THE EFFECT OF FIRM CHARACTERISTICS ON THE FINANCIAL PERFORMANCE OF PENSION SCHEMES IN KENYA

BY

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DECLARATION

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

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ACKNOWLEDGEMENT

DEDICATION

I dedicate this study to my wife, Esther Mokeira and my dear family, for their love and unstinting support throughout the study.

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ABBREVIATIONS

EBRI   Employee Benefit Research Institute

GDP   Gross domestic product

OECD   Organization for Economic Co-operation and Development

RBA   Retirement Benefit Authority

TOC   Theory of Constraints

ZAR   South Africa Rand

ABSTRACT

The performance of pension schemes is imperative as they play a very significant role in the economy of any country. Countries throughout the world are increasingly relying on individual pension savings accounts to provide income replacement in old age for their citizens. Although these have now been in place for several decades, the attributes of their performance has not always been meaningful from the perspective of the long term objectives of pension schemes. The present study thus attempted to establish the effect of firm characteristics on financial performance of pension schemes in Kenya. More specifically, the study sought to determine the effect of membership age, fund size, fund design and density of contribution on the financial performance of pension schemes in Kenya. The study was conducted through the use of a descriptive survey design. The target population for the study comprised all the 1216 registered pension schemes in Kenya as per the Retirement Benefits Authority (RBA). A sample size of 134 registered pension schemes was reached sampled on a simple random sampling technique. The study used secondary data, which was quantitative in nature and was collected from the annual financial statements of the pension schemes in the custody of the Fund Managers, Scheme Trustees, Scheme Administrators and RBA as filed returns. The data to be representative enough, the study reviewed secondary data for a five year period, preferable latest, that is, 2009-2013. The quantitative data collected was analyzed by the use of both descriptive and inferential statistics using statistical package for social sciences (SPSS) version 20. There were strong, significant and positive correlations between ROI and: Density of contributions, Fund value, Fund size, and Fund returns. Weaker, significant and positive correlations were established between ROI and Fund design and Age.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In both developed and developing economies, pension schemes perform diverse activities that are beneficial to both individuals and the economy at large. The Pension schemes are substitute to and have complementary roles with other financial institutions, specifically commercial and investment banks stimulating capital and financial market growth (Eijffinger and Shi, 2007). Further, pension schemes cultivate competition and improve the effectiveness of loans and primary securities markets as contending mediators for household savings and corporate financing, resulting in a lower spread between lending and deposit rates, and lower costs to access capital markets (Brunner et al., 2008). The schemes also support banks by purchasing long-term debt securities or investing in long-term bank deposits. Other potential impacts from the growth of pension schemes include an incentive toward financial innovation, improvement in corporate governance and an overall improvement in financial markets (Bikker and Dreu, 2009).

The performance of pension schemes is thus imperative as they play a very significant role in the economy of any country. There is need for pension schemes to engage in proper management of the resources entrusted to them. Pension schemes also need to measure their financial performance against long-term optimal benchmarks. Some of the parameters that may be important in measuring the financial performance include: The presence of other sources of retirement income, including the income from public retirement schemes; the rate of contributions; the target replacement rate and its downside tolerance as well as a matrix of correlations between labor income and equity returns (Pablo et al., 2009).

1.1.1 Firm Characteristics

Firm characteristics, in the context of the financial performance of pension schemes, are an explicit representation of the key performance areas of a scheme (Serrano and Molinero, 2011). In this context, firm characteristics define those sustaining attributes that a scheme must exhibit well over time to accomplish its mission. They are found at every level of management, from executive to line management. Rockhart (2011) provides a useful summary of similar but distinct definitions: key areas of engagement in which favorable results are absolutely necessary to reach financial goals; key areas where things must go right for the business to flourish financially; factors that are critical to the financial success of an organization; as well as key areas of activities that should receive constant and careful attention from management. The present study attempted to establish the determinants of financial performance of pension schemes in Kenya. More specifically, the study sought to determine the effect of membership age, fund size, fund design and density of contribution on the financial performance of pension schemes in Kenya.

Countries throughout the world are increasingly relying on individual pension savings accounts to provide income replacement in old age for their citizens. Although these have now been in place for several decades, the metrics for the measurement of their performance has not always been meaningful from the perspective of the long term objectives of pension schemes (Clark and Mitchell, 2012). The recent financial crisis has highlighted the need to establish meaningful performance measures that consider pension schemes in relation to the ability to effectively provide income replacement at retirement age. The OECD (2009) states that pension schemes with a clear statement of investment principles perform better than those without. Increased pension scheme returns are dependent on the active management of the investment portfolios

(Gallagher and Martin, 2009). For instance, according to Markese (2000), pension schemes that invest more in equity stocks perform better than those that invest more in bonds and other fixed securities. According to Serrano and Molinero (2011) however, returns on investments are only one of several factors that will determine the financial performance of pension schemes to provide retirement income to their members. Others factors include the presence of other sources of retirement income; the age of individuals; the rate of contributions; the target replacement rate; the expected density of contributions; the type of retirement income in the payout phase, and the risk aversion of policymakers and individuals.

Although these factors are important in the overall performance of pension schemes, the focus of the present study is on the effect of firm characteristics on the financial performance. It is primarily directed to evaluating what can be learned about the comparative financial performance of pension schemes and consideration of how to undertake financial performance determinants within a framework that is derived from the particular characteristics and objectives of pension schemes systems.

1.1.2 Financial Performance of Pension Schemes

Cheong (2007) defines financial performance as a subjective measure of how well a firm is doing; case in point a pension scheme can use assets from its primary mode of business and generate profits. Financial reports of pension schemes provide valuable finance performance information to the users of the financial statements, as well as employees and retirees of that company (Brady, 2009). The financial performance can be a significant element in determining net income, and is also important in evaluating the financial risk of the firm. The pension

scheme's financial status can impact the financial health of a significant number of individuals during their retirement years. Accounting for defined benefit pension plans requires pension schemes to make many estimates (or assumptions). These include estimates of future salary increases of those employees covered by plans that are pay related, determination of the discount rate to be used in calculating the present value of pension payments to be made many years in the future as well as the return on assets accumulated in the pension fund (Blome et al., 2010).

Pension schemes are the principal sources of retirement income for millions of people in the world (Sze, 2008). They are also important contributors to the GDPs of countries and a significant source of capital in financial markets (Omondi, 2008). According to Bikker and Dreu (2009), because of their immense size, pension schemes' investment decisions have major influence in financial markets. Against this background, underlying much of the recent policy debate is the increasing recognition that pension fund assets have important differences compared with other forms of collective investments. Pension funds have the objective of providing income replacement in retirement whereas other forms of collective investments are primarily concerned with short-term wealth maximization. The differences in objectives result in different time frames over which performance should be considered and different attitudes to risk (Asebedo and Grable, 2011). From the foregoing, it remains paramount to assess the financial performance of pension schemes.

One way of establishing and managing the financial performance of a pension scheme is to use ratios, defined as relationships between two financial balances or financial calculations (Gallagher and Martin, 2009). These include: Liquidity Ratios, Profitability Ratios, Asset Management Ratios, Leverage Ratios and Market Value Ratios. Of particular interest to the

present study, Profitability Ratios (Return on Equity, Return on Assets and Profit Margin) are used to measure the level of a pension scheme's earnings in comparison to a base, such as assets, sales, or capital. Return on Equity (ROE) refers to a measure of how well management has used the capital invested by shareholders; Return on Assets measures the net income returned on each shilling of assets while Profit Margin measures the percent of profits you generate for each shilling of sales (Brunner et al., 2008). With a myriad of measurements of pension schemes performances proposed, the present study shall focus on investment performance particularly returns on investments. This is informed by the researcher's opinion that the difficulties defined benefit pension plans experienced at the turn of the century is only partly attributable to the stock market performance. More important is the poor choice of benchmarks used in risk and investment performance control.

