evaluating and interpreting them. The conclusions arrived at relate directly to specific objectives and the research hypotheses. Ordinarily, research studies come across areas that call for further researches. In line with this spirit, the recommendations will be made on the suggested areas for further studies to be conducted. Each recommendation traces its roots directly to each specific objective and the conclusion arrived at.

5.2 Summary of Findings

The literature showed that the Occupational Pension Scheme financial returns is affected by the Operational efficiency, density of Contributions, Asset allocations and the Risk preferences adopted by the Trustees. According to the research conducted, the influence of these independent variables on the financial returns is greatly moderated by the Pension Regulatory Framework. The following is a summary of the study findings:

5.2.1 Operational costs and financial Returns

The first specific objective of the study was to determine whether Operational costs had was a determinant on the financial performance of the occupational Pension Schemes. In particular, this thesis sought to ascertain out whether the operational costs incurred by

the trustees had an effect on the financial returns of the Occupational Pension Schemes. The trial of the hypothesis confirmed that since the p-value of 0.002 was less than the pre-set significance level of 0.05, the null hypothesis was rejected and the conclusion was that Operational costs has a positive effect on the financial returns of Occupational pension schemes. The results from the primary data were confirmed by the results from the secondary data that the operational costs had an effect on the financial performance of the occupation pension schemes. .

5.2.2 Density of contributions and Financial Returns

The second specific objective of the thesis was to determine the effect of the density of Contributions on the financial returns of the occupational Pension scheme. In particular, this thesis sought to find out whether members' and sponsors 'contributions had an effect on the financial returns of the Pension Schemes. The test of the hypothesis confirmed that since p-value of 0.001 was less than the pre-set significance level of 0.05, the null hypothesis was rejected .There was a high correlation coefficient of 0.798 between the density of contribution and the financial performance of occupational pension schemes. The results were confirmed by the secondary data which indicated a high coefficient in the multiple regression model

5.2.3 Asset allocations and Financial Returns

The third specific objective of the thesis was to determine the effect of the Asset allocations on the financial returns of the occupational Pension schemes. The test of the hypothesis indicated that the p-value of 0.000 was less than the pre-set significance level of 0.05, thus the null hypothesis was rejected. The conclusion was that Asset allocations were statistically significant factors in influencing the financial returns of the registered pension schemes. There was a high correlation coefficient of 0.757 between the asset allocation and the financial performance of occupational pension schemes. The R^2 was 0.573 indicating that Asset allocations contribute 57.3% on the changes of financial of

Occupational Pension Schemes. The results were confirmed by the secondary data which indicated a high coefficient in the multiple regression model

5.2.4 Risk preferences and Financial Returns

The fourth specific objective of the study was to determine whether Risk preferences had an effect on the financial performance of the occupational Pension schemes. The test of the hypothesis indicated that the p-value of 0.000 was less than the pre-set significance level of 0.05, thus the null hypothesis was rejected. It was concluded that risk preferences have an effect on the financial returns of Occupational pension schemes. The results indicated a positive relationship between risk preferences and the financial returns since "r" was 0.631. However, R^2 was 0.3982 indicating that Risk preferences contribute 39.82% on the changes of financial of Occupational Pension Schemes. There is weak influence of risk preferences on the financial performance of occupational pension schemes in Kenya. The results were confirmed by the secondary data which indicated a high coefficient in the multiple regression model

5.2.5 Pension Regulatory Framework and Financial Returns

The fifth specific objective of the thesis was to determine whether the regulatory framework on Occupation pension schemes had a moderating effect on the variables that were considered to have an effect on the financial returns Occupation pension schemes. The moderating effect of Pension Regulatory Framework can be noted by comparing Table 4.33 on regression coefficients and Table 4.34 on the results of the Multi linear Regression coefficients after moderating the independent variables. The coefficients of the in the multiple linear equation changed to lower values when the moderating effect of the regulatory framework on the relationship between independent variables and the financial performance was analyzed. Thus, the pension regulatory framework is a strong moderating factor as far as financial performance was concerned.

5.3 Conclusions

The general objective of the study was to analyze the trustee-related determinants of financial returns of the registered occupational pension schemes in Kenya. To achieve the general objective, five specific objectives were extracted. Research questions and hypotheses were formulated. The hypotheses of the specific objectives were tested using statistical tools such as correlation analysis, Analysis of variance and regression analysis.

5.3.1 Conclusion of the effect of Operational Costs on financial Results

This first specific objective of the study was to establish the effect of the Cost efficiency on the financial returns of Occupational Pension Schemes in Kenya. Operational costs were then operationalized into; Agency costs, Trustees allowances, RBA levy and Training and meetings costs. The results indicated a high correlation between the components Cost efficiency and the statistical measures of financial Returns. The Beta coefficient as well as the coefficient of determination was high. Furthermore, the null hypothesis was rejected. It can therefore be concluded that Cost efficiency is a Trustee-related determinant which has a statistically significant effect on the financial returns of occupational Pension Schemes in Kenya. If management does not take the operational costs seriously, more funds will be channeled to paying outsiders in terms of the agency fees, RBA levy, Training and meeting costs rather than the members of the occupational pension schemes

5.3.2 Conclusion of the effect of Density of Contributions on financial Results

The second specific objective of the study was to assess the effects of the density of contributions on the financial returns of the Occupational Pension Schemes, Kenya. Density of contributions of contributions was operationalized into; Charging rates, number of contributors, pensionable Salary levels of the members, the percentage of contribution charged to the members' salaries as well as ages of the contributors. Results

indicated a high correlation between the density of contributions and the financial returns of Occupational pension schemes in Kenya .Furthermore, the Beta coefficient as well as the coefficient of determination values of the density of contributions was high. In addition, the null hypothesis was rejected and thus the conclusion was that density of contributions from members is a Trustee-related determinant which had a statistically significant effect on the financial returns of occupational Pension Schemes in Kenya. The collection of funds should be taken seriously by the trustees in order to improve the volume of investment funds.

5.3.3 Conclusion of the effect of Asset allocations on financial Results

The third specific objective of the study was to examine the relationship between Asset allocations and the financial returns of Occupational Pension Schemes in Kenya. Asset allocations were operationalized into; liquidity levels, investment policies, and asset size Asset allocation refers to where the trustees chose to invest their funds. The null hypothesis was rejected and thus the conclusion was that Asset allocations were a Trustee-related determinant which had a statistically significant effect on the financial returns of occupational Pension Schemes in Kenya Results indicated a high correlation between the Asset allocations and the financial returns of Occupational pension schemes in Kenya. Furthermore, the Beta coefficient as well as the coefficient of determination values of the Asset allocations was high. Trustees should prudently allocate assets for investment in a manner that bring more returns to the members otherwise returns will remain in spite of the contributions made by the members.

5.3.4 Conclusion of the effect of Risk preferences on financial Results

The fourth specific objective of the study was to assess the effect of Risk preferences on the financial returns of Occupational Pension Schemes in Kenya. Risk preferences were operationalized into: Risk takers, risk neutral as well as risk averse trustees. Results indicated a high correlation between the Risk preferences and the financial returns of

Occupational pension schemes in Kenya. However, the Beta coefficients as well as the coefficient of determination values of the Risk preferences were relatively low. This indicates that when making investment choices, trustees should always bear in mind the risks associated with those investment.

