

**EFFECTS OF REGULATIONS ON FINANCIAL PERFORMANCE OF THE
RETIREMENT BENEFITS FUNDS IN KENYA**

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DECLARATION

This research project is my original work and has not been presented for examination in any other university.

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

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DEDICATION

This research project is dedicated to my family, for their constant support and encouragement throughout my studies. I cannot forget my parents and my wife for their wisdom and inspiration which has been my pillar in search for knowledge.

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I thank the Almighty God for seeing me through the entire research period.

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ABSTRACT

Regulatory controls have a significant effect on the growth of the pension schemes. This means that pension regulatory controls lead to improved financial performance and growth of the individual pension schemes. This study aimed to find out what has been the effect of the regulatory control changes passed since 2007 to date on the financial performance of pension schemes. The objective of the study was to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya. Secondary Data was collected from retirement benefit fund financial reports and multiple regression analysis used in the data analysis. The study revealed that there was a positive relationship between financial performance of retirement funds and liquidity of the scheme, the study also found that there was negative relationship between financial of retirement benefits fund and scheme expense ratio and financial distress or vulnerability. The study found that regulations affects the financial performance of retirement benefits funds in Kenya, thus the study concludes that since the enactment of the Retirement Benefits Authority Act, there has been significant growth in performance of retirement benefits fund. The relationship between regulatory changes and financial performance of pension schemes in Kenya is unidirectional and runs from regulatory changes to performance and not vice versa. The study further concludes that regulatory changes have a significant influence on the performance of pension schemes in Kenya as the results have passed significance tests. Therefore, the control of scheme expenses, provision to access full employee and half of employer portion before retirement and reduction of payment period from sixty to thirty days have had a major effect on the financial performance of pension schemes in Kenya. The study recommends that the policy makers should evaluate the regulatory changes that they propose so that the changes can be able to stimulate growth in the pension industry rather than stifle it. The policy makers also need to expand the scope of the regulatory changes in order to ensure that the pension schemes are governed in responsible way to reduce vices such as corruption and thereby improve performance. The study also recommends that the government through the Retirement Benefits Authority should put up strict measures to ensure that the pension schemes are observing the regulations enacted as a way of ensuring improved performance.

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LIST OF ABBREVIATIONS

BCBS	Blue Cross Blue Shield
GDP	Gross Domestic Products
LAC	Latin American Countries
MDGs	Millennium Development Goals
OECD	Organisation for Economic Co-operation and Development
PAYG	Pay As You Go
RBA	Retirement Benefit Authority
ROA	Return On Assets
ROE	Return On Equity
ROS	Return On Sales
SPSS	Statistical package For Social Science

CHAPTER ONE:

INTRODUCTION

1.1 Background of the Study

1.1.1 Regulation of Retirement Benefit Fund

The regulatory environment for funded pension schemes varies across countries. While the purpose of pension provision institutions worldwide is broadly similar, i.e., to safeguard retirees' welfare, national regulations are heterogeneous. In this paper, I analyze the extent to which the type of regulation and its quality can influence a pension system's financial performance in a cross-country analysis. Since a pension portfolio allocation is key in determining the investment return (Brinson et al., 1986; Aglietta et al., 2012), I focus only on asset management regulations. Two different conceptions of financial regulation coexist: rule-based and risk-based (Black and Baldwin, 2010). Rule-based regulation refers to inflexible bright-line requirements such as direct restrictions on investments. From a compliance perspective, rule based regulation is appealing as its ex-post verification is unambiguous. But some rules, such as investment limits, may in theory yield lower risk-adjusted returns when they are binding.

A number of reasons, such as the increasing complexity of financial instruments and the merging of supervisory agencies for pension funds with those for banks and insurers, have fostered the emergence of risk-based regulation. The aim of introducing this type of regulation is to ensure that institutions establish a sound risk management framework. Risk-based regulation usually relies on quantitative financial models to determine the adequate level of buffer capital needed to withstand adverse financial market conditions. Using a

methodology prescribed by the supervisor, funds identify and evaluate risk factors. It is therefore necessary to specify an underlying model in order to define, qualify, and/or quantify risks, (Ford, 2008). This bestows legitimacy and, perhaps, greater credibility to the regulatory framework.

However, imposing a simplistic model may jeopardize the soundness of a regulatory environment. Shi and Werker (2012) demonstrate that substantial economic costs are incurred when regulatory risk constraints imposed on pension funds are shorter-dated than their long investment horizon. Bec and Gollier (2010) and Severinson and Yermo (2012) contend that risk-based regulation induces pro-cyclical investment, which threatens not only the funds' well-being, but also macroeconomic stability.

Thus, whether or not risk concepts are employed in a manner that fosters pension funds' financial health is a crucial consideration. We use countries' perceived ability to create policies that promote sound private-sector development, namely the index of Kaufmann et al. (2009), as a measure of regulatory quality. Many countries worldwide have gradually shifted from rule-based to risk-based regulation (OECD, 2010). In the European pension industry, a regulatory revision is underway (EIOPA, 2012), whereby the proposed regime incorporates solvency regulations founded on risk-based concepts. Denmark, Germany, Hungary, the Netherlands, and Finland, along with Australia and Canada, are among the pioneers of risk-based pension regulation. The regulatory environment in these countries is unlike that in Latin America, where pension funds generally face stringent portfolio limits. For example, Chilean funds were only allowed to invest in fixed income in their nascent years, though the

regulator gradually relaxed these limits over time and introduced risk-based regulation in 2011.

A country's regulatory environment can prominently display both rule-based and risk-based regulation. This is the case in Mexico, where investment restrictions exist alongside a daily value-at-risk constraint. In sum, the global trend towards risk-based regulation makes it relevant to investigate the influence of rule and risk based regulation on pension funds' investment performance. Extensive discussions on the regulatory impact of pension investment performance were initiated in the late 1990's, after many countries undertook pension reform. None of the studies we have come across rely on empirical analysis of wide cross-country samples, most likely because pension investment data was not available until recently. Attempts at evaluating pension investment performance globally are mainly descriptive (Tapia, 2008). Otherwise, they are theoretical (Davis, 2002) or geographically restricted (Srinivas and Yermo, 2010).

The Retirement Benefits Act, 1997 brought much needed sanity in the retirement benefits sector. Before the enactment of the Act, numerous Acts of Parliament related to retirement benefits offered a weak framework for the regulation of the sector, namely the Pensions Act, Cap 189; the Pensions (increase) Act, Cap 190; the Provident Fund Act, Cap 191; the Widows and Orphans' Pensions Act, Cap 192; the Asian Widows' and Orphans' Pensions Act, Cap 193; the Asian Officers' Family Pensions Act, Cap 194; the Widows' and Children's Pensions Act, Cap 195; and the Parliamentary Pensions Act Cap 196. There are two other Acts which affected pension schemes, namely: the Insurance Act, Cap 487; and the Income Tax Act, Cap 470.