1.1.3 The Effect of Firm Characteristics on Financial Performance of Pension Schemes

The relationship between firm characteristics and financial performance of pension schemes is that of cause effect. From a number aforementioned, the present study delves into firm size, fund design, density of contribution and membership age as firm characteristics, and how the same determine the financial performance of pension schemes. According to Lungu (2009) the age of a contributor to a pension schemes is very significant in determining its performance. If a pension scheme has majority young contributors who have not attained retirement age, it implies that they will have more financial resources at its disposal that can be channeled into investment activities thus earning more income. On the other hand if most of the contributors are old and almost attaining retirement, the scheme has to spend more funds to service retirement packages for the contributors and this implies there will be less funds available for investments.

Studies that report on the absence of the relationship include Cicotello and Grant (1996), Droms and Walker (2001). Contradictory results on the same proposition are included in Gallagher and Martin (2005) and Cheong (2007). Droms and Walker (2001) noted that portfolios of smaller schemes are more risky than larger schemes but found that smaller schemes outperforming the larger schemes. Pension schemes operate under the defined benefit or defined contribution designs, but hybrid designs are also possible (Kerrigan, 2008). In the present study pension fund designs are classified as either defined benefit or defined contribution.

The density of contributions that pension schemes receive from the contributors is also a very important determinant of their performance. If a fund has many contributors who are capable of channeling huge funds to the scheme, then there will be enough funds to invest and this will assist the scheme to earn better revenues. The reverse is also likely to happen if the amount of contributions received from the contributors is not large enough to enable the scheme to enter into any meaningful asset investment (Bodie et al, 2009).

1.1.4 Pension Schemes in Kenya

Pension schemes in Kenya can be classified into four main categories. The first category is the pension fund that is sponsored by the state and operates in the name of National Social Security Fund (NSSF). This pension is mandatory to all employees both in the public and private sector. The second category of pension schemes includes the ones run by public service and are specifically meant to serve civil servants. The third category of pension schemes is called occupational schemes and they draw their membership from private sector companies that

operate pension schemes. The last category comprises of individual pension schemes that run as Trusts and membership is open to all (GOK, 2000).

There were 1216 pension schemes in Kenya by the close of 2013, of which include the public sector, individual retirement schemes and by private enterprises. OECD (2010) asserts that the country could improve considerably the rate of return on pension assets by making very limited improvements in governance practices. In the country, investment returns of pension funds, whether public or private are often below bank deposit rates and almost always below the growth of per capita income (Oluch, 2013). Factual evidence (Mitchell et al., 2008; MacNaughton, 2011 and Rao, 2011) also links this poor performance to undue political interference in the investment decision of public funds. The government has often imposed on financial intermediaries explicit social and developmental objectives that undermine their financial viability.

1.2 Research Problem

Most people depend on their pension schemes as a source of income when they retire. Retirement income accounts for 68% of the total income of retirees in Kenya (Kakwani et al., 2006), 45% in Australia, 44% in Austria and 80% in France, while in South Africa 75% of the elderly population rely on pension income (Alliance Global Investors, 2007). In the United States of America 82% of retirees depend on pension income (EBRI, 2007). Pension schemes should therefore be managed efficiently to ensure higher retirement income for pensioners. Global indices indicate that pension assets are important to any economy. According to Alliance Global Investors (2007), pension assets in Australia amount to AU$ 1trillion (equivalent to 20% of the GDP), while in Belgium pension assets amounted to 140 billion Euro in 2004. In Kenya and South Africa, respectively, the pension assets had a value of KSH 130 billion in 2006, which

accounted for 30% of the GDP (RBA Quarterly Report, 2007), and ZAR. 1098 billion in 2004 (Alliance Global Investors, 2007). Pension schemes are therefore important contributors to the GDPs of countries and should consequently be managed effectively.

The pension scheme industry is a significant source of capital in the Kenyan financial markets (Omondi, 2008). Pension schemes invested a sum of Ksh. 223 billion in the Kenyan financial sector in 2007 of which Ksh. 77 billion (22% of the outstanding domestic debt) was invested in government securities (Omondi, 2008). Pension schemes act as an important stimulus to capital markets in the country where they exist through financial intermediation (Oluoch, 2013). They complement, and hence stimulate development of capital markets, while acting as substitutes for banks in the country as they generate returns themselves. The returns they realize depend on different factors that vary from country to country and from time to time (Alliance Global Investors, 2007). It however remains unclear what factors determine the performances thereof in Kenya, hence the need for the present study.

The empirical literature however suggests that there are certain research gaps regarding the efficiency of pension schemes. Meng and Pfau (2010) carried out a study on the role of pension schemes in capital market development at the stock and bond market level. Samples were taken from a number of countries. The study established that pension fund financial assets have positive impacts on stock market depth and liquidity as well as private bond market depth. However, the impacts are only significant for countries with high financial development. Pension schemes do not impact capital market development in the countries with a low level of financial development. Another study was also conducted by Crose et al. (2011) on the role of pension schemes in financing green growth initiatives. The study established that pension schemes' asset

allocation to green investments remains low. The study confirmed that the main reason behind the low investment is partly due to a lack of environmental policy support, but other barriers to investment include a lack of appropriate investment vehicles and market liquidity, scale issues, regulatory disincentives and lack of knowledge, track record and expertise among pension schemes about these investments and their associated risks.

Locally, Omondi (2008) evaluated the efficacy of the pension scheme industry is a significant source of capital in the Kenyan financial markets. The study found that pension schemes invested a sum of Ksh. 223 billion in the Kenyan financial sector in 2007 of which Ksh. 77 billion (22% of the outstanding domestic debt) was invested in government securities. He concludes that the value of pension assets drop after financial market correction Ngetich (2012) carried out a study on determinants of the growth of individual pension schemes in Kenya. The study established that that fund governance exert a significant relationship on the growth of the pension schemes. This means that pension fund governance lead to improved growth of the individual pension schemes. Njuguna (2010) conducted a study on strategies to improve pension scheme efficiency in Kenya. The findings from the study indicate that fund size is as a significant determinant of the financial efficiency of pension schemes. Empirical results also established that those smaller schemes are perceived to be more financially efficient than bigger ones. It was however clear that the size of the pension fund did not have any significant influence on the operational efficiency of pension schemes.

Despite the studies carried out on performance of organizations and pension schemes, there are no studies that have attempted to establish the effect of firm characteristics on the financial performance of pension schemes. A knowledge gap on the same is thus apparent, motivating the

present study. Against this backdrop, the present study attempted to answer the question, what are the effects of firm characteristics on the financial performance of pension schemes in Kenya?