5.3.5 Conclusion of the effect of Regulatory Framework on financial Results

The fifth specific objective of the study was to determine the moderating effect of the Regulatory Framework of Kenya on the relationship between trustees related-determinants and the financial returns of Occupational Pension Schemes, Kenya. The study examined the compliance level with the RBA regulations. Results indicated a high correlation between the Pension Regulatory Framework and the financial returns of Occupational pension schemes in Kenya. Furthermore, the Beta coefficient as well as the coefficient of determination values of the Pension Regulatory Framework was high. In addition, the null hypothesis was rejected and thus the conclusion was that Pension Regulatory Framework moderates the Trustee-related determinants.

5.4 Recommendations

Based on the findings and the conclusions on the Trustee-related determinant of the financial returns of occupational Pension Schemes in Kenya, the following recommendations were made. These included managerial and policy recommendations.

5.4.1 Managerial Recommendations

The first specific objective of the study was to determine whether Operational costs had was a determinant on the financial performance of the occupational Pension Schemes. Since the operational costs have an influence on the financial results of the occupational Pension Schemes, the board of Trustees should critically re-examine their spending with a view to reducing the costs versus investment returns ratio. Trustees should ensure that there are no duplication of duties, roles or even responsibilities in order to reduce costs

associated with those extra responsibilities. It is also recommended that the right people to be hired and placed to do the right duty. In addition, Processing of Pension benefits should be done within the stipulated period of time to prevent Pension schemes from incurring unnecessary litigation costs. The internal control systems should be enhanced in order to minimize operating costs. The second specific objective of the thesis was to determine the effect of the density of Contributions on the financial returns of the occupational Pension scheme.

Since the density of contribution had the highest effect on all independent variables, trustees should do everything possible to ensure the funds are collected from members in good time and invested immediately. Where possible Trustees can negotiate with the sponsoring institution to reduce the period between when funds are collected from the members and when the funds are remitted to the fund managers for investment purposes. At the same time, liquidity levels should be reduced to bare minimum levels. The third specific objective of the thesis was to determine the effect of the Asset allocations on the financial returns of the occupational Pension schemes. The effect of the Asset allocations on the financial returns was statistically significant. Thus for pension schemes to perform well, Trustees should put in place more aggressive investment strategies. Such strategies should flow with the investment climate change at all times. Moreover, Trustees should embrace the emerging investment opportunities such as mining, energy and the Information Technologies that promise better returns than the traditional conservative sectors of investments such as government treasury bonds, estate investment, and security stock exchange among others.

The fourth specific objective of the study was to determine whether Risk preferences had an effect on the financial performance of the occupational Pension schemes. The risk preferences of the Trustees played a role in the financial performance of occupational pension schemes. In addition, the study observed that higher returns demand taking higher calculated risks. In the light of the post modern Portfolio Theory, the Risk preferences have to be in such a way that there is a covariance between the

investments chosen. Thus the risks associated with the investment choices made should be given a priority. The fifth specific objective of the thesis was to determine whether the regulatory framework on Occupation pension schemes had a moderating effect on the variables that were considered to have an effect on the financial returns Occupation pension schemes. It was observed that the regulatory framework had a significant statistical effect on the financial performance of occupational pension schemes. Thus, Trustees should constantly examine how they would maximize returns given the RBA regulations. The thesis recommends that Trustees should constantly consult service providers as well as monitor the pension industry performance for possible remedial action.

5.4.2 Policy Recommendations

For objective one, a policy recommendation would be for the Retirement Regulatory Authority to come up with a policy that determines the manner in which service charges by the service providers should be determined. Currently, service providers negotiate with Trustees on the amount to be charged for the services rendered. A policy would provide an objective way of determining how much service providers would be paid instead of depending on the negotiation skills of the trustees.

For objective two, a policy recommendation would be for the RBA to come up with a policy that harmonizes the members and sponsors contributions. In addition, stiffer penalties should be imposed upon institutions that delay remitting the funds, for whatever reason. Delays in remitting funds weaken the investment capacities of occupational pension schemes. Investment opportunities would be lost in the process of delaying the remittance of funds for investments. In addition RBA should impose a liquidity ratio in order to ensure that minimal funds are in the bank for day to day managing of the business while the bigger chunk is invested.

For the third objective, a policy recommendation would be for the RBA to allow Trustees and service providers to be regularly review investment policy as need arises .In addition, RBA should allow occupational pension schemes to participate in the emerging investment opportunities in Kenya such as Mining, oil refining, infrastructures, information Technology and many other areas. By so doing, diversifiable risks will be reduced even further in accordance with the post-modern portfolio theory. For the fourth objective, a policy recommendation would be for the RBA enhance education and training programmes of the Trustees. Such exposure programmes would greatly enhance management and investment awareness and possibly change the attitude of the Trustees towards risks.

Finally, given the significant moderating role played by the regulatory framework, a policy recommendation for the fifth objective, would be for the RBA to formulate a policy that will allow Trustees invest in profitable opportunities given the competitive investment environment especially in Kenya. Perhaps an insurance policy to cover investment risks can also be considered worthwhile.

5.5 Areas for Further Research

As far as Operational costs is concerned as well as pension fund risks, their respective influence on the financial Returns was moderate. Studies should be conducted to find out why their influences were moderate for a paradigm shift. This thesis also found that both the density of contributions and the Asset allocations have significant impact on the financial returns of occupational pension schemes. The researcher recommended the key factors under density of contributions be examined further to find out which among them is a greater contributor of financial returns in order to allow stakeholders to pay more attention to them. Researches can be done on the Asset allocations to determine the compliance rate with the RBA regulations in relation to the investment limits prescribed by the RBA. This will assist the policy makers reconsider whether the investment limits should be revised or not In addition, from the study it was established that 92.1% of the

change in the dependent variable was explained by the five independent variables combined, while 7.9% of the change in the dependent variable was not accounted for by the five independent variables hence the need to investigate the other factors that could have an effect on the dependent variable. Over and above, since this thesis was on the effect of trustee-related occupational pension schemes on their financial Returns, a study should be conducted on the effect of sponsor-related or even regulatory-related determinants on the financial returns of occupational pension schemes.

REFERENCES

.

Adams, J., Khan, H., & Raeside, R. (2014). *Research methods for business and social science students.* New Delhi: SAGE Response.

Angina, M. N. (1985). Employers' Accounting for the cost of pension schemes in Kenya.

Antolín, P., & Stewart, F. (2009). *Private pensions and policy responses to the financial and economic crisis.*

Asher, A. (2007). The design of retirement schemes:Possibilties and imperatives. *Unpublished Doctoral Dissertation*.

Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor Sentiment. *Journal of financial economics*, 49(3), 307-343.

Barbone, L. (2010, October). The great crisis and Fiscal institutions in Eastern and Central Europe and Central Asia.Policy research paper. (working paper No.5453).

Baronov, D. (2015). *Conceptual foundations of social research methods*.. Routledge.

Barros, P. c. (2006). *Performance evaluation of pension Funds management companies with data envelopment analysis* . (Vol. 00092). online.

Besley, T. (2003). Pension governance and choice between defined Benefits and Defined contribution Plans.centre for economicResearch.

Beste, A., Leventhal, D., & Williams, J. (2002). *Selecting an Efficient Investment Portfolio.* Lafayette College.