There was therefore no single law that regulated the retirement benefits sector. The sector was characterized by gross mismanagement of pension schemes. Pension schemes lacked clear investment policies which resulted in poor returns on investments of scheme funds. The Retirement Benefits Act, 1997 put in place much needed reforms and in addition, the Act separated the custody of scheme funds from the management of the same. There is now a requirement that every scheme fund must have a Custodian and a Manager. The Sponsor no longer had unbridled access to scheme funds. The duties of the Custodian and the Manager were clearly delineated. Tough conditions were set for the investment of scheme funds. Clear investment guidelines of scheme funds were provided.

1.1.2 Financial Performance of retirement Benefits Funds

Pension funds are a set of payment promises in favour of the plan that are protected by property rights. For the purpose of this study, pension is defined as a sum of money paid regularly by the state or by trustees of a scheme to an employee upon normal or ill- health retirement. Various studies were reviewed in line with investment of pension schemes. It is important to note that the studies are mainly foreign with a few local ones. In a study by Mghali (2003), it was concluded that firms should conduct pension schemes where the employer contributes a certain percentage together with the employee contribution and then this is invested by trustees who should control the fund. Mugweru (2001) in his study on National Social Security Fund (NSSF) recommended that the investment department at NSSF should consist of professionals who adhere to proper investment policies and procedures.

Pension funds are playing an increasingly important role as both channels for retirement savings and as intermediaries in financial markets. This combined role makes them a prime concern for governments and regulators from a variety of perspectives. Pension funds, however, are by their nature subject to potential conflicts of interest arising between the fund administrators and the ultimate beneficiaries of the fund. Pension funds, therefore, require a set of internal statutes and external regulations to ensure that they are managed in the best interest of their beneficiaries. The balance between internal statutes and external regulations is a delicate one, and depends largely on a country's social and legal structure (Mugweru, 2001).

Studies on the performance of pension funds either use financial ratio analysis (Delebohn, 1995) or compare the pension fund returns with the market indices (Bikker and Dreu, 2009). The use of Data Envelopment Analysis (DEA) has however been documented as a more superior technique of analysis of efficiency (Barros and Garcia, 2006) since it enables the ranking of the institutions being evaluated and generates scores for inefficiencies. Very few studies have used DEA to measure pension fund efficiency.

1.1.3 Regulatory and Financial Performance of Retirement benefit Fund

Regulatory control changes involve controls on corporate governance, access to pension funds, investment of funds and running costs of schemes. Since the coming into effect of the Retirement Benefits Act and other regulations, the management of pension schemes has become more structured and organized. However, it is questionable whether this has translated into an improvement in the financial performance of the schemes. This is because the regulations have also brought about some limitations on the operations of pension schemes and an increase in administrative costs. It is the financial performance that

determines the financial health of a pension scheme and its ability to pay all benefits as and when they fall due.

Research has shown that there have been significant positive effects on the financial performance of occupational retirement benefit schemes in the period in which the regulations have been in place (Kusewa, 2007). According to Kipkoech (2012), regulatory controls exert a significant relationship on the growth of the pension schemes. This means that pension regulatory controls lead to improved financial performance and growth of the individual pension schemes.

Further, he posits that reducing the benefits processing period, providing relevant education to the trustees, maintaining an appropriate internal control system, communicating regularly with members, defining the roles of the trustees clearly, regulating the fees charged by the service providers, controlling default risk on the part of the sponsor and implementing investment strategies that are major factors that influence the financial performance and growth of individual pension schemes in Kenya.

1.1.4 Pension Schemes in Kenya

In spite of the demographic and economic differences that exist among nations, it has now become evident that pension systems and retirement benefits schemes are necessary for developing countries like Kenya not only to secure people's livelihoods after retirement, but also due to the fact that retirement schemes provide an avenue for mobilizing savings for long-term investments. This has led to increased prominence for the pension and retirement

benefits industry since it serves the economy variously, by ensuring that individuals have savings that may be used to sustain their standards of living after retirement and in the process providing funds for development (Njuguna, 2010).

While it is readily conceded that the retirement benefits and pensions industry in Kenya has been growing, there is the greater challenge of raising the savings rate above the present average of 8-9%. While this is an altogether important concern, it is also recognized that the level is determined largely by the fact that Kenyans have grown progressively poorer over the last decade. It could therefore be surmised that it is not exactly possible to raise the proportion of incomes that Kenyans may save when they are unable to meet even basic needs (Njuguna, 2010).

Security against poverty in old age would be better guaranteed through a pension system by which a person draws out a monthly sum as benefits until death. One problem with NSSF arises from the low value of the benefits received from this scheme, which bear no relation to economic realities. This is mainly due to insignificant size of contributions paid into the scheme. Currently there is a debate on whether Kenya's state run retirement benefits provider, the NSSF should be converted from a provident fund into a pension scheme that will afford its members greater old age security. Such a change would be of great importance in boosting old age security in Kenya given the wide reach of the NSSF (Kusewa, 2007).

1.2 Research Problem

According to RBA, there has been a gradual and constant growth in the size of retired benefits funds in Kenya in the recent years. Performance of the funds has also changed

drastically from year to year, (Kusewa, 2009). Theoretically, the expected relativity of fund size and their performance is not explicit; some studies insist on a positive relationship, others a negative relationship while others suggest no correlation at all between the two variables, (Ruguru, 2010).

The Retirement Benefits Act was enacted in 1997 with the aim of regulating the retirement benefits sector, which lacked a harmonized legal framework. The Retirement Benefits Regulations, which were gazetted in the year 2000 and 2007 put in place further and more precise provisions aimed at achieving the core objectives of protecting the benefits of members' of retirement benefit schemes and developing the retirement benefits industry, (Karisa, 2008). Since the coming into effect of the Retirement Benefits Act and Regulations, the management of pension schemes has become more structured and organized. However, it is questionable whether this has translated into an improvement in the financial performance of the schemes. This is because the regulations have also brought about some limitations on the operations of pension schemes and an increase in administrative costs. It is the financial performance that determines the financial health of a pension scheme and its ability to pay all benefits as and when they fall due, (RBA, 2010).

With the level of attention being paid to the provision of adequate retirement benefits for workers around the world increasing, the idea of reforming the retirement benefits sector to deliver intended services to beneficiaries effectively has become a central issue. To be in tandem with global developments, the government of Kenya enacted the Retirement Benefits Act (1997) and the Retirement Benefits Regulations (2000) and issued further regulations on

Administrator (2007). The main thrust of the Act was the establishment of the Retirement Benefits Authority for the regulation, supervision and promotion of retirement benefits sector and for connected purposes. These were the main missing links in the administration of retirement benefits schemes in the country, currently estimated to hold assets in excess of Ksh. 696 billion or 27% of the country's GDP (RBA 2013).