1.3 Research Objective

1.3.1 General Objective

To assess the effects of firm characteristics on the financial performance of pension schemes in Kenya

1.3.2 Specific Objectives

i. To determine the effect of membership age on the financial performance of pension schemes in Kenya

ii. To examine the effect of fund size on the financial performance of pension schemes in Kenya

iii. To establish the effect of fund design on the financial performance of pension schemes in Kenya

iv. To evaluate the effect of density of contributions on the financial performance of pension schemes in Kenya

1.4 Value of the Study

The findings of this study will be a significant contribution to the existing literature on performance of pension schemes. Since this is an area that has great potential of further growth

and will attract further academic research, the findings will assist in providing reference materials for future researchers.

Policy makers who work for pension schemes in Kenya will also get a clear understanding on the factors that affect the performance of pension schemes. This will be in form of benchmark for best practice that will enable them to come up with policies that can enhance the performance of their schemes.

The findings can also assist the National and county governments of Kenya to know the factors that determine the financial performance of pension schemes. This will enable the government to put in place any appropriate regulations to enhance the sustainable performance of pension schemes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a general review of the available literature pertinent to the study problem. It delves into the theoretical framework guiding the study; determinants of financial performance of pension schemes, empirical literature and a summary of the literature review.

2.2 Theoretical Framework

This section reviews the Stakeholder theory and Theory of Constraints as pertinent to the assessment of the determinants of financial performance of pension schemes in Kenya.

2.2.1 The Stakeholder Theory

Originally proposed by Freeman (1994), more recent scholarly works on the topic of stakeholder theory pertinent to the present study include Donaldson and Preston (1995), Mitchell et al. (1997), Friedman and Miles (2001), and Phillips (2003). The Stakeholder theory begins with the assumption that values are necessarily and explicitly as part of doing business. It asks managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. Stakeholder theory is managerial in that it reflects and directs how managers operate rather than primarily addressing management theorists and economists. The focus of stakeholder theory is articulated in two core questions (Freeman, 1994). First, it asks, what is the purpose of the firm? This encourages managers to articulate the shared sense of the value they create, and what brings its core stakeholders together.

This propels the firm forward and allows it to generate outstanding performance, determined both in terms of its purpose and marketplace financial metrics. Second, stakeholder theory asks, what responsibility does management have to stakeholders? This pushes managers to articulate how they want to do business—specifically, what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. Today's economic realities underscore the fundamental reality which is at the core of stakeholder theory: Economic value is created by people who voluntarily come together and cooperate to improve everyone's circumstance. Managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises. Certainly shareholders are an important constituent and profits are a critical feature of this activity, but concern for profits is the result rather than the driver in the process of value creation (Collins, 2001).

Many pension schemes, more so in developed economies have developed and run their businesses in terms highly consistent with stakeholder theory. These schemes also see the importance of values and relationships with stakeholders as a critical part of their ongoing success. They have found compelling answers to the two core questions posed by stakeholder theory, which underscore the moral presuppositions of managing—they are about purpose and human relationships. The theory guides the present study into an investigation of key determinants of the financial performance of pension schemes, taking age and density of contribution as functions of the stakeholder.

2.2.2 Theory of Constraints

The theory of constraints (TOC) is a systems-management philosophy developed by Eliyahu M. Goldratt in the early 1980s. The fundamental thesis of TOC is that constraints establish the limits

of performance for any system. Most organizations contain only a few core constraints. TOC advocates suggest that managers should focus on effectively managing the capacity and capability of these constraints if they are to improve the performance of their organization. Once considered simply a production-scheduling technique, TOC has bROId applications in diverse organizational settings (IMA, 1999).

TOC challenges managers to rethink some of their fundamental assumptions about how to achieve the goals of their organizations, about what they consider productive actions, and about the real purpose of cost management. Emphasizing the need to maximize the throughput revenues earned through sales TOC focuses on understanding and managing the constraints that stand between an organization and the attainment of its goals. Once the constraints are identified, TOC subordinates all the non-constraining resources of the organization to the needs of its core constraints. The result is optimization of the total system of resources (IMA, 1999). The present study will be guided by the TOC, taking fund size and design as possible constraints to the financial performance of the pension schemes.

2.3. Determinants of Financial Performance of Pension Schemes

Rockhart and Bullen (1981) define determinants as critical areas of performance that are essential for an organization to accomplish its mission. In the present context, determinants describe the underlying or guiding principles of an effort that Pension Schemes must regard to ensure that it is financially successful. In the present study, the following have been identified as critical determinants of Financial Performance of Pension Schemes**:**

2.3.1 Membership Age

The existence of pension schemes can be traced back to the colonial days when the colonial governments introduced the social welfare programmes. In recent years there has been a great transformation of the pension schemes as well as major growth across the globe. The main reason why pension schemes exist is to provide some form of social security to people who retire from active employment (Bodie et al, 2009). The pension fund is aimed at providing some income that will enable retired people to meet their needs even in retirement. It is therefore clear that pension schemes are part and parcel of a social protection plan that is designed to protect people from financial impairment once they retire from active employment (Lungu, 2009).

2.3.2 Fund Size

Empirical findings with regard to the relationship between size and the financial performance of pension schemes are inconclusive. A negative relationship between financial performance and fund size is reported in Mahon and Donohoe (2006). On the other hand, a positive relationship between the same variables is reported in Gallagher and Martin (2005). It is reported that larger pension schemes can achieve numerous benefits brought about by economies of scale in administration (Cheong 2007; Chon et al., 2004). Similar findings were reported by Bikker and Dreu (2009) and Ardon (2006).

2.3.3 Fund Design

Literature sources suggest that defined contribution (DC) pension schemes outperform the defined benefit (DB) schemes for the following reasons: DC schemes are more cost effective than DB schemes because the benefits payable are not tied to the contributions made (Brady, 2009; Crane, Heller and Yakoboski, 2008; Faktum, 2009); They involve members more in decision-making (Hess and Impavido, 2003; Choi, Laibson and Madrin, 2006); the investment risk is borne by the members and not the sponsor so that members take all possible measures to avoid loss (Brady, 2009); there is less sponsor influence since the sponsor does not nominate the majority of the members (Yang, 2005); there is more transparency in decision-making and communication to members (Nyce, 2005; Clark and Mitchell, 2005); and that default risk from the members is less (Yang, 2005).

2.3.4 Density of contributions

Density of contributions entails the amount individual members contribute towards pension funds (Bodie et al, 2009). It is also an important factor that has affected the pension benefits in countries with large informal sectors. Individuals with a low density of contributions are likely to face low accumulated assets at retirement age, and therefore are likely to have low retirement incomes (Bikker and Dreu, 2009). Because the accumulation period is shorter in countries that allow individuals to retire earlier, individuals are likely to receive lower retirement income. As a consequence, governments in some countries have been raising the official retirement age or have introduced incentives to delay retirement. The capacity of funded individual account systems to deliver retirement income will be further challenged in this respect as life expectancy continues to increase in virtually all countries (Bodie et al, 2009).

2.3.5 Fund value

Pension funds, like many other organizations, can be viewed as open systems which receive inputs, convert these inputs into outputs and deliver these outputs to stakeholders (Hustead, 2008). Pension funds receive inputs (scarce financial resources in the form of contributions and investment funds) and convert these inputs to outputs (pension fund value and retirement benefits) (Davis 2005) A pension fund would be regarded as efficient if it succeeds in maximising financial outputs by the efficient use of the financial resources (inputs) (Chansarn 2005).