Bikker, Jacob , A., Broeders, Dirk, & Hollan. (2012, September). Pension Funds' Asset Allocation and Participant Age: A Test of the Life-Cycle Model. *Journal of Risk and Insurance, 79*(3), 595-618.

Blake, D., Lehmann, B. N., & Timmermann, A. (2002). Performance clustering and incentives in the UK pension fund industry. *Journal of Asset Management*, 3(2), 173-194.

Bovenberg, L. A. (2008). Dutch policies towards Aging;European view. *7(2)*, 265-275.

Brigham, F. E. (2004). *Intermediate finanancial managent* (Vol. 8). NatorpBoulevard, Ohio, Mason: South Western 5191.

Campbell , J. Y., & Viceira, L. M. (2012). *Strategic Asset Allocation: Portfolio choice for long term investors.* UK: Oxford University Press.

Carpio, E. J. (2002). The reformed pension systems in Latin America. World Bank Social Protection Discussion Paper Series, .

Casey, B., Oxley, H., Whitehouse, E., Antolin, P., & Duval , R. (2003). *Policies for an ageing society: recent measures and areas for further reform.* OECD Publishing.

Chansarn, S. (2013). Economic preparation for retirement of population aged 50–59 years old in Thailand. *Procedia-Social and Behavioral Sciences, 91*, 640-647.

Chirchir, S. (2007). The Rationale for quantitative portfolio ceilings on investment of Retirement Benefits funds. *Retirement Benefits Authority*. Nairobi, Kenya.

Clark, G. L., Munnell, A. H., Williams, K., & Orszag, J. M. (2006). *The Oxford handbook of pensions and retirement income (Vol. 13).* Oxford Handbooks.

Claus, L., Lungu , A. P., & Bhattacharjee, S. (2011). The effects of individual, organizational and societal variables on the job performance of expatriate managers. *International Journal of Management*, 28(1), 249.

Cohen, L., Manion, L., & Morrison, K. (2013). *Action research. In Research methods in education.* Routledge.

CopeLand, E. T. (2012). *Financial Theory and Corporate policy.* New Delhi, NewDehi India: DorlingKindersley.

Creswell, J. W., & Clark, V. L. (2017). *Designing and conducting mixed methods research.* Sage publications.

Cuthbertson, K. (2004). *Quantitative Financial Economics: Stocks ,Bonds and Foreign exchange* (2nd ed.). John wiley and Sons,Ltd.

Davis, E. (2013). The role of Pension Funds as institutional investors in emerging market economies. Korean development institute conference on population Ageing in Korea. .*Journal of Business and Management, 18*(5), 54-60.

Dawson, E., & Simpson , L. (2002). *Analysis and design issues for synchronous stream ciphers.In Coding Theory and Cryptology (pp. 49-90).*

DeFusco, R. A., McLeavey, D. W., Pinto, J. E., Runkle, D. E., & Anson, M. J. (2015). *Quantitative investment analysis.* . John Wiley & Sons.

Devesa-Carpio, J. E., & Vidal-Meliá, C. (2002). *The reformed pension systems in Latin America.* World Bank Social Protection Discussion Paper Series, 209.

Dronin, A. (2012). Portfolio Management: a new glance at the risk evaluation. Regionalization vs.Globalization" April 19-21, 2012 (Vol. 19, p. 135). *In IX KIMEP International Research Conference (KIRC-2012)"Central Asia:.*

Ember, C. R. (2009). *Cross-cultural research methods.* Rowman Altamira.

Fan, J., & Li, R. (2001). Variable selection via nonconcave penalized likelihood and its oracle properties. *Journal of the American statistical Association, 96(456)* , 1348-1360.

Forbes, A. (2013). Impact of Financial Services on Pension Schemes in Kenya. *East African Journal of Business Management, 39*(3), 50-62.

Gakure , & Gakera . (2015). ANALYSIS OF THE FINANCIAL PERFORMANCE OF REGISTERED INDIVIDUAL RETIREMENT SCHEMES IN KENYA. *International Journal of Current Business and Social Sciences, 1* (4).

Gaur, A. S., & Gaur , S. S. (2006). *Statistical methods for practice and research:A guide to data analysis using SPSS. Sage.*

Geambaşu, L., & Stancu, I. (2010). *The Liquidity of the Bucharest Stock Exchange (BSEk Exchange (BSE) during the Financial Crisis. Theoretical & Applied Economics, 17(5).*

Gitundu, E. W. (2016). The influence of privatization, ownership structure and corporate governance on financial performance of privatized companies in Kenya (Doctoral dissertation, Egerton University).

Gujarati, D. N. (2009). *Basic econometrics.* . Tata McGraw-Hill Education.

Gupta, P. G. (1989). *Busines statistics.* New Delhi, Delhi: Sultan Chad and Sons.

Hatchett, J. (2010). Pension fund riskfor DB pension funds. A thesis presented to the staple Inn Acturial Society, London School of Economics. *Journal of Business and Management, 10*(2), 38-44.

Hirschman, E. C. (1986). Humanistic inquiry in marketing research: philosophy, method, and criteria. *Journal of marketing Research, 23(3), 237-249.*

Hlavac, J. (2011). Financial performance of the Czech private pension scheme: Its current position and the comparison with other CEE countries. (9/2011).

Hughes, J. A., & Sharrock, W. W. (2016). *The philosophy of social research.* Routledge.

Hustead, E. C. (2009). *Administrative Costs of State Defined Benefit and Defined Contribution Systems. The Future of Public Employee Retirement Systems, 97.* United Kingdom: Oxford University Press.

Ichingwa, B. I., & Mbithi, S. M. (2017.). EFFECT OF TOTAL CONTRIBUTION ON FINANCIAL PERFORMANCE OF PENSION SCHEMES IN KENYA: A SURVEY OF PENSION SCHEMES IN KENYA. *International Journal of Finance and Accounting*, , 2(6), 11-19.

James Grable, G. A. (2004). *Predicting mutual Fund over performance over a nine-year period.Financial counselling and Planning.*

JAMES, Adam, J., & Albert, H. T. (2015). *Research Methods for Graduate Business and Social Science Studies* (3 ed., Vol. iv). Singapore, Asia Pacific , Far East Singapore: SAGE Publication.

Jayeoba, F. I., Ayantunji , O. I., & Sholesi, O. Y. (2013). A critique of the systems theory of JT Dunlop. *International Journal of Academic.Research in Economics and Management Sciences*, 2(2), 97.

Jović, O. (2016). *Durbin-Watson partial least-squares regression applied to MIR data on adulteration with edible oils of different origins. Food chemistry, 213, 791-798.*

Kendall, M. G., & Buckland , W. R. (1982). *A dictionary of statistical terms. Longman Publishing Group.*

Kiaritha, H. W. (2015). Determinants of the Financial Performance of Savings and Credit Co-operatives in the Banking Sector in Kenya (Doctoral dissertation).

Kigen, A. K. (2016). Effect of Fund Size on the financial performance of Pension Funds in Kenya (Doctoral dissertation, KCA University).

King'oria, G. K. (2011). *Fundamentals of Applied Statistics.* Nairobi, Kenya: JKF.

Kiplagat, M. K. (2014). The effect of asset all ocation on the financial performance of pension funds in Kenya. Unpublished Project.

Knell, M. (2010). The optimal mix between Funded and Unfunded Pension systems when people care about relative consumption.