Local studies done includes Kusewa (2009) who did a study on the impact of regulation of the retirement benefits sector on the financial performance of occupational pension schemes in Kenya, Ruguru (2010) did a study on the impact of retirement benefits regulations on the cost efficiency of retirement benefits schemes in Kenya, Karisa (2008) did a study a survey of the impact of the retirement benefits Act, 1997 on pension funds' investments portfolio. Muchemi (2004) did a study on the effect of the retirement benefits act (no.3 of 1997) on the management of insured retirement benefits schemes in Kenya. Were (2011) conducted an investigation of the determinants of the amount of benefits accessed before retirement age in Kenya. Nguthu (2009), did a study on the effect of assets allocation on retirement Benefits fund performance in Kenya. Wanyama (2001) conducted a study on pension schemes and provident funds investment portfolios in kenya: implications of investment guidelines under retirement benefits act (1997) and regulations (2000) and Kihunyu (2005), who conducted a study on the effects of retirement benefit authority act on risk of investments held by pension funds in Kenya, however none of these study seeks to establish the effects of regulations in the performance of the retired benefits funds in Kenya, this study seek to fill the existing research gap by conducting a study to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya

1.3 Objectives of the Study

The objective of this study was to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya

1.4 Value of the Study

Kenya plans to take action to enhance the use of pensions, insurance, capital and securities markets in realising the investment goals set for Vision 2030. The overall research will help Kenya in achieving Millennium Development Goals (MDGs) and Vision 2030 which heavily rely on mobilization of small savings and pooling of resources to fuel investments in the country.

The research aims to clarify to potential investors and employees who will at one time become retirees or need a form of security or insurance on how retired benefit funds are also a viable investment option just like the others that are more common like equity. An extract from the document Vision 2030 states, "Financial services will play a critical role in the next phase of the development of our country by providing better intermediation between savings and investments than at present." These finding will be of great importance to future scholars and academicians as it will provide literature for future research as well as provide basis for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The review of literature is to guide us in the methodologies to be used, estimation procedures and interpretation of results. This chapter, therefore, focuses on both theoretical and empirical literature to understand the effects of regulations in the financial performance of the retired benefits funds in Kenya. This chapter is divided into four broad sections. The first section reviews select theories of regulation. The second section assesses literature on determinants of financial performance. The third section gives an empirical review. The final section reviews summary of the literature review.

2.2 Review of Theories

This section will review theories of economic and banking regulations. The focus of the theories is whether there is need for more regulation or deregulation in the economy especially in retired benefit fund.

2.2.1 Public Interest Theory and Market Failure

Pigou (1932) notes that the theory of economic regulation is rooted in perception that government must step in to regulate markets in instances when markets are unable to regulate themselves. These so-called "market failures" occur where the price mechanism that regulates supply and demand breaks down, forcing government to take action. Natural monopolies and external costs (externalities) are the most prominent types of market failure. Natural monopolies occur when the fixed costs of supplying a commodity are so great that it makes sense for only one firm to supply that commodity. Public utilities like the delivery of

electricity or water/wastewater services to your home usually require so much money to build the necessary infrastructure (erect utility poles and lay pipelines) that no company would take on the task without confidence that it would control a sizeable portion of the market. The problem is that the monopoly businesses that arise from this situation tend to use their market power in ways that can be highly detrimental to the community at large.

This is where governmental regulation becomes important. Externalities occur when the costs or benefits of producing a good or service are not fully incorporated into the price. Economists often cite air pollution as a cost incurred by almost any sort of economic activity, but which is often ignored when determining the prices. When the polluting activity is very concentrated, as in a manufacturing plant, the costs to the surrounding community can be considerable. Yet, without governmental regulation there is nothing that compels the plant to either minimize the environmental impact or otherwise compensate the community for bearing that part of the cost of production. These sorts of market failures, along with the general need for mechanisms of regular public disclosure by business, make regulation critical if the public interest is to be protected. In this view, regulation results from the need to protect the public from the negative impacts of such market failures and other harmful business behaviour.

2.2.2 Capture Theory and Monopoly Control

The public-spirited vision of the public interest theory of regulation began to be challenged systematically in the early 1970s when researchers suggested that the individual regulatory agencies of government did not work for the public interest at all. Instead, they worked for private interests who actually demanded to be regulated as way of enhancing profits. Going further, some even argued that each individual government agency was "captured" by the

leading organized interest (a company or business association) in the industry over which a particular agency operated. This view rests on the understanding that the political actors most interested in the regulation of a particular industry are the companies in that very industry. Because of this tightly focused interest orientation among economic actors, it is thought that each regulating agency has been isolated and essentially taken over by a single powerful interest or interest association representing the very industry under regulation.

Furthermore, it is believed that powerful interests in one industry generally do not interfere with the regulating activities in other industries. This line of analysis implies that there is little or even no competition over control of public policy among economic interests. Within each industry a single company or industry association dominates, and each industry minds its own business being careful not to interfere with other industries and their particular public agencies. Citizens, meanwhile, are thought to be largely absent from the processes of economic regulation. This exclusion of citizens is thought to result from two things: the issues and processes involved are complex and arcane, and the impact of regulation on any individual citizen is relatively light compared to the impact on the businesses under regulation. A citizen paying a few dollars more per month for electricity is relatively insignificant compared to the millions of dollars at stake for an electric utility company. In short, regulation exists not because citizens need it, but because the regulated industry wants it. The capture theory of economic regulation provides some of the theoretical foundation for the concept of "iron triangles" (also known as policy sub-governments), which depict a three-way relationship between a government agency, the industry over which it has responsibility and the relevant legislative committees (Stigler, 1971).

2.2.3 Special Interest Theory and Group Competition

This approach to understanding regulation developed as a response to the capture theory. Some researchers reject the capture theory's emphasis on monopoly control of individual agencies by one narrow group of powerful interests. Instead, they propose that multiple groups actually compete for control of an agency's activities. The average citizen is not a major factor in this model either. Instead, powerful groups fight among themselves to use the coercive authority of the government to make rules and regulations that would help their particular businesses. Such rules might help one industry or company, but hurt others. As in the capture theory government regulation is not regarded by the regulated industries as an inherently bad thing. Instead, the regulated industries or companies actually demand regulation. The key difference between the capture theory and the special interest theory is that the latter holds that competition among special interests can be both widespread and intense (Becker,1983).

2.3 Determinants of Financial Performance

2.3.1 Volatility

Maya Fisher-French (2012) stated that volatility (risk) of an asset class affects the returns of an investment. Low volatility is associated with potential low returns while the vice versa is also true. The researcher advocates the asset allocation for retirement savings should consist of a wide range of assets including cash, bonds, property and equities (shares), whose overall impact will be to have a medium risk portfolio.

2.3.2 Portfolio Weightings

In their study, Block and French (2002), showed that the weighting of individual securities within the portfolio. The weight that a portfolio manager assigns to a given security in a portfolio can make a contribution to return that is just as important as the security selection and investment timing decisions. The researcher found that fund managers tended to hold consistent in constructing and maintaining equal weights in management on retirement benefits funds.