2.3.6 Fund Returns

Studies on the performance of pension funds either use financial ratio analysis (Hebb, 2006) or compare the pension fund returns with the market indices (Stanko 2002; Bikker and Dreu 2009). An efficient pension fund should operate at the lowest possible cost and maximise its returns on investments and benefits payable to the retirees. The OECD (2009) states that pension funds with a clear statement of investment principles perform better than those without. Increased pension fund returns are dependent on the active management of the investment portfolios (Stanko 2002). Markese (2000), for example, found that pension funds that invest more in equity stocks perform better than those that invest more in bonds and other fixed securities.

2.4 Empirical Literature

Bikker and Dreu (2006) examined the impact of determinants of these costs, such as the size, governance, pension plan design and outsourcing decisions, using data on all Dutch pension schemes across the 1992-2004 period, including more than 10,000 observations. The study found that economies of scale dominate the strong dispersion in both administrative and investment costs across pension schemes. Industry-wide pension schemes are significantly more efficient than company schemes and other schemes. The operating costs of pension schemes' defined contribution plans are lower than those of defined benefit plans. Higher shares of pensioners make schemes more costly, whereas the reverse is true when relatively many participants are inactive.

A survey by Mercer (2006) of the governance of global retirement plans offered by multinational corporations found that sponsoring employers are very concerned about the lack of governance of their benefit plans in the different countries in which they operate. A lack of resources (including skills) and weak local engagement were found to be the most common challenges multinational corporations had in meeting their global pension's governance goals.

Ammann and Zingg (2008) investigated the relationship of pension fund governance and investment performance of Swiss pension schemes. The study was based on a sample of 96 pension schemes with total assets of more than CHF 190 billion. The study findings indicate that good governance with respect to target setting and investment strategy seems to be of particular importance. In contrast, organization, investment rules and organization, controlling and

steering, and communication are not significantly related to performance. However, this does not mean that governance issues in these areas are negligible.

Rusconi (2008) reviewed pension fund governance in South Africa and has identified major knowledge gaps in trustee boards, weak board discipline, and conflicts of interest among consultants and asset managers that are going unaddressed, leading to a prevalence of active over passive management and higher fees than would otherwise be the case. Such conflicts reach even training programmes for trustees as these are mostly delivered or financiald by asset managers and consulting firms.

In Zambia, Lungu (2009) carried out a study on the viability of occupational pension schemes in Zambia. The study focused on 7 multi-employer trusts in Zambia and investigated the factors that influence their viability. The findings from the study revealed that the 7 multi-employer trusts in Zambia are in deficit hence not viable. The study also established that there are a number of factors that determine their viability: inadequate regulatory policy; unstable macroeconomic environment and high levels of employee mobility. It was also established that there exists a significant relationship between the viability of the pension schemes and the three variables mentioned above.

Locally, Nyakundi (2009) assessed the pension coverage in Kenya, evaluating legal and policy framework required to encourage coverage in the country. The study found that Kenya's pension system is fragmented and covers only 15% of the labor force. The enactment of the Retirement Benefits Act in 1997 has not in any significant way impacted on the widening coverage of the

pension system. The problem of low coverage is attributable to lack of an effective policy aimed at widening of coverage and the current legal framework which was designed to target participation of formal workers. This study argues that wide ranging policy and legal reforms are required to enhance pension coverage in Kenya. Recommended policy and legal reforms include: macro-economic reforms to create employment; provision of funded pension schemes to workers as a term of employment; and a review of current pension laws to allow participation of employees in short-term employment contract.

Njuguna (2010) evaluated strategies to improve pension fund efficiency in Kenya. The findings from the study indicate that fund size is as a significant determinant of the financial efficiency of pension schemes. Empirical results also established that those smaller schemes are perceived to be more financially efficient than bigger ones. It was however clear that the size of the pension fund did not have any significant influence on the operational efficiency of pension schemes. It was also evident that that fund regulations influence how schemes are governed and led. Adherence to the identified fund regulations were shown to improve fund governance and leadership.

Hatchett et al. (2010) indicate that pension schemes need to understand the premise of risk management since it plays a very significant role in providing increased organizational effectiveness of disparate risk management functions through a central coordinating function that has clear ownership and accountability for overall risk management. They further assert that senior management who understand risk management will be better informed when making material decisions and should be better able to assess risk/return trade-offs, as well as having an alternative insight into emerging risks and opportunities.

Jackowicz and Kowalewski (2011) assessed the relationship between Corporate Governance and Pension Fund Performance. Using a hand collected data set on governance factors; the study shows that the external and internal governance mechanisms in pension plans are weak. One explanation for this weakness is the potential conflict between the pension beneficiaries and the fund's owner, which depends on who bears the investment risk in the pension plan. Hence, different governance factors are found to be important for pension fund return on invested assets and also for its economic performance. Consequently, the overall policy conclusion is that more focus should be put on the governance of the pension schemes, taking into account the different interests of the beneficiaries and owners as it may determine their performance.

Oluoch (2013) established the determinants of performance of pension schemes in Kenya. The study was done on Kenyan pension schemes at aggregate level using annual data on fund value, assets, age, contributions and returns. The data was from between 2000 through 2012. Time series regression analysis was used to determine the relationship between returns as the dependent variable and fund value, assets, age and the contributions of pensioners as the independent variables. The study found a strong positive relationship between age of the investors measured by national life expectancy of Kenya indicating that a longer life expectation positively affected returns. However, weak positive relationships between returns and fund value, assets and contributions of pensioners was weak which indicated that fund values, assets, and contributions were not utilized in the generation of income for the pension schemes in Kenya.

2.5 Summary of the Literature Review

Stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business. Stakeholder theory is managerial in that it reflects and directs how managers operate rather than primarily addressing management theorists and economists. The theory guides the present study into an investigation of the effects of firm characteristics on the financial performance of pension schemes in Kenya, taking age and density of contribution as functions of the stakeholder. The fundamental thesis of TOC is that constraints establish the limits of performance for any system. Most organizations contain only a few core constraints. Once the constraints are identified, TOC subordinates all the non-constraining resources of the organization to the needs of its core constraints. The present study will be guided by the TOC, taking fund size and design as possible constraints to the financial performance of the pension schemes.

The empirical findings reviewed reveal significant knowledge gaps that the present study endeavors to address. For instance, Bikker and Dreu (2006) examined the impact of size, governance, pension plan design and outsourcing decisions and found that economies of scale dominate the strong dispersion in both administrative and investment costs across pension schemes. The study however fails to show how firm characteristics affect administrative and investment costs as well as financial performance thereof. Ammann and Zingg (2008) investigated the relationship of pension fund governance and investment performance of Swiss pension schemes and found that good governance with respect to target setting and investment strategy seems to be of particular importance. The study failed to factor in firm characteristics and only focused on governance as a stand-alone variable. Lungu (2009) studied the viability of

occupational pension schemes in Zambia and found that the 7 multi-employer trusts in Zambia are in deficit hence not viable. The study fails to show how firm characteristics affect the viability of occupational pension schemes. Nyakundi (2009) assessed the pension coverage in Kenya, evaluating legal and policy framework required to encourage coverage in the country and found that Kenya's pension system is fragmented and covers only 15% of the labor force. The study fails to show how firm characteristics affect the ideal coverage. The identified gaps present a need to investigate the determinants of financial performance of pension schemes in the country, and more specifically, the effects of firm characteristics on the financial performance thereof.

The study has reviewed expansive literature on pension schemes. It is clear that pension fund assets have important differences compared with other forms of collective investments. However the same measurements are still used to measure the performance of pension schemes. It is also clear that most pension schemes are still at their infancy and this makes it difficult to create any meaningful trend analysis on their performance. Studies linking performance of pension schemes for most developing countries are also scarce since they do not have well-structured pension plans due to inadequate regulations.