Kothari, C. R. (2011). *Research methodology,Methods and Techniques* (2nd ed.). New Delhi, India: New Age International (P) Ltd.

Kusewa, L. (2007). The impact of regulation of the retirement benefits sector on the financial performance of occupational pension schemes in kenya.

Leornard, S. (2006). Promoting Home ownership Using Retirements Benefits.

Levy, P. S., & Lemeshow, S. (2013). *Sampling of populations: methods and applications.* John Wiley & Sons.

Lindbeck, A. (2003). The gains from pension reforms. *journal of economic reforms*, 74-112.

Lumby, S. (2011). *Corporate Finance,Theory and Practice* (8th ed.). Northway Hampshire, UK: CheritonHouse.

Maina, S. M. (2012). *Qualitative and Quantitative Research Methods.* Nairobi, Kenya: Frajopa Printers.

Malkiel, B. (1999). *The Random Walk Down Wall Street.* W.W. Norton and Co.,Inc.

Mele, C., Pels , J., & Polese, F. (2010). A brief review of systems theories and their managerial applications. Service Science. 2(1-2), 126-135.

MIRITI, F. M. (2014). THE RELATIONSHIP BETWEEN RETIREMENT BENEFITS AUTHORITY INVESTMENT GUIDELINES AND FINANCIAL PERFORMANCE OF PENSION SCHEMES IN KENYA.

Mudida, R. (2010). *Financial Management.* Nairobi, Kenya: Focus Publishers Ltd.

Mugambi, M. P. (2014). The Effect of Property Investment on Asset Growth of Pension Funds in Kenya. unpublished MBA Project, University of Nairobi.

Mugenda, O., & Mugenda, A. (2003). *Research methods: Quantitative and Qualitative methods. Revised in Nairobi.*

Muriithi, J. (2017). Analysis of the Effect of Operating Costs on Financial Performance of Occupational Pension Schemes in Kenya. *Research Journal of Finance and Accounting, 8*(1), 2222-1697.

Mutua. (2003). A survey of the extent of compliance with the Retirement benefits Act by Retirement Benefits Schemes in Kenya.

Mutuku , N. (2014). *Members' opinion on pension benefits. A surveyreport on 2014 by Retirement Benefits Authority.* Retirement Benefits Authority. Nairobi, Kenya,: Government Printer. .

Namusonge, G. S. (2010). *Business Statistics: Concepts and Applications.* Beau Bassin, Mauritius: VDMPublishing House Ltd.

Navarro Sada, A., & Maldonado, A. (2007). *Research Methods in Education.*

Nduruhu, D. K. (2019). Influence of Financial Management Practices on Sustainability of Pension Funds Administrative Institutions in Kenya (Doctoral dissertation, JKUAT-COHRED).

Ng'ang'a, A. K. (2017). The Impact Of Interest Rate Capping On The Financial Performance Of Commercial Banks In Kenya. Unpublished MBA Project, University of Nairobi. .

Ngetich, C. (2012). Determinants of the growth of individual pension schemes in Kenya. Nairobi,.

Ngugi, W., Njuguna , A., & Wambalaba, F. (2018). The Influence of Pension Scheme Maturity on Investment Strategies of Pension Funds in Kenya. *International Journal of Business and Management*, 13(10).

Njeru, S. E., Dominic, N. M., & Fredrick, K. (2015). Evaluation of financial performance on portfolio holdings held by pension funds in kenya. *European Scientific Journal, 11*(16).

Njoroge, N. (2014). The effect of firm size on financial performance of pension schemes in Kenya.Unpublished MBA Project.

Njuguna, A. (2011). Trustee-related determinants of Pension governance. *International Journal of Business and Management, 6*(11), 32-39.

Njuguna, A. (2012). Critical success factors for a Micro-Pension Plan;An exploratory study. *International Journal of Financial Research*, 1923-4023.

Nugée, J., & Persaud, A. (2006). Redesigning Regulation of Pensions and other Financial. *Oxford Review of Economic Policy, 22(1),* 312-342.

Nuseir, M. T., & Madanat, H. (2017). The use of integrated management approaches and their impact on customers' satisfaction and business success. *International Journal of Business Excellence, 11(1),* 120-140.

Nyakundi, B. (2009). Pension coverage in Kenya :Legal and Policy Framework required to encourage coverage in Kenya. Nairobi, Kenya. Retrieved 7 26, 2016, from https://ssrn.com/abstract=1374975

Nyakundi, B. (2009). Pension coverage in Kenya :Legal and Policy Framework required to encourage coverage in Kenya.

Nyambere, F. K. (2013). Effect of credit risk management on financial performance of deposit taking savings and credit co-operative societies in Kenya. Unpublished MBA Project, University of Nairobi.

Odundo, E. (2013, February 8). Supervision of Pensions and Pension schemes.Kenyan Experience. *Thesis presented at Pension Supervision Workshop*. Dakar, Senegal.

OECD. (2016). .*Pension at a Glance: 2012, Retirement Income Systems in OECD Counties.* Retrieved from .OECD.

Ogilo, F. (2017). Determinants of Bear Market Performance in the Nairobi Securities Exchange in Kenya,JKUAT COHRED.

Okougbo, P. O. (2011). Corporate governance and firm performance: Empirical evidence from selected listed companies in Nigeria (Doctoral dissertation, Covenant University, Ota).

Oluoch, M. A. (2013). The determinants of performance of pension funds in Kenya (Doctoral dissertation, University of Nairobi).

Omino, P. A. (2014). Liquidity risk mitigation measures and financial performance of savings and credit co-operative societies (SACCO's) in Kisumu County-Kenya (Doctoral dissertation, University of Nairobi). Unpublished Research project.

Ondia, J. O. (2012). Pensions Reforms in Nigeria:A comparison between the Old and New Schemes.

Orina, S. O. (2011). *Advanced Financial Management.* Nairobi, Kenya: Mustard Seed Business Press.

Orodho, J. A. (2015). *Elements of Educational and social science Research methods.* Nairobi, Kenya: Masola Publishers.

Osborne, J. W. (2015). What is rotating in exploratory factor analysis.Practical assessment, research & evaluation, 20(2), 1-7.

Oso, W. Y. (2009). *A guide to writing research proposal and report.* Nairobi, Kenya: Satima Printers JKF.

Padilla-Díaz, M. (2015). "Phenomenology in educational qualitative research: Philosophy as science or philosophical science.". *International Journal of Educational Excellence 1, no. 2* , 101-110.

Palacios, R., & Pallares-Miralles, M. (2000). International patterns of pension provision.

Pallant, J. (2013). *SPSS survival manual.* UK: McGraw-Hill Education.

Pandey, I. M. (2015). *Essentials of Finanancial Management* (9th ed.). India: Vikas Publishing House Pvt Ltd.

Penmatsa, Rajeev, V., Jordan, R., & Lehmiller . (2019). *"Three dimensional terrain modeling."*. U.S.

RBA. (2014, 09 30). *Quatery Report.* Retrieved 07 15, 2016, from Retirement Benefits Authority: http://www.rba.go.ke/index.php/en/publications

Rocha, R., Vittas, D., & Rudolph, H. P. (2011). *Annuities and other retirement products: Designing the payout phase.* The World Bank.

Rono, L. J., Bitok, J. K., & Asamoah, G. N. (2010). Impact of Retirement Benefit Act (RBA) on Investment Returns to Pension Funds in Kenya. *International Business & Economics Research Journal, 9*(4), 51.