2.3.3 Interest Rates

Flannery and James (1984) in their study on the effect of interest rate changes on the common stock returns of financial institutions found that returns on equities are found to be positively correlated with interest rate changes. This implies that where retirement funds are invested in equities and the money market, both asset classes will lose if interest rates decrease and the vice versa would hold true if there was an increase in interest rates.

2.3.4 Liquidity

This is the ease (and speed) with which an asset can be sold and still fetch a fair price. It is a relationship between the time dimension (how long it will take to dispose) and the price dimension (any discount from fair market price) of an investment asset. Cash and money market instruments such as T-bills and commercial paper are most liquid assets, and real estate is among the most illiquid. Liquid assets tend to have lower rates of returns than the less illiquid assets. Therefore fund managers should strike a balance between liquidity and desired returns by establishing the minimum level of liquid assets they wish to hold in the investment portfolio.

2.3.5 Investment Horizon

This is the planned liquidation date of the investment or substantial part of it. This concept is best supported by the yield curve. A normal yield curve (that is upward sloping) suggests that long term bonds are sold at higher yields than short term bonds. Horizon needs to be considered when investors choose between assets of various maturities, such as bonds, which pay off at specified future dates, considering that this has an impact on the financial performance of specified portfolios.

2.3.6 Regulations

Only professional and institutional investors are constrained by regulations. First and foremost is the prudent investor rule. That is, professional investors who manage other people's money have a fiduciary responsibility to restrict investment to assets that would have been approved by a prudent investor. However, there are specific regulations that apply to various institutional investors. For instance, there are investment guidelines issued by RBA to regulate the way in which trustee of retirement benefit schemes invest retirement funds. This affects financial performance of the funds as an investment manager is restricted from investing, say, 100% in the assets that have the highest returns like equities.

2.3.7 Tax Considerations

Tax consequences are critical to investment decisions. The performance of any investment strategy is measured by how much it yields after taxes. For household and institutional investors who face significant tax rates, tax sheltering and deferral of tax obligations may be pivotal in their investment strategy. However, in the context in retirement benefit industry in

Kenya, returns of the funds are not taxed at the corporate level but at an individual level at the time of withdrawal.

2.4 Empirical Review

Srinivas and Yermo (1997) assessed the impact of regulatory regimes on the market performance of private pension funds in Latin American Countries (LAC) that have undertaken reforms of their pension systems. They focused, in particular, on the effects of “draconian” regulations, a set of rules on the industry’s structure, investment regime and performance. The paper developed an intuitive analytical methodology for benchmarking performance in defined contribution systems. Expected replacement rates for workers of different demographic characteristics were calculated based on historical rates of return of pension funds and alternative investments. It was shown that the poor past performance of the Chilean pension funds relative to market alternatives will create significant differences between the expected replacement rates of the pension system and the replacement rates that could have been expected under a more liberal investment regime. The following conclusions were made: While the rules have achieved their basic objectives of safeguarding workers’ retirement savings from financial systems that lack transparency and solidity, the rules are not without costs. They create distortions in asset management, limit opportunities for diversification, and, as a consequence, hamper the performance of pension funds. The existing regulatory regimes should be liberalized as soon as possible to allow pension fund investments in a wide array of financial instruments, and that regulations should require evaluation of pension fund performance against market benchmarks as opposed to exclusive focus on comparison with industry average.

According to Vittas (1998) and Queisser (1998) “The main adverse effect of performance regulation is to exacerbate herding behavior” with small fund managers behaving like Stackelberg Followers (Tirole, 1988), choosing portfolios similar to larger funds, which have greater weight in the industry average return.

Kusewa (2009) did a study on the impact of regulation of the retirement benefits sector on the financial performance of occupational pension schemes in Kenya. This study set out to investigate whether the enactment of regulations has had a significant impact on the financial performance of pension schemes. A sample of thirty occupational retirement benefit schemes was selected from data obtained from scheme administrators. The total contributions and the fund values for each scheme in the sample was analyzed for each of the five years prior to and the five years after the year 2000. Using the matched or paired t-test, findings indicated that there was a significant positive impact in the financial performance of the population of occupational retirement benefit schemes in the period in which the regulations have been in place.

Ruguru (2010) did a study on the impact of retirement benefits regulations on the cost efficiency of retirement benefits schemes in Kenya. The objective of the study was to examine the impact of Retirement Benefits Regulations (2000) on the cost efficiency of retirement benefit schemes in Kenya. The study compared cost efficiency between the two periods: pre and post introduction of regulations. The population was 2176 occupational retirement benefit schemes registered with Retirement Benefits Authority in Kenya as at January 2010. A random sample of 30 retirement benefits schemes was selected for the

purpose of this study. Preferences were given to those pension schemes that have been in operation since 1991. The study period was from the year 1991 to 2009. To measure cost efficiency level of schemes in Kenya, the Stochastic Econometric cost function which involves the estimation of the cost function and the derivation of the cost efficiency estimate based on the deviation from the efficient frontier was used and analysis of data was done through correlation and regression analysis. Pearson correlation results indicate that is high positive correlation between cost efficiency and pension paid out to members and regulation dummy indicating Cost efficiency is determined by pension paid out to members and regulation dummy. Graphical representation of cost efficiency shows that that cost efficiency in pension scheme sector has been increasing steadily from 1991 to 2009. Therefore, it can be concluded that the introduction of regulation increased the cost efficiency among the pension schemes. Comparative test between the two periods pre and post introduction of regulation indicates that the two periods are weakly correlated. The paired samples t-test statistics is 9.028 and significance indicating the two periods are not related and are independent of each. This result shows that there is slight improvement in cost efficiency after introduction of retirement benefit scheme regulation.

Karisa (2008) did a study a survey of the impact of the retirement benefits Act, 1997 on pension funds' investments portfolio. This study shows that pension schemes have realigned their investment portfolios and in particular the study shows that pension plans have now become major players in the capital market. Investment by pension plans in securities traded at the Nairobi Stock Exchange has increased tremendously, making them major institutional investors. This has improved the liquidity of securities traded at the Nairobi Stock Exchange.

The study shows that pension schemes have kept within the investment ceilings set by the Retirement Benefits Act, 1997. There have also been major changes in the proportions of funds invested in some types of assets in light of the investment guidelines of the Retirement Benefits Act, 1997.

Muchemi (2004) did a study on the effect of the retirement benefits act (no.3 of 1997) on the management of insured retirement benefits schemes in Kenya. The rationale of the study is to address the various issues raised by the insurance companies regarding the effect of the Act of 1997 and subsequent regulations on the management of insured retirement benefits schemes. The population consists of 19 insurance companies underwriting retirement benefits schemes and 3 brokerage firms. The primary data from structured questionnaires was analysed using descriptive statistics. The study shows that 64.3% of the insurance companies managing the retirement benefits are locally owned. Within the different types of retirement benefits arrangements, 57% of the companies were operating the defined benefits schemes as opposed to defined contribution, and 71% of the companies managed contributory as opposed to non-contributory schemes. The results and responses given by the respondents agreed that the enactment of the RBA Act brought about major positive changes to the industry, The percentage for the responses on specific changes were as follows: Fees 71.4%, Services 71.4% Reporting of accounts 92.90/0, Returns to RBA 92.9%, Fund management and custodial services 85.7%. One of the most negative aspects of the Act was the increase in costs of setting up and operating schemes. The stakeholders in the industry, namely, the Retirement Benefits Authority, the Commissioner of Insurance, and the Capital Markets Authority should look for ways of bringing these costs down.