Studies on the performance of pension schemes either use financial ratio analysis or compare the pension fund returns with the market indices. Although corporate governance has attracted much attention in the recent past, focus has not shifted to the important firm characteristics of pension schemes' financial performance. Furthermore, different authors relate the investment strategy to the mix that an investor makes in the investment portfolio. A research gap has been identified as

the empirical literature largely focuses on corporate governance in pension schemes and financial performance thereof, leaving the key firm characteristics of the financial performance of pension schemes especially using investment measures of largely unexplored.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section defines research methods, research instruments and research tools. It also presents the instruments and tools selected for this study. The chapter further describes the methods and procedures that will be used in collecting relevant data and how it will be analyzed. It presents the research design, type of data, target population, the sample size and sampling procedure, methods of data collection and procedures, techniques of analyzing data and instrument validity.

3.2 Research Design

The present study was conducted through the use of a descriptive survey design. Descriptive research portrays an accurate profile of persons, events, or situations (Kothari, 2000). Therefore, the descriptive survey was deemed the best strategy to fulfil the objectives of this study. Donald (2006) notes that a research design is the structure of the research, it is the ''glue '' that holds all the elements in a research project together. Kombo and Tromp (2006) further define a research design as the scheme, outline or plan that is used to generate answers to research problems.

3.3 Population of the Study

According to Ngechu (2004), target population in statistics is the specific population from which information is desired. The total population is the entire spectrum of a system or process of interest (Johnston and VanderStoep, 2009). The target population for this study comprised all the 1216 registered pension schemes in Kenya as per the Retirement Benefits Authority (RBA) (2013).

3.4 Sample and Sampling Design

Sampling involves any procedure that draws conclusions based on measurements of a portion of the entire population (Ethridge, 2004). According to Connaway and Powell (2010) a sample is usually drawn because it is less costly and less time consuming to survey than the population, or it may be impossible to survey the entire population. The study adopted the simple random sampling design. According to Mugenda and mugenda (2003), simple random sampling design is advantageous, in that, it is free of classification error, and it requires minimum advance knowledge of the population.

The sample size was determined by use of the Neuman (2000) formula. According to Neuman (2000), the size of a sample for a particular study was calculated as follows:

$$nf = \frac{n}{1 + {}^n/_N}$$

n_f is the desired sample size when population is in denominations of thousands, but less than 10,000

n is the desired sample size when population is more than 10,000, given at 384

$$nf = \frac{384}{1 + {}^{384}/_{206}} = 134$$

A sample size of 134 registered pension schemes was thus be reached for response.

3.5 Data Collection Technique

The study used secondary data, which was quantitative in nature and was collected from the annual financial statements of the pension schemes in the custody of the Fund Managers, Scheme Trustees, Scheme Administrators and RBA as filed returns. For the purpose of this

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study, these financial statements were sourced from the RBA systems and the pension schemes for validity. For the data to be representative enough, the study reviewed secondary data for a five year period, preferable latest, that is, 2009-2013.

3.6 Data Analysis Technique

The quantitative data collected was analyzed by the use of both descriptive and inferential statistics using statistical package for social sciences (SPSS) version 20. The descriptive statistics were presented through percentages, means, standard deviations and frequencies, while inferential statistics will use correlation and linear regression analysis to explain the relationship between the determinants (independent) variables and project performance (dependent) variables. These was guided by a multiple regression model shown below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$

Where:

Y= Return on Investment (ROI)

α = Constant

$\beta_1 - \beta_4$ = Beta coefficients

X1= Membership age

X2= Fund size

X3= Fund design

X4= Density of contributions

X5=Fund value

X6=Fund returns

ϵ = Error term

3.7 Measurement

This section details how the above independent variables were measured; Owing to the difficulty of obtaining pension schemes contributors' ages, membership age will be measured by the use of life expectancy in Kenya. Fund size was measured by the number of registered contributors to respective pension schemes. Fund design was used to connote the type of respective funds reached, as defined contribution, defined benefit or hybrid of both.   Density of contributions was measured by the amounts in the financial records of pension schemes indicating how much the schemes had received from their contributors in a given year. The value of the assets of the pension funds studied were used to measure the respective fund value; they are the sum of the pension schemes in a particular year. Finally returns were captured using recorded income of the schemes in a year; the figures for individual schemes in each year were summed up together to provide the figures

3.8 Test of Significance

It can never be completely 100% certain that a relationship exists between two variables. There are too many sources of error to be controlled, for example, sampling error, researcher bias, problems with reliability and validity. Tests for statistical significance tells what the probability is that the relationship found is due only to random chance. It indicates what the probability is that there would be an error if the assumption that it is found that a relationship exists.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF FINDINGS

4.1 Introduction

In this chapter, the study provided two types of data analysis; namely descriptive analysis and inferential analysis. The descriptive analysis helps the study to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. For the inferential analysis, the study used the Pearson correlation, the panel data regression analysis and the t-test statistics. While the Pearson correlation measures the degree of association between variables under consideration, the regression estimates the relationship between the firm characteristics and finance performance of pension schemes in Kenya.

4.2 Response Rate

The survey questionnaire was administered to the respondents directly. A summary of the response rate is presented in Table 4.1.

Table 4.1: Response rate

	Frequency	Percent (%)
Reached	123	91.8
Unreached	11	18.7
Sampled	134	100.0

Source: Survey Data, 2014

The study achieved a response rate of 91.8% with 123 respondents reached, out of the 134 targeted. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. The study thus achieved an excellent response rate.

4.3 Descriptive Statistics

The study first found it necessary to evaluate the firm characteristics of pension schemes in Kenya for the firms under consideration, that is, membership age, fund size, fund design, density of contributions, fund value and fund returns. Their mean, standard deviation, minimum and maximum values were determined as indicated in Table 4.2.

Table 4.2: Descriptive Statistics (Firm Characteristics)

	Age (Yrs)	Fund size	Fund design	Density of contributions	Fund value	Fund returns
N	123	123	123	123	123	123
Min	55.56	10	.00	131,735.00	8,829,954.00	53,257.00
Max	57.88	4682	1.00	122,199,556.00	4,779,276,000.00	2,287,565,000
Mean	56.67	472.321	.909	27,573,594.25	336,942,628.29	127,935,447.82
Std. Dev	2.480	56.422	.294	24,340.090	150,409.354	50,589.80

Source: Computed by researcher using data extracted from RBA

A mean life expectancy was established at 56.67 years while the minimum age at 55.56 and maximum at 56.67. The standard deviation was 2.480 suggesting a variance of about 2 years across members' ages. A mean of 472.321 was further established in fund size, with a minimum value of 10 and maximum of 4682. A standard deviation of 56.422 suggests a variance of about 56 members across the pension schemes reached. Fund design was used as a dummy variable, with the value 0 representing defined benefits contribution design and 1 connoting defined contribution design. A mean of .909 was recorded implying that most schemes were registered under the defined contribution type. A mean of Kshs 27,573,594.25 was established for density of contributions with a minimum value of Kshs131,735.00 and a maximum of

Kshs122,199,556.00. A standard deviation of 24,340.090 further suggests a variance of about 24,000 shillings in contributions. A mean of Kshs 336,942,628.29 was further established in fund value with a minimum value of 8,829,954.00 and a maximum of 4,779,276,000.00. Also, a standard deviation of 150,409.354 further suggests a variance of about 150,000 shillings in value. Finally, fund returns recorded a mean of Kshs 127,935,447.82 and a minimum of Kshs 53,257.00 and a maximum of Kshs2,287,565,000 with a standard deviation of 50,589.80 suggesting a variance of about 50,000 shillings in returns.