Saunders, M., Lewis, P., & Thornhill,. (2009). *A.Research methods for business students (Vol. 5).* Harlow: Pearson.

Sekaran, U., & Bougie, R. (2013). *Research methods for business.* Chichester, West Sussex: Wiley.

Sharon, C. (2010). *Review of international Pension reform,Department for work and Pensions.* Research Report.

Stewart, F., & Yermo, J. (2012). *Pension fund governance :Challenges and potential solutions.* OECD-IOPS MENA . OECD.

Swisher, P., & Kasten,, G. W. (2005). Post-modern portfolio theory. *Journal of Financial Planning*, 18(9), 74.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics (Vol. 5).* Boston: MA: Pearson.

Tari, J. (2015). Employer related determinants of Scheme Design in Occupational Defined Contribution Schemes in Kenya. *Research Journal, 7 ,No 6*.

Tucker, A. L. (1994). *Contemporary portfolio theory and risk management.* West publishing company.

Victoria, M., & Olukuru, J. (2014). Impacts of Pension Reforms on the Kenyan pension industry. *European Scientific Journal, 10*(10).

Wamiori, G. M., Namusonge, G. S., & Sakwa, M. M. (2016). Effect of access to finance on financial performance of manufacturing firms in Kenya. Strategic Journal of Business & Change Management, 3(4).

Webb, D. (2007). Sponsoring company finance,Investment and Pension plan funding. *The Economic Journal*, 117,738-760.

Yama James Campbell. (2002). *Strategic Assets Allocation:Portfolio choice for long-term investors.* Oxford University Press.

Yermo, J. (2008). *Pension fund governance: Challenges and potential solutions. Available at SSRN 1217266.*

Zaidi, A. (2010). Fiscal and Pension Sustainability :Present and Future Issues in EU Countries,Policy Brief,.

Zamuee, M. R. (2015). Data Envelopment Analysis to measure efficiencyof Namibian pension funds. *American Journal of Marketing Research* , 1(4), 215-221.

APPENDICES

Appendix I: Letter of Introduction

GATHOGO GEORGE MWANGI

P.O BOX 943- 10200

MURANG'A

RE: RESEARCH PROJECT FOR Ph D IN BUSINESS ADMINISTRATION (FINANCE OPTION)

I am a student at Jomo Kenyatta University of Agriculture and Technology pursuing a PhD degree in Business Administration (Finance Option) and it is a requirement of the university to undertake a research in partial fulfillment before graduating.

The research study is entitled "**Trustee-related determinants of Financial Returns of the registered Occupational Pension Schemes in Kenya"**

The data gathered and results obtained will be used for the purposes of this study only. Information given during the interview will be strictly confidential and will not be used for any other purpose.

Please assist by filling in the questionnaire.

Yours sincerely

Gathogo George Mwangi

Appendix II: Questionnaire for Registered Pension Schemes

The purpose of this research is to study the factors affecting the financial returns of the Occupational Pension Schemes in Kenya. It is expected that you will spwere some time out of your busy schedule to provide the much needed information in order to address the financial returns challenges in this category of Pension Schemes in the Pensions industry. The information provided is purely for academic purposes and as such it will be kept confidential.

Trust secretaries Background Information

1. How long has the scheme been operating? (Tick the appropriate)

   Less than one year ( ) 1 -2 yrs ( ) 3-4 yrs 5-7Yrs ( ) 8-9 Yrs ( ) 10 yrs and above( )

2. How long have you been in this service? (Tick the appropriate)

   Less than one year ( ) 1 -2 yrs ( ) 3-4 yrs 5-7Yrs ( ) 8-9 Yrs ( ) 10 yrs and above( )

3. Indicate the composition of the Board of Trustees.

Gender	Men	Women
Number		

4. State their highest educational level that each trustee has attained.

Education	Ph	Masters	Undergraduate	Diploma	Secondary	Other

Level	D				Education	
No. of Men						
No. of Women						

5. What type of fund is your scheme? (tick the appropriate)

   Umbrella ( ) Stand-alone ( ) Under NSSF ( )

6. Who is the Fund Administrator? (tick the appropriate)

   Employee of the Sponsoring company ( )

   The Sponsoring company ( )

   An external Body Corporate ( )

Part 1: The influence of Operational costs on financial Returns;

The statements below relate to the effect of Operational costs on financial returns of registered Occupational Pension Schemes. Please provide the following information by ticking only **ONE** answer in the appropriate box.

1.0 Operational Cost		**1**	**2**	**3**	**4**	**5**
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**
1.1	Trustees were appointed competitively					
1.2	Service providers were appointed competitively					
1.3	There is timely processing of Pension benefits					
1.4	The internal control system has improved the operational of the scheme.					
1.5	The Trustees work harmoniously with the service providers					

1.6	Trustees conduct their statutory meetings as required by the Pension law					
1.7	All trustees have been trained by the Kenya Retirement Benefits Authority					
1.8	The training has brought an impact on the performance of the Trustees					
1.9	There is timely reporting to the members on pension issues					
1.9	Members have been involved in decision making					
1.10	The Board of Trustees has full autonomy from the sponsoring institution					

1.11	There is effective compliance with the Pension laws.					

Part 2: The influence of the density of contributions on financial returns

The statements below relate to the effect of financial contributions density on financial returns of registered Occupational Pension Schemes.

2.0 Density of Contributions		**1** **Strongly Disagree**	**2** **Disagree**	**3** **Uncertain**	**4** **Agree**	**5** **Strongly agree**
2.1	Salary grades of the members affect their total contributions.					
2.2	The percentage of contribution charged to the members' salaries affect their total contributions.					
2.3	Members' turnover affects the total					

	Financial contributions to the scheme.					
2.4	Late remittances of members' contributions to the Funds custodian affect the total Financial contributions to the scheme.					

Part 3: The influence of the Asset allocations on financial returns

The statements below relate to the effect of Asset allocations on financial returns of registered Occupational Pension Schemes.

3.0 Investment strategies		**1**	**2**	**3**	**4**	**5**
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**
3.1	The Investment limits stipulated by the RBA affect the investment returns.					
3.2	The choice of the investment mix affects the investment returns.					
3.3	Benchmarking is					

	critical in determining the performance of Pension Schemes					
3.4	Funds managers do not have a freehand to immediately invest the funds whenever they see an opportunity					

Part 4: The influence of the Risk Preference on financial returns

The statements below relate to the effect of risk Preference on financial returns of registered Occupational Pension Schemes.

Risk Preference		**1**	**2**	**3**	**4**	**5**
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**
4.1	The risk of default by the members in remitting funds affects the financial returns of the scheme.					
4.2	The default by the sponsoring companies in remitting funds affects the financial returns of the scheme.					
4.3	The scheme has strategies to counter stock market risks.					
4.4	The risk of liquidity affects the financial returns of the scheme					
4.5	There were negative influences from the company that					

	encourage employees turnover					
4.6	The risk of investment mix affects the financial returns of the scheme.					

Part 5: The moderating effect of the Pension Regulatory Framework on financial returns

The statements below relate to the moderating effect of Pension Regulatory Framework on financial returns of registered Occupational Pension Schemes.