Were (2011) conducted an investigation of the determinants of the amount of benefits accessed before retirement age in Kenya. The primary purpose of a pension system is to provide regular income upon retirement. Most governments support pensions directly or give direction in the establishment of pension schemes. In Kenya, retirement schemes are set up on a voluntary basis and are regulated by Retirement Benefits Authority (RBA). In addition, RBA also regulates the National Social Security Fund, which is a statutory fund requiring all employers to make contributions on behalf of their employees. The employees are also obliged to make statutory contributions to the scheme. Prior to 2005, members of scheme would access up to 100% of their total benefits upon changing jobs or leaving service before attaining the retirement age of the scheme. In 2005, the Retirement Benefits Act was amended to prevent members from accessing the whole of their benefits upon leaving service before attaining the retirement age. This was further reversed in 2010, where the RBA Act was amended to allow members to access up to 75% of their total benefits upon changing jobs. Of interest was to establish how much was accessed by members upon leaving service. The study therefore looked at the data presented by the pension scheme administrators and used statistical tools to interpret and develop a predictive model for the early access of pension benefits. The results show that there is a negative relationship between amount of benefits accessed before retirement and the amount of income, age and the number of years in the scheme. Further, the results also showed that Younger members of scheme, those from age group 26 to 35 tend to withdraw their benefits early in comparison to the older members of the scheme. This is in line with Life cycle hypothesis that explains how rational individuals allocate their life-time earnings between consumption and retirement savings over their life cycle. In addition, the study shows that most members withdrew their pension

scheme after working for less than five years and a majority, 51.8% withdrew 75% of the pension benefits. This is in line in the RBA regulations which stipulate that the maximum amount of benefits that can be withdrawn upon changing jobs for member have not attained retirement age is 75% of the total benefits.

Nguthu (2009), did a study on the effect of assets allocation on retirement Benefits fund performance in Kenya. The objectives of the study were to determine how much of the variations of returns among retirement benefits schemes in Kenya are explained by asset allocation and also the level of returns which is explained by assets allocation. A sample of 40 schemes was drawn from a population of 400 segregated occupational schemes in Kenya. The secondary data on pension schemes assets allocation and returns was obtained from Retirement benefits Authority was analysed using regression analysis and descriptive statistics. Regression was done on the fund returns to the policy returns over time to determine the policy impact on variation over time. Regression was also done on the compounded annual fund returns to the compounded annual policy returns among schemes to determine the impact of assets allocation differences of schemes on the variability of returns. To determine the level of returns which is explained by assets allocation, the researcher computed the ratio of the average annualized total returns for each scheme to the average annualized policy returns. The study shows that the variation in returns over time for pension schemes is explained up to 62.4% by investment policy adopted by the trustees of the scheme. Other factors such as securities selection, timing of investments and managers selection explain the remainder. Differences in investment policies explained 37% of the variations on the return among different schemes as shown on Appendix IV. Further the

study established that policy explains 100% of the total fund returns level of the schemes in Kenya. This shows that on average, schemes are not adding value above their policy benchmark because of the combination of the active management and the associated management expenses. It is possible for an investor who has the ability to select superior managers before committing funds to earn above average returns.

Wanyama (2001) conducted a study on pension schemes and provident funds investment portfolios in Kenya: implications of investment guidelines under retirement benefits act (1997) and regulations (2000). The main aim of this study was twofold. First, the study sought to identify the current investment portfolio composition of pension schemes and provident funds and on this basis determine the changes that they will have to make on their investment portfolios so as to conform to the investment guidelines. Secondly, the study sought to assess the problems that pension schemes and provident funds will encounter in their efforts to conform to the investment guidelines as stipulated in the Retirement Benefits Regulations (2000). In achieving the aforementioned objectives, a questionnaire was used to collect primary data from a sample of schemes and all fund managers that had been registered with RBA by end of May 2001, and Insurance companies that had life departments managing pension funds.

It was found out that 70% of the schemes surveyed were not in conformity with investment guidelines and required making drastic changes to their investment portfolios so as to beat the set deadline. The main ways that schemes outlined to come into conformity with the investment guidelines included off-loading excessive investment in an exceeded asset class,

postponing further investment in the over invested asset class and on the extreme, where no any other viable alternative exists, dissolving the scheme all together. All these measures had various major implications for schemes that included contending with a depressed property market, illiquidity of the equity market, unremitted contributions by sponsors and a narrow range of corporate instruments. With 70% of the surveyed schemes being not in conformity with investment guidelines, the study recommends that RBA should give a grace period of at least three years, before fully enforcing the Retirement Benefits Regulations (2000). This grace period is important especially to those schemes that had over invested in immovable property and equity of quoted companies in East Africa. The importance arises from the fact that attempts to off-load excessive holdings in these asset classes currently will result into individual schemes realising excessive losses running into millions of shillings and billions of shillings for the entire retirement benefits sector.

Kihunyu (2005), conducted study on the effects of retirement benefit authority act on risk of investments held by pension funds in Kenya. The purpose of the study was to determine the effects of RBA Act 2000 on investment risk of pension funds in Kenya. The study enlightens the stakeholders in the pension industry on the risk effects arising from RBA enactment. The data was obtained from secondary sources, which included pension funds audited accounts, end of period returns and annual returns from Retirement Benefits Authority. The data was analysed using SPSS on income and distribution of assets of the pension fund's portfolio. The study revealed that with application of RBA Act the asset distribution of pension fund's portfolio have changed. It was established that pension funds have invested heavily in marketable and liquid assets improving liquidity of pension funds. Another interesting

observation is that the earnings are more stable and less risk is observed with applications of RBA rules and regulations. The study can be used to explain the reasons for investing in certain assets of the portfolio given wide range of assets from which to invest.

2.5 Summary of the Literature Review

The Act (1997) and the Retirement Benefits Regulations (2000) and (2007). The main thrust of the Act was the establishment of the Retirement Benefits Authority for the regulation, supervision and promotion of retirement benefits sector and for connected purposes. These were the main missing links in the administration of retirement benefits schemes in the country, currently estimated to hold assets in excess of Ksh. 696 billion or 27% of the country's GDP (RBA 2013). Major transitions like this give a good reason to pause, take stock of where schemes have been, where they are and where they are headed. Retirement Benefits Regulations (2000) and (2007) contain among others, investment guidelines that stipulates maximum investment ceilings in any asset class that schemes have to conform to by 8th October 2001 and/or the regulator may direct in the case of (2007). Prior to this, retirement benefits schemes were at liberty to set their own investment ceilings, as they deemed fit. This led to some schemes investing in a few asset classes or mainly one asset class, thus exposing schemes to diversifiable risks that could be eliminated through adequate diversification as per the rules of portfolio theory. This study sought to fill the existing research gap by conducting a study to establish the effect of regulations in the financial performance of the retirement benefits funds in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides the methodology to be used in the research. It covered the design, population, sampling techniques, instrumentation, data collection, data analysis procedures and hypothesis testing. The chapter looks at the various benchmarks that are used in measuring performance of mutual funds in Kenya.