4.3 Inferential Statistics

Under the advance analysis, correlation analysis was first used to measure the degree of association between different variables under consideration. While the regression analysis was used to determine the impact of the various firm characteristics variables on finance performance, the t- test statistics was used to ascertain whether there is a significant difference in the firm characteristics and financial performance.

4.3.1 Pearson's Correlation Coefficient Analysis

In this section, the study measured the degree of association between the firm characteristics variables and finance performance that is, if the firm characteristics (membership age, fund size, fund design, density of contributions, fund value and fund returns) will increase, decrease or not affect finance performance. Table 4.3 presents the correlation coefficients for all the variables considered in this study.

Table 4.3: Pearson's Correlation Coefficients Matrix

	ROI	Age	Fund size	Fund design	Density of contributions	Fund value	Fund returns
ROI	1						
Age	0.427*	1					
Fund size	0.758*	.624	1				
Fund design	0.669*	-.447*	-.409	1			
Density of contributions	0.882*	.528*	.496	-.225*	1		
Fund value	0.778*	.498	.513*	.506	.354	1	
Fund returns	0.712*	.520	.471*	.511	.397	.478*	1

* Correlation is significant at the 0.01 level (2-tailed).
Source: Computed by researcher using data extracted from RBA

Table 4.2 shows that at 0.01 confidence interval, there were strong, significant and positive correlations between ROI and: Density of contributions (R = 0.882), Fund value (R = 0.778), Fund size (R= 0.758), and Fund returns (R= 0.712). Weaker, significant and positive correlations were established between ROI and Fund design (R = 0.669) and Age (R = 0.427).

4.3.2 Regression Analysis

In this section, the study used the panel data regression analysis to investigate the relationship between the firm characteristics and finance performance among the pension schemes reached. In doing this, the study used a simple definitional model as developed in chapter three to guide the analyses. The regression model was as shown below:

ROI = α + β_1 (membership age) + β_2 (fund size) + β_3 (fund design) + β_4 (density of contributions) + β_5 (fund value) + β_6 (fund returns) $_+$ ε

Regression analysis also produced coefficient of determination and analysis of variance (ANOVA). Coefficient of determination showed the strength of the relationship while Analysis

of variance was done to show whether there is a significant mean difference between dependent and independent variables. The ANOVA was conducted at 95% confidence level.

Table 4.4: Model Goodness of Fit

R	R^2	Adjusted R^2	Std. Error of the Estimate
0.771	0.631	0.532	0.06227

a. Predictors: (Constant), Membership Age, Fund Size, Fund Design, Density of Contributions, Fund Value, Fund Returns
b. Dependent Variable: ROI
Source: Computed by researcher using data extracted from RBA

Regression analysis was used to establish the relationship between ROI and its conceptualized firm characteristics such as membership age, fund size, fund design, density of contributions, fund value and fund returns. The results showed a correlation value (R) of 0.771 which depicts that there is a good linear dependence of ROI on all the firm characteristics.

An adjusted R-squared of 0.532, shows that Membership Age, Fund Size, Fund Design, Density of Contributions, Fund Value and Fund Returns explain 53.2 percent of the variations in ROI while 46.8 percent is explained by other factors not in the model.

Table 4.5: Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	4.181	6	1.394	3.135	.038a
Residual	15.562	123	.445		
Total	19.744	129			

Source: Computed by researcher using data extracted from RBA

ANOVA statistics was conducted to determine the differences in the means of the dependent and independent variables and thus show whether a relationship exists between the two. The P-value of 0.038 implies that ROI has a significant joint relationship with Membership Age, Fund Size, Fund Design, Density of Contributions, Fund Value and Fund Returns which is significant at 5 percent level of significance. This also depicted the significance of the regression analysis done at 95% confidence level.

Table 4.6: Regression Coefficient Results

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	7.724	5.006		1.543	.132
Membership Age	.019	.720	.009	2.387	.023
Fund Size	0.434	.697	.038	2.058	.047
Fund Design	-.056	.827	-.048	-.551	.035
Density of Contributions	.624	.040	.555	.599	.048
Fund Value	0.923	.052	.813	.562	.002
Fund Returns	0.781	.064	.693	.103	.019

a. Dependent Variable: ROI

Source: Computed by researcher using data extracted from RBA

The regression results in table 4.6 reveal a positive relationship between ROI and the Predictor variables, Membership Age, Fund Size, Density of Contributions, Fund Value and Fund Returns and a negative relationship with Fund Design. The established regression equation was:

ROI = 7.724 + .019 (Membership Age) + 0.434 (Fund Size) - 0.056 (Fund Design) + .624 (Density of Contributions) + 0.923 (Fund Value) + 0.781 (Fund Returns)

$p=0.038$

Significant tests (T-tests and P-values) revealed that all of these relationships were significant; thus, the study to investigate the effect of firm characteristics on finance performance of pension

schemes in Kenya. The regression results show that, when the Membership Age, Fund Size, Density of Contributions, Fund Value and Fund Returns have zero values, the space allocation value would be 7.724.

It is established that a unit increase in Membership Age, while holding other factors (Fund Size, Density of Contributions, Fund Value and Fund Returns) constant, would result in a .019 increase in ROI. This statistic had a t-value of 2.387 at 0.023 showing that the statistic is significant at 95% confidence level. The finding is in agreement with Oluoch (2013) who found a strong positive relationship between age of the investors measured by national life expectancy of Kenya indicating that a longer life expectation positively affected returns. The finding however disagrees with Charles et al. (2006) who found a negative relationship between the age of members and pension fund financial efficiency adding that that the age of the members influences the investment strategy to adopt. Whereas pension funds with younger members will be robust in their investments, while those with older members will tend to be conservative, thus limiting their returns on investments (Charles et al. 2006). The significant of the finding is further in agreement with Friedberg and Webb (2004) and Lusardi and Mitchell (2007) who argue that the age of employees determines the pension promises that their employers will make to them since younger employees have a longer time horizon to invest compared with the older employees, which in turn influences the type of pension fund design on which to anchor the pension fund.

Holding other factors constant, a unit increase in Fund Size would cause an increase in ROI by 0.434. A t-value of 2.058 was established at 0.047 P-value. This shows that the statistics was significant at 95% significance level. The finding disagrees with Mahon and Donohoe (2006)

who found a negative relationship between financial performance and fund size. On the other hand, it is in support of Gallagher and Martin (2005) who found a positive relationship between the same variables. Cheong (2007) and Chon et al. (2004) further report that larger pension schemes can achieve numerous benefits brought about by economies of scale in administration.

The regression results also show that fund design had a negative influence on finance performance. From the statistic, a unit change in fund design would lead to a 0.056 decrease in ROI. With a P value of .035, the association is significant at 95% confidence level. The study is in conformity with Brady (2009), Crane et al. (2008) and Faktum (2009) who argue that defined contribution (DC) pension schemes outperform the defined benefit (DB) schemes for the following reasons: DC schemes are more cost effective than DB schemes because the benefits payable are not tied to the contributions made. They involve members more in decision-making (Hess and Impavido 2003; Choi, Laibson and Madrin 2006); the investment risk is borne by the members and not the sponsor so that members take all possible measures to avoid loss (Brady 2009); there is less sponsor influence since the sponsor does not nominate the majority of the members (Yang 2005); there is more transparency in decision-making and communication to members (Nyce 2005; Clark and Mitchell 2005); and that default risk from the members is less (Yang 2005).