5.0 Pension Regulatory Framework		**1** **Strongly Disagree**	**2** **Disagree**	**3** **Uncertain**	**4** **Agree**	**5** **Strongly agree**
5.1	The Pension Regulatory Framework on compliance costs affects the financial returns of the Pension Schemes.					
5.2	The Pension Regulatory Framework on fees charged by the service providers affects the financial returns of the Pension Schemes.					
5.3	The Pension Regulatory Framework on Investment limits affects the financial					

	returns of the Occupational Pension Schemes.					
5.4	The Pension Regulatory Framework on monitoring pension funds, affects the financial returns of the Occupational Pension Schemes.					

Part 6: Financial Returns

The statements below relate to the Finance Performance. Please provide the following information by ticking only **ONE** answer in the appropriate box concerning " financial Returns".

6.0 Financial Returns		1	2	3	4	5
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly agree**
6.1	Financial returns were measured by the Returns on the total assets of the schemes					
6.2	Financial returns were measured by Changes in the funds values					
6.3	Financial returns were measured by the Returns on investments					
6.4	Financial returns were measured by ability of the schemes to meet their financial obligations					
6.5	Financial returns were measured by ability of the schemes to reduce costs					

-Thank you for taking your invaluable time to complete this questionnaire-

Appendix III: List of the Sampled Occupational Pension Schemes

1. National Museums of Kenya Staff Retirement Benefits Scheme
2. Meru North Farmers Sacco Staff Retirement Benefits Scheme
3. A P A Insurance Limited Staff Retirement Benefits
4. Mount Kenya Academy Staff Pension Scheme
5. Aberdare Safari Hotels Limited and its subsidiaries Staff Retirement Benefits Scheme
6. ACK Western Region Christian Community Services Staff Provident Fund
7. Across-Kenya Staff Provident Fund Scheme
8. Affiliated Business Contacts Limited Staff Retirement Benefits Scheme
9. Africa Inland Mission International Services Staff Retirement Benefits Scheme
10. Africa Merchant Assurance Company Limited Staff Retirement Benefits Scheme
11. Africa Nazarene University Staff Retirement Benefits Scheme
12. Africa Now Staff Provident Fund Scheme
13. African Banking Corporation Limited Staff Provident Fund
14. African Diatomite Industries Limited Staff Retirement Benefit Scheme
15. African Economic Research Consortium (AERC) Provident Fund
16. African Evangelistic Enterprise Staff Provident Fund Scheme
17. African Fund for Endangered Wildlife (K) Limited Staff Provident Fund
18. African Population and Health Research Center Staff Pension
19. Aga Khan Development Network (Kenya) Staff Pension Scheme
20. Aga Khan Educational Service Companies Staff Retirement Benefits
21. Aga Khan Foundation Staff Pension, Life Assurance and Personal Accident
22. Aga Khan Health Service, Kenya Staff Pension and Life Assurance Scheme
23. Aga Khan University Staff Provident
24. Agence France Presse Ltd Staff Retirement Benefits Scheme
25. Agricultural Development Corporation (ADC)Staff Retirement Benefits
26. Agro-Chemical & Food Company Limited (ACFC) Staff Retirement Benefits Scheme
27. Agrochemicals Association of Kenya Staff Retirement Benefits Scheme
28. AIG (Kenya) Insurance Company Limited Staff Pension
29. Air France Kenya Staff Retirement Benefits Scheme
30. Air India Staff Provident Fund
31. Aircare Charterers and Brokers Limited Staff Retirement Benefits
32. Airside Limited Staff Pension
33. Aktion Africa HILFE Staff Retirement Benefits
34. All African Conference of Churches Staff Provident Fund
35. All Nations Gospel Church Staff Provident Fund
36. Alliance One Tobacco Kenya Limited Staff Pension

37. Allied Assessors Limited -Staff Retirement Benefits
38. Amedo Centres Kenya Limited Executive Staff Retirement Benefits
39. 1634 Anglo African Property Holdings Limited Staff Retirement Benefits
40. Anjeli Limited Tea Brokers Staff Retirement Benefits
41. Apollo Insurance Company Limited Individual Retirement Benefits
42. Apollo Insurance Company Limited Staff Retirement Benefits Scheme
43. Appropriate Technologies for Enterprise Creation Staff Retirement Benefits
44. Armstrong and Duncan Staff Retirement Benefits
45. Asea Brown Boveri Limited (ABB) Staff Retirement Benefits Scheme
46. Assa Abloy (E.A.) Limited Staff Pension Scheme
47. Associated Vehicle Assemblers Staff Retirement Benefits Scheme
48. Association For The Physically Disabled (APDK) - Coast Province Staff Retirement Benefits Scheme
49. Association of Evangelicals in Africa Staff Pension Scheme
50. Association of Kenya Insurers (AKI) Staff Retirement Benefits Scheme
51. Athi Water Services Board - Staff Provident Scheme
52. Avenue Service Station (1977) Staff Retirement Benefits Scheme
53. Ayton Young & Rubicam Limited - Retirement Benefits Scheme
54. Nairobi Chapel Retirement Benefits Scheme
55. Bank of Africa Kenya Limited Staff Provident Fund
56. Bank of Baroda (Kenya) Staff Provident Fund
57. Baobab Beach Resort Staff Pension Scheme
58. Baptist Misson of Kenya Staff Retirement Benefits Scheme "A"
59. BDF East Africa Limited Staff Retirement Benefits
60. Blackwood Hodge (K) Limited Staff Retirement Benefits
61. Blue Ring Products Limited Staff Provident Fund Scheme
62. Blue Shield Insurance Co. Ltd Staff Retirement Benefit
63. Bob Morgan Services Staff Retirement Benefits Scheme
64. Bobmil Group of Companies Staff Provident Fund
65. Bosky Industries Limited Staff Retirement Benefits Scheme
66. Brakenhurst Baptist International Centre Staff Retirement Benefits
67. Bridges Capital Ltd Staff Reirement Benefits Scheme
68. British American Insurance Company (Kenya) Limited
69. British Airways PLC Kenya Pension and Life Assurance Scheme
70. British American Insurance Co. Limited Staff Pension
71. British American Insurance Company (Kenya)
72. British Broadcasting Corporation(BBC) Staff Provident Fund
73. Bureti Tea Growers Savings and Credit Co-operative Society Limited Staff Provident Fund
74. Bush Homes of East Africa Limited Staff Retirement Benefits Scheme