3.2 Research Design

The research was a census survey research. Mugenda and Mugenda (2002) note that a survey research seeks to get opinions from a section or the entire population. In this research, the researcher finds a survey what the impact of the establishment of RBA is on the management of pension schemes in Kenya by fund managers.

3.3 Population and sample of the study

The population studied was 1232 registered pension fund as at as at 8th May 2014 and the Retirements Benefits Authority itself. The study population of this study was 518 registered pension schemes by 2007 prior release of retirements benefit funds Regulations (2007). These will thus a form the sample study. Kothari (2004) points out that a sample study is a sub-group of the population selected for the study which should be selected randomly, and in unbiased manner. He acknowledges that a good sample should be large enough to satisfy the need for the investigation being undertaken. According to Gay 1983 as cited by Mugenda and Mugenda, (2003) suggests that for descriptive studies at least 10% - 30% of the total population is enough. The study will sample 50 registered pension schemes that were operation before the regulation and in operation after regulations.

3.4 Data Collection procedures

For purposes of this study, secondary data was used. Data was in the form of financial results for a period of up to 5 years before and after the change in regulation. Secondary data was obtained from websites of the various pension schemes, the Central Bank as well as that of the RBA. The financial statements were used as sources of financial data.

3.5 Data analysis and presentation.

Data collected for each of the pension schemes was quantitative in nature. The quantitative data was analyzed in two stages. First, the R-Square (Coefficient of Determination) was calculated in order to explain how much of the variability of fund financial performance can be caused or explained by regulations. The purpose of this stage was to corroborate the findings by Nguthu (2009).

The second stage was to determine the extent to which each regulation contributes to the overall financial performance of the fund by estimating the relative importance of the repressors in the linear regression. For this purpose a linear regression T-Test was applied. In addition to the fund totals returns we needed the policy weights of each fund and the total returns on asset class benchmarks.

3.5.1 Analytical Model

A multiple regression model was used to predict the extent to which financial performance are explained by regulations. A similar model was used by Nguthu (2009) in his study. The model is therefore necessary in order to corroborate the findings in the study by Nguthu. The following multiple regression model was used in the study:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y is the financial performance of the funds which was measured using Return on Investment, which is the ratio of Return on Investments, which was measured by Investment Income divided by Average Investments

α is the constant, which represents the value of financial performance accounted for by other factors

β is the regression coefficient

X_1 , is the Scheme Expense Ratio, which was measured by Administration Expenses divided by Total Expenses

X_2 , is the liquidity of the scheme which was measured by schemes Current Assets divided by Current Liabilities

X_3 , is the Measures of Financial Distress or Vulnerability, this was measured by ratio of Total Liabilities to Total Assets

3.5.2 Test of Significance

Tests of significance were used in the study. This included Bivariate Correlation between the regulation and financial performance, R-square, ANOVA, Coefficient of Determination and Paired Sample T-Test. Chi-square was used to test for any significant difference on the performance of retirement benefits funds in Kenya before and after regulations.

CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

This chapter presents the data findings to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya. This data were collected from the Retirement benefits funds reports. Multiple linear regressions were used to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya. The study covered a period of 10 years from years 2004 to 2013.

4.2 Analysis and Interpretation

4.2.1 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 20) to code, enter and compute the measurements of the multiple regressions

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.691(a)	.653	.645	.19440

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.643 an indication that there was variation of 64.5% on financial performance of retirement benefit fund due to changes scheme expense ratio, liquidity of the scheme, financial distress or vulnerability at 95% confidence interval . This shows that 64.5% changes in financial performance of retirement benefit fund could be account for by scheme expense ratio, liquidity of the scheme, financial distress or

vulnerability. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.691.

Table 4.2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.232	3	0.372	3.131	.048 ^b
	Residual	28.294	12	0.329		
	Total	30.526	15			

From the ANOVA statics in table above, the processed data, which is the population parameters, had a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value) is less than 5%. The F critical at 5% level of significance was 3.131 since F calculated is greater than the F critical (value = 1.684), this shows that the overall model was significant and that scheme expense ratio, liquidity of the scheme , financial distress or vulnerability significantly affect the financial performance of retirement benefit fund.

Table 4.3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	.298	.453		2.165	.006
	Scheme Expense Ratio	-.237	.160	-.198	-1.479	.012
	Liquidity of the scheme	.231	.126	.245	1.834	.001
	Financial Distress or Vulnerability	-.239	.145	-.008	-.065	.023

From the data in the above table the established regression equation was

$$Y = 0.298 - 0.237 X_1 + 0.231 X_2 - 0.239 X_3$$

From the above regression equation it was revealed that holding scheme expense ratio, liquidity of the scheme, financial distress or vulnerability to a constant zero, financial performance of retirement benefit fund be at 0.298, a unit increase in scheme expense ratio would lead to decrease in financial performance of retirement benefit fund by a factor of 0.237, unit increase in liquidity of the scheme would lead to increase in financial performance of retirement benefit fund by factors of 0.231 and a unit increase financial distress or vulnerability in would lead to decrease in financial performance of retirement benefit fund by a factor of 0.239. At 5% level of significance and 95% level of confidence, financial distress or vulnerability had a 0.023 level of significance; Scheme Expense Ratio showed had a 0.012 level of significance while liquidity of the scheme showed 0.001 level of significance hence the most significant factor is Liquidity of the scheme. Overall Liquidity of the scheme had the greatest effect on financial performance of retirement benefits funds, followed by Scheme Expense Ratio while Financial Distress or Vulnerability had the least effect to the financial performance of retirement benefit fund. All the variables were significant ($p < 0.05$).

4.2.2 Chi-Square Tests

Table 4.4: Chi-Square Tests

	Value	DF (degree of freedom)	P-Value
Chi-square	2.734	49	0.023

The calculated Pearson Chi-Square value is 2.73. The associated P-Value (Asymptotic significance) is 0.023. This value is less than 0.05 (5% level of significance) indicating that

there is evidence against the null hypotheses and therefore we reject it. A conclusion can be drawn from the study that regulations affect the financial performance of retirement benefits funds in Kenya.

4.3 Summary and Interpretation of Findings

From the findings the study revealed that there was variation of 64.5% on financial performance of retirement benefit fund due to changes scheme expense ratio, liquidity of the scheme, financial distress or vulnerability, this is an indication that changes in financial performance of retirement benefit fund could be accounted for by changes in scheme expense ratio, liquidity of the scheme, financial distress or vulnerability. The study also revealed that there was strong positive relationship between regulation and financial performance of mutual funds in Kenya. From the ANOVA statistic, the study found that scheme expense ratio, liquidity of the scheme, financial distress or vulnerability significantly affect the financial performance of retirement benefit fund.