A unit increase in Density of Contributions would lead to a .624 increase in ROI. A t-value of 0.599 was established at 95% confidence level (p=0.048). This finding is espoused by Chan et al. (2004) who noted that pension funds with more members are expected to have a higher value in contributions and assets compared with smaller ones. The funds therefore receive sizable contributions that may result in inefficiency in investments. Thus the larger pension funds have

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large sums of money at their disposal that they tend to invest in less profitable ventures as opposed to smaller pension funds with smaller financial resources that force them to allocate the money judiciously to the most profitable opportunities. Moreover, the larger pension funds with huge investments in the stock market are exposed to more risk as opposed to the smaller funds (Bikker and Dreu 2009).

A unit increase in Fund Value, while holding other factors constant, would result in a 0.923 increase in ROI (T = .562; P = .002) while a unit increase in Fund Returns would result in a 0.781 increase in ROI. This statistic had a t-value of 0.103 and a P value of 0.019 showing that the statistic is significant at 95% confidence level. While these associations are strong in the present study, Oluoch (2013) reports weak positive relationships between returns and fund value, assets and contributions of pensioners was weak which indicated that fund values and assets.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the research findings. The implications from the findings and areas for further research are also presented. The findings from the study are presented in comparison to what other scholars have said as noted under literature review.

5.2 Summary of Findings

The study provided two types of data analysis; namely descriptive analysis and inferential analysis. The descriptive analysis helps the study to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. For the inferential analysis, the study used the Pearson correlation and the panel data regression analysis.

The study employed Pearson correlation statistics to measure the degree of association between the firm characteristics variables and finance performance that is, if the firm characteristics (membership age, fund size, fund design, density of contributions, fund value and fund returns) would increase, decrease or not affect finance performance. There were strong, significant and positive correlations between ROI and: Density of contributions (R = 0.882; p = 0.002), Fund value (R = 0.778; p = 0.045), Fund size (R= 0.758; p = 0.027), and Fund returns (R= 0.712; p = 0.031). Weaker, significant and positive correlations were established between ROI and Fund design (R = 0.669; p = 0.020) and Age (R = 0.427; p = 0.013).

The study also used the panel data regression analysis to investigate the relationship between the firm characteristics and finance performance among the pension schemes reached. An adjusted R-squared of 0.532, showed that Membership Age, Fund Size, Fund Design, Density of Contributions, Fund Value and Fund Returns explain 53.2 percent of the variations in ROI. ANOVA statistics was further conducted to determine the differences in the means of the dependent and independent variables and thus show whether a relationship exists between the two. A P-value of 0.038 was realized implying that ROI has a significant joint relationship with Membership Age, Fund Size, Fund Design, Density of Contributions, Fund Value and Fund Returns which is significant at 5 percent level of significance.

Regression results revealed a positive relationship between ROI and the Predictor variables, Membership Age, Fund Size, Density of Contributions, Fund Value and Fund Returns and a negative relationship with Fund Design. It is established that a unit increase in Membership Age, while holding other factors (Fund Size, Density of Contributions, Fund Value and Fund Returns) constant, would result in a .019 increase in ROI. Holding other factors constant, a unit increase in Fund Size would cause an increase in ROI by 0.434. The regression results also show that fund design had a negative influence on finance performance. From the statistic, a unit change in fund design would lead to a 0.056 decrease in ROI. A unit increase in Density of Contributions would lead to a .624 increase in ROI. Finally, a unit increase in Fund Value, while holding other factors constant, would result in a 0.923 increase in ROI (T = .562; P = .002) while a unit increase in Fund Returns would result in a 0.781 increase in ROI.

5.3 Conclusion

From the foregoing presented and analyzed findings, membership age is a significant firm characteristic of finance performance among pension schemes in Kenya. This implies that a longer time horizon can be leveraged by encouraging membership from younger ages in order to realize higher financial performances. Fund Size is also a significant firm characteristic of pension schemes' finance performance. Particularly, the larger schemes are likely to experience higher financial performance as compared to the smaller schemes as adequate resources in the former are likely to enable significant investments that would enhance their financial performance. This is in tandem with the finding that density of contributions is a significant firm characteristic of pension schemes' finance performance in the country as high contributions from members are likely to enable profitable investments hence performance.

Fund value and returns are also found to be key contributors to pension schemes' finance performance in Kenya as they can be leveraged by respective firms in pursuing significantly profitable ventures to further realize profitability. Fund Design is also a significant firm characteristic with the implication that since a majority of pension schemes reached are under the defined contribution plan, and have all shown exponential returns, it can be deduced that financial performance will significantly reduce should the schemes change to the defined benefits plan.

The whole regression analysis was statistically significant indicating that the firm characteristics under study significantly determine the finance performance behavior of the pension funds. There is need to find out what other underlying firm characteristics influence the financial performance of pension funds in the country.

5.4 Recommendations

Proposals for financial performance improvement, adjustments and growth of the retirement benefits and pensions industry in Kenya must necessarily take into account the major drivers identified in the study findings. The study recommends that since membership age has been found to positively influence profitability in the pension schemes surveyed, there is need for the industry players to lobby for attractive policies to encouraged younger individuals and corporations join various schemes. The same applies to individual schemes. This is also likely to increase the fund size and therefore asset base and returns. In this regard, the issue of compulsion needs to be considered. The most effective means for increasing the level of coverage will be for compulsory contributions into occupational retirement benefits arrangements with an option for opting out into IRBS. On fund design to abate negative financial performance, the defined contribution (DC) pension plan should be encouraged as the benefits payable are tied to the contributions made hence low risks, they involve members more in decision-making and that the investment risk is borne by the members and not the sponsor so that members take all possible measures to avoid loss.

5.5 Limitations of the Study

Several impediments were anticipated in the course the study. Confidentiality of information was a key constraint as some respondents appeared to withhold crucial information pertinent to the achievement of the study objectives. The researcher however explained to the respondents that the study was only meant for education purposes. The researcher also presented the introductory

letter from the University to prove to them that the research had no negative motive as it's meant for education purposes.

The study further covered a period of only 5 years; 2009-2013 hence may not be applicable across all times and the findings are thus limited to the 5 years under study. A true reflection of the case in all times in the country may therefore not be possible based only the 5 years studied as variations are possible with time. The associations in the model of the study have further been presented as only either strong or weak, but the attributes bend the relative strengths have not been accounted for. The researcher therefore recommends a causality study to ascertain the causes of the observed strengths and weaknesses in the relationships.

5.6 Suggestions for further studies

The most prevalent design in use by pension funds in Kenya is the defined contribution. The study recommends that the research efforts shift to the improvement of the defined contribution design as opposed to the benefits of the defined contribution design over the defined benefit design. Future research efforts should explore improved measuring instruments to measure the variables included in the hypothesized model.

Also, the time factor in the study can be improved if the study is expanded to cover a longer period of time. A future research can be carried out on the same topic, but using data across a longer period of time. This is with the assumption that the data for a longer time will provide results that are better than those provided by the data used in this study. The possible higher objectivity that arises based on the sample period may be settled covering a longer period.