75. CAB International Staff Retirement Benefits Scheme
76. Cannon Assurance (Kenya) Limited Staff Retirement Benefits Scheme
77. Canon Assurance (Kenya) Limited Staff Pension
78. Capwell Industries Limited Staff Provident Fund
79. Car & General (K) Ltd Staff Retirement Benefits Scheme
80. Carbacid(CO2) Limited Staff Provident Fund
81. Cargo Service Centre (EA) BV Staff Pension
82. Catholic Diocese of Garissa Staff Pension Scheme
83. Catholic Diocese of Homa-Bay (Development Office) Staff Provident Fund
84. Catholic University of Eastern Africa Staff Provident Fund
85. Centreline Tea Brokers Limited Staff Provident Fund Scheme
86. Centum Investment Company Limited Staff Retirement Benefits
87. Charterhouse Bank Limited Staff Provident
88. Chase Bank Staff Retirement Benefits Pension Scheme
89. Magnate Ventures Limited Staff Retirement Benefits Scheme
90. Chemelil Savings & Credit Co.-operative Society Staff Pension
91. Chemilil Sugar Company Limited Staff Pension Scheme
92. Chester House Limited Staff Retirement Benefits
93. Childcare International Kenya Staff Retirement Benefits Scheme
94. Choice Tea Brokers Ltd Staff Retirement Benefits
95. Christian Organizations Research Advisory Trust of Africa - (CORAT) Staff Retirement Benefits
96. Christian Student Leadership Centre Staff Retirement Benefits Scheme
97. Christoffel Blinden mission Staff Pension
98. Church World Service Staff Retirement Benefit Scheme
99. Cisle Kenya Branch Staff Retirement Benefits Scheme
100. Clarkson Notcutt Insurance Brokers Staff Retirement Benefits Scheme
101. Coastal Bottlers Limited Staff Pension Scheme
102. Color Creations Limited Staff Retirement Benefits
103. Colour Packaging Limited Staff Pension Scheme
104. Comet Plastics Limited Staff Retirement Benefits Scheme
105. Concern Worldwide Staff Pension
106. Consolidated Bank of Kenya Ltd Staff Retirement Benefits
107. Consumer Insight Staff Retirement Benefits Scheme
108. Continental Products Staff Pension Scheme
109. Corporate Insurance Company Limited Staff Retirement Benefits Scheme
110. Costek Alma - Staff Provident Fund
111. Credit Bank Limited Staff Retirement Benefits
112. Credit Traders Staff Retirement Benefits
113. Crown - Berger Kenya Limited Staff Provident

114. Cunningham G.M. Kenya Staff Retirement benefits
115. Deepa Industries Limited Staff Retirement Benefits
116. Delamere Estates Limited Staff Retirement Benefits Scheme
117. Deliverance Church Kasarani Staff Retirement Benefits Scheme
118. Department for International Development Kenya and Somalia (DFID) - Staff Retirement Benefits
119. Desbro (Kenya) Limited Staff Provident Fund
120. Desert Locust Control Organization for Eastern Africa Staff Povident Fund
121. Development Bank of Kenya Limited Staff Provident Fund
122. DHL Exel Supply Chain Limited Staff Retirement Benefits Scheme
123. Diamond Trust of Kenya Limited Staff Pension and Life Assurance
124. Diocese of Ngong Staff Pension
125. Dodo World (K) Limited Pension
126. Dubai Bank Kenya Limited Staff Retirement Benefits Scheme
127. EABS Bank Staff Retirement Benefits
128. Eagle Africa Insurance Brokers Limited Staff Retirement Benefits
129. Earthview Management Limited Staff Provident
130. East African Storage Company Limited Staff Retirement Benefits Scheme and Group Life Assurance Scheme
131. East Africa Reinsurance Co. Limited Staff Retirement Benefits Scheme
132. East Africa Reinsurance Co. Limited Staff Retirement Benefits Scheme
133. East African Educational Publishers Ltd Pension & Life Assurance Scheme
134. Ecolab East Africa (Kenya) Ltd Staff Provident Fund
135. Economic Housing Group Limited Staff Provident Fund Scheme
136. Eculine Kenya Limited Staff Pension
137. Eldoret Club Staff Retirement Benefits Scheme
138. Electricity Regulatory Board Staff Pension Plan
139. Energy for Sustainable Development - Africa Limited Staff Retirement Benefits Scheme
140. Engender Health (Access to Voluntary & Safe Contraception) Retirement Benefits Scheme
141. Engineering Supplies 2001 Limited Staff Pension Scheme
142. Engineering Supplies Limited Staff Pension Scheme
143. Environment Liaison Centre International Staff Pension Scheme
144. Equator Bottlers Limited Staff Pension
145. Equatorial Commercial Bank Limited Staff Provident Fund
146. Equity Bank Staff Retirement Benefits Scheme
147. ETC East Africa Limited Staff Provident
148. Everest Enterprises Pension Scheme
149. Ewaso Ng`iro South Development Authority Staff Pension Scheme

150. Executive Turbine Kenya Limited Staff Retirement Benefits
151. Family Health International Staff Provident Fund
152. Farm Africa Staff Pension Scheme
153. Farmer`s Choice Staff Retirement Benefits Scheme
154. Farmer's Choice Ltd Junior Staff Provident Fund and Life Assurance
155. Federation of Kenya Employers Staff Pension & Life Assurance Scheme
156. Federation of Women Lawyers - Kenya Staff Pension Scheme
157. Fidelity Shield Insurance Company Limited - Staff Provident Fund
158. Fides Kenya Limited - Staff Provident Fund
159. Fiesta Restaurants Limited Staff Retirement Benefits Scheme
160. First Africa Capital Ltd Staff Retirement Benefits Scheme
161. Forum for African Women Educationalist Staff Provident Fund and Group Life Assurance Scheme
162. Francis Drummond & Co. Ltd. Staff Provident Fund
163. Freight in Time Staff Provident Fund
164. Friends Church Sabatia Eye Hospital Staff Pension Scheme
165. Mara Conservancy Limited Staff Provident Fund
166. Full Gospel Churches of Kenya Staff Retirement Benefits Scheme
167. G4S Security Services (Kenya) Limited Staff Retirement Benefits Scheme"B"
168. Gachichio Insurance Brokers Limited Staff Provident Fund
169. Galaxy Paints & Coatings Limited Staff Pension Scheme
170. Gateway Insurance Company Ltd Staff Retirement Benefits
171. General Accident Insurance Company Kenya Limited-Staff Provident Fund
172. General Adjusters Limited Staff Provident Fund Scheme
173. General Cargo Services Staff Retirement Benefits
174. Geomax Consulting Engineers Ltd Staff Retirement Benefits
175. Getrio Insurance Brokers Limited Staff Provident Fund Scheme
176. Gibb Africa Limited Staff Retirement Benefits Scheme
177. Gina Din Corporate Communications Ltd Staff Retirement Benefits Scheme
178. Giro Commercial Bank Limited Staff Pension Scheme 4 PN DC 20081231
179. Githere Investments Limited Staff Retirement Benefits Scheme
180. Golden Neo-life Diamite (GNLD) International Staff Retirement Benefits Scheme
181. Good News Productions International Africa Staff Retirement Benefits Scheme
182. Goodman Agencies Limited Staff Retirement Benefits Scheme
183. Grain Bulk Handlers Limited Staff Pension
184. Grand Paints Staff Retirement Benefits Scheme
185. Grant Thornton Staff Provident Fund