The established regression equation was $Y = 0.298 - 0.237 X_1 + 0.231 X_2 - 0.239 X_3$

The study revealed that there was a positive relationship between financial performance of retirement funds and liquidity of the scheme, the study also found that there was negative relationship between financial of retirement benefits fund and scheme expense ratio and financial distress or vulnerability. The study also revealed that holding scheme expense ratio, liquidity of the scheme, financial distress or vulnerability to a constant zero, financial performance of retirement benefit fund be at 0.298. From the finding on the chi-square test, the study found that regulations affect the financial performance of retirement benefits funds in Kenya. The results of the tests for significance of the differences in performance of the schemes after the introduction of the regulatory changes show that there is a significant difference in the financial performance of the schemes. The results therefore indicate that the

regulatory changes have had positive effects on the performance of pension schemes in general, consistent with the findings of Kusewa (2007). The information that is provided is usually limited or is a proxy for the relevant factors and, when available, is not easy to understand for most members (Campbell and Viceira, 2002). In general, no assurances can be given that competition in the short-term will result in long-term optimal asset allocation (Campbell and Viceira, 2002). Regulatory restrictions on pension fund performance, such as the minimum return guarantee, may create additional disturbance in the equilibrium portfolio allocation that is reached in a competitive framework.

Exley, Mehta and Smith (1997), revealed that adoption of this market based approach appears now to be essential in many of the most critical areas of actuarial advice in the field of defined benefit corporate pension provision and that the principles can in addition be used to establish more efficient and transparent methodologies in areas which have traditionally relied on subjective or arbitrary methods. Srinivas and Yermo (1997), found that the poor past performance of the Chilean pension funds relative to market alternatives have created significant differences between the expected replacement rates of the pension system and the replacement rates that could have been expected under a more liberal investment regime.

The finding concurs with the finding of Srinivas and Yermo (1997) who found that the existing regulatory regimes should be liberalized as soon as possible to allow pension fund investments in a wide array of financial instruments, and that regulations should require evaluation of pension fund performance against market benchmarks as opposed to exclusive focus on comparison with industry average. Kusewa (2009), using the matched or paired t-test, findings indicated that there was a significant positive impact in the financial

performance of the population of occupational retirement benefit schemes in the period in which the regulations have been in place.

Ruguru (2010) found there is slight improvement in cost efficiency after introduction of retirement benefit scheme regulation. Karisa (2008), found that pension schemes have realigned their investment portfolios and in particular the study shows that pension plans have now become major players in the capital market. The study shows that pension schemes have kept within the investment ceilings set by the Retirement Benefits Act, 1997. There have also been major changes in the proportions of funds invested in some types of assets in light of the investment guidelines of the Retirement Benefits Act, 1997.

Muchemi (2004) found that RBA also regulates the National Social Security Fund, which a statutory fund is requiring all employers to make contributions on behalf of their employees. Nguthu (2009), found that the variation in returns over time for pension schemes is explained up to 62.4% by investment policy adopted by the trustees of the scheme. Other factors such as securities selection, timing of investments and managers selection explain the remainder. Wanyama (2001) found out that 70% of the schemes surveyed were not in conformity with investment guidelines and required making drastic changes to their investment portfolios so as to beat the set deadline. The main ways that schemes outlined to come into conformity with the investment guidelines included off-loading excessive investment in an exceeded asset class, postponing further investment in the over invested asset class and on the extreme, where no any other viable alternative exists, dissolving the scheme all together.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The objective of the study was to establish the effects of regulations on the financial performance of retirement benefits funds in Kenya. Secondary Data was collected from retirement benefit fund financial reports and multiple regression analysis used in the data analysis. From the findings the study revealed that there was variation of 64.5% on financial performance of retirement benefit fund due to changes scheme expense ratio, liquidity of the scheme, financial distress or vulnerability, this is an indication that changes in financial performance of retirement benefit fund could be accounted for by changes in scheme expense ratio, liquidity of the scheme, financial distress or vulnerability. The study also revealed that there was strong positive relationship between regulation and financial performance of mutual funds in Kenya. From the ANOVA statistic, the study found that scheme expense ratio, liquidity of the scheme, financial distress or vulnerability significantly affect the financial performance of retirement benefit fund. The study revealed that there was a positive relationship between financial performance of retirement funds and liquidity of the scheme, the study also found that there was negative relationship between financial of retirement benefits fund and scheme expense ratio and financial distress or vulnerability. The study also revealed that holding scheme expense ratio, liquidity of the scheme, financial distress or vulnerability to a constant zero, financial performance of retirement benefit fund be at 0.298. From the finding on the chi-square test, the study found that regulations affect the financial performance of retirement benefits funds in Kenya.

5.2 Conclusion

From the findings study found that regulations affects the financial performance of retirement benefits funds in Kenya, thus the study concludes that since the enactment of the Retirement Benefits Authority Act, there has been significant growth in performance of retirement benefits fund.

The relationship between regulatory changes and financial performance of pension schemes in Kenya is unidirectional and runs from regulatory changes to performance and not vice versa, thus the study concludes that there exist a positive relationship between regulatory changes and financial performance of pension schemes in Kenya

The study revealed that regulatory changes have a significant influence on the performance of pension schemes in Kenya, thus the study concludes that regulatory changes have a significant influence on the performance of pension schemes in Kenya as the results have passed significance tests.

Therefore, the control of scheme expenses, provision to access full employee and half of employer portion before retirement and reduction of payment period from sixty to thirty days have had a major effect on the financial performance of pension schemes in Kenya. The study found that financial performance before application of RBA guidelines are better than after RBA applied performance. However, with the application of RBA guidelines, provident pension schemes have experienced reduced risk, decreased reported investment performance and drastic reduction of variability in returns from year to year, an indication of more stable earnings.

5.3 Policy Recommendations

The study recommends that the policy makers should evaluate the regulatory changes that they propose so that the changes can be able to stimulate growth in the pension industry rather than stifle it. The policy makers also need to expand the scope of the regulatory changes in order to ensure that the pension schemes are governed in responsible way to reduce vices such as corruption and thereby improve performance.

The study also recommends that the government through the Retirement Benefits Authority should put up strict measures to ensure that the pension schemes are observing the regulations enacted as a way of ensuring improved performance.

The study recommends that there is need for the stakeholders in the industry, namely, the Retirement Benefits Authority, the Commissioner of Insurance, and the Capital Markets Authority should look for ways of bringing these costs down. Another interesting observation is that the earnings are more stable and less risk is observed with applications of RBA rules and regulations. The study can be used to explain the reasons for investing in certain assets of the portfolio given wide range of assets from which to invest.

Grace period is important especially to those schemes that had over invested in immovable property and equity of quoted companies in East Africa. The importance arises from the fact that attempts to off-load excessive holdings in these asset classes currently will result into individual schemes realising excessive losses running into millions of shillings and billions of shillings for the entire retirement benefits sector.

5.4 Limitation of the Study

One major limitation of the study was the availability of yearly data per pension scheme as this was the initial plan for the study to use yearly data to perform the analysis. Since this was not possible, the researcher reverted to the use data from 38 schemes as this is what was readily available. The study was limited to 38 schemes meant that the number of observations was less than had been initially planned.

The study was limited to establishing the effects of regulations on the financial performance of retirement benefits funds in Kenya, for this reason pension scheme not regulated by RBA were not considered in this study.

Secondary data was collected from the firm financial reports. The study was also limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from scheme publications, it nonetheless could still be prone to these shortcomings.

The study was based on a 10 year study period from the year 2004 to 2013. A longer duration of the study will have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.5 Areas for Further Research

The study recommends that a study should be done on the effects of external macro-economic factors such as the economic conditions in the country on financial performance of retirement benefits funds.

Studies need to explore the relationship further by using individual pension data for the whole industry to examine the effect of regulatory changes on the growth of pension schemes in Kenya.

The study recommends that a study should be done on the effects of Retirement Benefit Authority regulation on growth of pension schemes in Kenya

The study recommends that a study should be done on the effect of pension schemes on economic growth in Kenya

The study recommends further studies in the area of factors affecting the custody industry in Kenya. This should include other non-bank institutions that offer custodial services.

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APPENDICES

Appendix I: Introductory letter

From: **MWANGI JAMES NJERU**

To: Respondent

Dear, Respondent

RE: Questionnaire

I am a student at University of Nairobi pursuing Masters of Business Administration. I am carrying out a study on **EFFECTS OF REGULATIONS ON FINANCIAL PERFORMANCE OF THE RETIREMENT BENEFITS FUNDS IN KENYA**

You are kindly requested you to assist in the collection of secondary data, from your organization so as to enable me accomplish the study. Please, note that all the information given shall be treated purely and used for academic purposes and shall be treated as confidential. Thank you for taking your time to complete the questionnaire and for your time and cooperation.

Yours sincerely

MWANGI JAMES NJERU

Student UON Kenya

Appendix II: Data Collection sheet

		Name of the Fund						
	Total Assets	Current Assets	Total Liabilities	Current Liabilities	Total Expenses	Admin Expenses	Investment Income	Average Investment
2004								
2005								
2006								
2007								
2008								
2009								
2010								
2011								
2012								
2013								

Appendix III: Data before Regulation

Schemes	ROA	Scheme Expense Ratio	Liquidity of the scheme	Financial Distress or Vulnerability
1.	0.1930	0.1601	0.2010	0.0450
2.	0.1070	0.0860	0.1520	0.0172
3.	0.2260	0.1300	0.2360	0.0342
4.	0.4230	0.1680	0.4320	0.0220
5.	0.2600	0.2300	0.3120	0.0750
6.	0.1040	0.0970	0.1620	0.0257
7.	0.1350	0.0830	0.1450	0.0244
8.	0.3500	0.2700	0.3600	-0.0115
9.	0.3500	0.4300	0.3600	0.3556
10.	0.1620	0.1440	0.1650	0.0441
11.	0.1378	0.1068	0.1451	0.0616
12.	0.1100	0.1100	0.1300	0.1212
13.	0.3680	0.2610	0.3760	0.1936
14.	0.2500	0.2100	0.2700	0.1311
15.	0.1530	0.1470	0.1840	0.0156
16.	0.3510	0.4860	0.3570	0.3277
17.	0.1900	0.1700	0.1900	0.2235
18.	0.1323	0.1007	0.1449	0.2156
19.	0.2200	0.2100	0.2800	0.0411
20.	0.2341	0.1898	0.2348	0.0871
21.	0.1642	0.1045	0.1749	0.0926
22.	0.1400	0.1000	0.1400	0.0735
23.	0.1400	0.1000	0.1700	0.1403
24.	0.2370	0.1540	0.2490	0.0409
25.	0.1930	0.1360	0.1930	0.1073
26.	0.1529	0.1420	0.1623	0.0226
27.	0.4030	0.1540	0.4030	0.0345
28.	0.4117	0.2248	0.4172	0.0242
29.	0.2437	0.1998	0.4873	0.0607
30.	0.1990	0.1410	0.2120	0.0551
31.	0.1890	0.1816	0.1992	0.0242
32.	0.2100	0.2000	0.2200	0.2006
33.	0.2310	0.2160	0.2320	0.0826
34.	0.5163	0.3913	0.5253	0.0136
35.	0.3600	0.1900	0.3700	0.0435
36.	0.1464	0.1521	0.1551	0.0361
37.	0.3500	0.3000	0.3600	0.1253
38.	0.4600	0.2200	0.4700	0.2055

Appendix IV: Data after Regulation

Schemes	ROA	Scheme Expense Ratio	Liquidity of the scheme	Financial Distress or Vulnerability
1.	0.4210	0.060	0.686	0.459
2.	0.6760	0.014	0.745	0.342
3.	0.2500	0.103	0.434	1.306
4.	0.1530	0.037	0.368	1.717
5.	0.5859	0.080	0.615	0.625
6.	0.7540	0.035	0.791	0.264
7.	0.6921	0.041	0.699	0.430
8.	0.3920	0.006	0.319	2.130
9.	1.4575	0.251	1.096	-0.087
10.	0.6391	0.085	0.677	0.476
11.	0.5512	0.040	0.588	0.700
12.	0.7936	0.153	0.872	0.147
13.	0.9290	0.091	0.759	0.318
14.	0.5514	0.123	0.523	0.912
15.	0.4840	0.019	0.514	0.946
16.	0.9865	0.412	0.965	0.036
17.	0.8996	0.301	2.227	-0.551
18.	1.0528	0.129	0.783	0.277
19.	0.5389	0.068	0.610	0.640
20.	0.8395	0.055	0.844	0.185
21.	0.4622	0.043	0.834	0.199
22.	1.3285	0.009	1.520	-0.342
23.	0.8778	0.129	0.974	0.026
24.	0.3925	0.044	0.645	0.550
25.	0.7708	0.217	0.864	0.157
26.	0.9451	0.003	1.283	-0.221
27.	0.5125	0.056	0.464	1.154
28.	0.4012	0.032	0.454	1.204
29.	0.6594	0.087	0.739	0.353
30.	0.5423	0.055	0.575	0.738
31.	0.3944	0.035	0.457	1.187
32.	0.9118	0.239	1.216	-0.178
33.	0.5936	0.109	0.689	0.451
34.	0.5244	0.019	0.809	0.236
35.	0.6200	0.096	0.624	0.604
36.	0.4829	0.033	0.582	0.719
37.	0.5629	0.244	0.828	0.208
38.	0.4222	0.215	0.797	0.255