186. Greif (EA) Senior Staff Pension
187. Greif Kenya Limited Staff Retirement Benefits Scheme
188. Habib Bank Ltd Staff Retirement Benefits Scheme
189. Hazina Sacco Ltd Staff Pension
190. Heritage Insurance Company Limited Individual Retirement Fund
191. Highlight Travel Limited Staff Provident Fund
192. Horticultural Crops Development Authority Staff Retirement Benefits Scheme
193. Iber Africa Systems Kenya Limited Staff Retirement Benefits Scheme
194. Ibero Staff Retirement Benefits Scheme
195. Imaging Solutions Limited Staff Retirement Benefits Scheme
196. Imperial Bank Limited Staff Pension and Life Assurance
197. Industrial & Commercial Development Corporation Staff Retirement Scheme
198. Industrial Development Bank (IDB) Staff Retirement Benefits Scheme
199. Industrial Promotion Services (Kenya) Group Staff Retirement Benefits
200. Insurance Company of East Africa Limited Staff Provident Fund and Life Assurance Scheme
201. Insurance Training and Education Trust Staff Retirement Benefits Scheme
202. International Bible Society Staff Retirement Benefits Scheme
203. International Fund For Animal Welfare (IFAW) Staff Retirement Benefits
204. Intertek Testing Services (EA) (Pty) Limited Staff Retirement Benefits Scheme
205. Intrahealth International Inc - Staff Retirement
206. Investment Promotion Centre Staff Retirement Benefit Scheme/Kenya inv
207. Investments & Mortgages Bank (I & M) Limited Staff Retirement Benefits Scheme
208. J.J.Chesaro & Company Advocates Staff Pension
209. Jacaranda Hotel Staff Retirement Benefits Scheme
210. Jamii Sacco Society Limited
211. Jani Consultancy Limited Staff Retirement Benefits Scheme
212. Japan External Trade Organisation Staff Retirement Benefits Scheme
213. Japan International Co-operation Agency Staff Retirement Benefits Scheme
214. Jesuit Refugee Service - Eastern Africa Staff Retirement Benefits Scheme
215. JohnsonDiversey East Africa Limited Provident
216. Jomo Kenyatta Foundation Staff Retirement Benefits Scheme
217. Jos Hansen & Soehne Deposit Administration Scheme
218. Jubilee Insurance Company Ltd Personal Pension Plan
219. Kakamega Teachers Co-operative Savings & Credit Society Limited Staff Provident Fund
220. Kakuzi Fibreland Limited Retirement Benefits Scheme

221. Karen Country Club Staff Retirement Benefits Scheme
222. Karen Rose Limited - Staff Retirement Benefits Scheme
223. Karirana Tea Estates Limited Staff Pension Scheme
224. Kate Freight and Travel Limited Staff Retirement Benefits Scheme
225. Kenafric Industries Limited Staff Retirement Benefits Scheme
226. Kensalt Staff Retirement Benefits Scheme
227. Kenwest Cables Limited Staff Retirement Benefits Scheme
228. Kenya Aerotech Ltd Staff Retirement Benefits Scheme
229. Kenya Aids NGO`s Consortium Staff Retirement Benefits Scheme
230. Kenya Association of Tour Operators Staff Retirement Benefits Scheme
231. Kenya Bixa Limited Staff Retirement Benefits Scheme
232. Kenya Bus Services Limited Executive and Main Staff Retirement Benefits Scheme
233. Kenya Christian Homes & It`s Associated Homes Staff Retirement Benefits Scheme
234. Kenya College of Accountancy Staff Retirement Benefits Scheme
235. Kenya Co-operative Creameries Limited Junior Pension
236. Kenya Co-operative Creameries Royal Guardians
237. Kenya Co-operative Creameries Unionisable Staff (Senior) Pension Scheme
238. Kenya Dairy Board Staff Pension Scheme
239. Kenya Fire Appliances Company Limited Retirement Benefits Scheme
240. Kenya High School Staff Retirement Benefit Scheme
241. Kenya Human Rights Commission Staff Pension
242. Kenya Industrial Estates Limited-Informal Sector Programme Staff Provident Fund and Group Assurance Scheme
243. Kenya Industrial Estates Retirement Benefits
244. Kenya Industrial Research and Development Institute Staff Retirement and Group Life Assurance Scheme
245. Kenya Institute for the Blind Staff Pension
246. Kenya Institute of Administration Staff Retirement Benefits
247. Kenya Institute of Education Staff Retirement Benefits Scheme
248. Kenya Institute of Special Education Pension Scheme
249. Kenya Literature Bureau Staff Retirement Benefits Scheme
250. Kenya Litho Limited Staff Retirement Benefits Scheme
251. Kenya National Commission on Human Rights Staff Provident Fund
252. Kenya National Shipping Line Limited Staff Retirement Benefits Scheme
253. Kenya National Trading Corporation Limited (KNTC) Staff Retirement Benefits Scheme
254. Kenya Nut Company Limited Staff Pension and Life Assurance Scheme
255. Kenya Ordinance Factories Corporation Staff Retirement Benefits Scheme

256. Kenya Orient Insurance Company Limited Staff Retirement Benefits Scheme
257. Kenya Police Staff Co-op Savings & Credit Society Retirement
258. Kenya Ports Authority Staff Pension Scheme
259. Kenya Red Cross Society Staff ReOrement Benefit
260. Kenya Roads Board Stafff Retirement Benefits Scheme
261. Kenya Safari Lodges & hotels Ltd Staff Retirement Benefits Scheme
262. Kenya School of Professional Studies Staff Provident Fund
263. Kenya Sisal Board Staff Retirement Benefits Scheme
264. Kenya Society for Deaf Children Staff Retirement Benefits Scheme
265. Kenya Society for the Blind Staff Retirement Benefits Scheme
266. Kenya Utalii College Staff Pension
267. Kenya Veterinary Vaccines Production Institute Staff Pension Scheme
268. Kenyan Alliance Insurance Company Limited Staff Retirement Benefits Scheme
269. Ker & Downey Safaris Staff Pension Scheme
270. Kericho Primary School Staff Provident
271. Khoja S.I.A. Education Board Staff Retirement Benefits
272. Kilifi Plantations Limited Staff Pension Scheme
273. Kingdom Kenya Pension & Life Assurance
274. KLM Royal Dutch Airlines Staff Pension Scheme
275. A P A Insurance Limited Staff Retirement Benefits Scheme
276. KLSA Pannel Kerr Forster Staff Retirement Benefits Scheme
277. Knight Frank Kenya Limited Staff Provident Scheme
278. Lavington United church Staff Retirement Benefits Scheme
279. Mount Kenya Bottlers Ltd Staff Retirement Benefits Scheme
280. Laborex Kenya Limited Staff Provident Fund
281. Lake Bogoria Spa Resort Staff Provident Fund
282. Langata High School Staff Retirement Benefits
283. Lavington United church Staff Retirement Benefits Scheme
284. Law Society of Kenya Staff Retirement Benefits
285. Let`s Go Travel Staff Pension and Life Assurance
286. Liaison Insurance Brokers Limited Staff Pension and Life Assurance
287. Lighthouse For Christ Eye Centre Staff Provident Fund
288. Limuru Milk Processors Limited Staff Provident Fund Scheme
289. Living Water International Staff Pension
290. Lloyd Masika Limited Staff Retirement Benefits Scheme
291. Longhorn (K) Limited Retirement Benefits
292. Loreto Institute Staff Pension Scheme
293. Lutheran World Relief Staff Retirement and Life Assurance Scheme
294. M.J. Clarke Ltd Staff Retirement Benefits

295. Madison Insurance Personal Pension Plan

Appendix IV: Data Collection Form for the Years 2006-2015

GATHOGO GEORGE MWANGI

P.O BOX 943- 10200

MURANG'A

Date……

The CEO
Retirement Benefits Authority, Kenya
Nairobi

Re; Collection of Data for the Years 2006-2015

Kindly provide the following data for the named Occupational pension schemes. The information is purely academic and will be kept confidential

	Name of The Occupational Pension Scheme……..			
Year	Investment Returns	Asset size	No of contributors	Operating expenses
2006				
2007				
2008				
2009				
2010				
2011				
2012				
2013				
2014				
2015				

Yours sincerely

Gathogo George Mwangi

George.gathogo @ yahoo.com