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APPENDICES

Appendix I: List of Pension schemes

1. Nairobi Club Staff Retirement Benefits Scheme

2. Triad Architects Staff Retirement Benefits Scheme

3. East African Packaging Industries Limited Staff Retirement Benefits Scheme

4. Armed Forces Canteen Organisation Staff Retirement Benefits Scheme

5. Kenya Tea Development Authority Staff Provident Fund

6. Agricultural Society of Kenya Staff Provident Fund

7. Maseno University College Staff Retirement Benefits Scheme

8. BAT Kenya Ltd. Staff Provident Fund (Old Fund)

9. BAT Kenya Provident-Trust A/C (1991) Fund

10. The Sotik Tea Company Limited Staff Provident Fund

11. Equity Bank Staff Retirement Benefits Scheme

12. AAR Holdings Limited Staff Pension Scheme

13. The Hotel Intercontinental - Nairobi Staff Retirement Benefits Scheme

14. East African Breweries Limited Staff Provident Fund

15. The Finlay African Agency Provident Fund

16. Bata Shoe Company (Kenya) Limited Staff Retirement Benefits Scheme

17. The Standard Group Limited Staff Pension Scheme

18. Alliance Investments Limited Staff Pension Scheme

19. Jomo Kenyatta University of Agriculture and Technology Staff Retirement Benefits Scheme

20. Barclays Bank of Kenya Limited Staff Pension Fund

21. Premier Academy Charitable Trust Staff Retirement Benefits Scheme

22. Marianists Retirement Benefits Scheme

23. Kenya Revenue Authority Staff Pension Scheme

24. Cirio Del Monte Kenya Staff Retirement Benefits Scheme

25. Independent Adjusters Kenya Limited Staff Pension Scheme

26. Nandi Tea Estates Retirement Benefits Scheme

27. Stansand (Africa) Staff Pension Scheme

28. Taita Hills Wildlife Sanctuary Staff Pension Scheme

29. KLM Royal Dutch Airlines Staff Pension Scheme

30. National Social Security Fund Staff Retirement Benefits Scheme

31. Tysons Limited Staff Provident Fund

32. Egerton University Retirement Benefits Scheme

33. Kensalt Staff Retirement Benefits Scheme

34. Oserian Development Co. Limited Staff Retirement Benefits Scheme

35. Kenya Trypanosomiasis Research Institute (KETRI) Staff Provident Fund

36. Nyayo Tea Zones Development Corporation Retirement Benefits Scheme

37. Telposta Provident Fund

38. Telposta Pension Scheme

39. Kenya Tea Development Authority Retirement Benefits Scheme

40. Mugama Farmers Co.-operative Union Provident Fund

41. Federation of Kenya Employers Staff Pension & Life Assurance Scheme

42. JSI Staff Provident Fund

43. Federation of Kenya Employers Provident Fund

44. Phoenix Publishers Limited Staff Pension and Life Assurance Scheme

45. Agricultural Finance Corporation Pension Scheme

46. Sea Air Forwarders International Limited Staff Retirement Benefits and Life Assurance Scheme

47. National Oil Corporation of Kenya Staff Retirement Benefits Scheme

48. Farmer's Choice Ltd Junior Staff Provident Fund and Life Assurance Scheme

49. C. Dorman Limited Staff Retirement Benefits Scheme

50. Chemelil Sugar Company Limited Staff Pension Scheme

51. Coffee Research Foundation Staff Retirement Benefits Scheme

52. Document Handling Kenya Ltd. (DHL) Staff Retirement Benefits Scheme

53. Kenya Bureau of Standards Staff Retirement Benefits Scheme

54. Kenya Forestry Research Institute (KEFRI) Staff Retirement Benefits Scheme

55. Kenya Sisal Board Staff Retirement Benefits Scheme

56. Kenya Tourist Development Corporation Staff Retirement Benefits Scheme

57. Kenya Wine Agencies Limited Staff Retirement Bemefits Scheme

58. Mumias Sugar Company Limited Staff Retirement Benefits Scheme

59. Spicers (EA) Ltd Staff Retirement Benefits Scheme

60. Teachers Service Commission Staff Superannuation Scheme

61. Care International in Kenya Staff Retirement Benefits Scheme

62. East Africa Portland Cement Co. Ltd Staff Retirement Benefits Scheme

63. Food for the Hungry International (Kenya) - Staff Retirement Benefits Scheme

64. Kentalya Limited Staff Retirement Benefits Scheme

65. Kenya Airports Authority Staff Retirement Benefits Scheme

66. Kenya Broadcasting Corporation Staff Retirement Benefits Scheme

67. Kenya Credit Traders Limited Staff Retirement Benefits Scheme And Group Life Assurance

68. Kenya Flourspar Company Limited Pension Scheme

69. Kenyatta National Hospital Staff Superannuation Scheme

70. Kisii Bottlers Limited Staff Retirement Benefits Scheme

71. Lloyd Masika Limited Staff Retirement Benefits Scheme

72. Mather & Platt Kenya Limited Staff Retirement Benefits Scheme

73. National Irrigation Board (NIB) Staff Retirement Benefits Scheme

74. Tana & Athi River Development Authority (TARDA) Staff Pension Scheme

75. The Kenya National Examination Council Staff Retirement Benefits Scheme

76. Uchumi Supermarkets Limited Staff Retirement Benefits Scheme

77. Mugaco Services Limited Staff Pension Plan

78. SGS Kenya Limited - Staff Retirement Benefits Scheme

79. Kenya Wine Agencies Ltd Provident Fund

80. Capital Group Staff Provident Fund

81. Capital Markets Authority Staff Retirement Benefits Scheme
82. Mission Aviation Fellowship Staff Pension Scheme
83. National Water Conservation and Pipeline Corporation (NWCPC)Staff Superannuation Scheme
84. Tea Brokers East Africa Ltd Staff Retirement Benefits Scherme
85. Getrio Insurance Brokers Limited Staff Provident Fund Scheme
86. Kenya Railways Staff Retirement Benefits Scheme
87. Kenya Sugar Authority Staff Retirement Benefits Scheme
88. International Development Research Centre Kenya Provident Fund
89. Ufundi Savings and Credit Society Limited Staff Provident Fund
90. National Security Intelligence Service (NSIS) Staff Superannuation Scheme
91. Chai Co-operative Savings and Credit Society Ltd Staff Retirement Benefits Scheme
92. Kenya Marine
93. Pinebridge Investment Staff Retirement Benefits Scheme
94. Farmer`s Choice Staff Retirement Benefits Scheme
95. Aembu Farmers Sacco Staff Retirement Benefits Scheme
96. Communications Commission of Kenya (CCK) Staff Retirement Benefits Scheme
97. Kenya Plant Health Inspectorate Services (KEPHIS) Staff Retirement Benefits Scheme
98. Stegra Limited Staff Provident Fund Scheme
99. Higher Education Loans Board Staff Retirement Benefits Scheme
100.   James Finlay Kenya Provident Fund
101.   Practical Action Staff Provident Fund
102.   Handicap International Staff Retirement Benefits Scheme
103.   Nyahururu Elite Nursery School Staff Retirement Benefits Scheme
104.   The National Cereals & Produce Board Staff Provident Fund
105.   Limuru Dairy Farmers Co-operative Society Limited Staff Provident Fund
106.   MTN BusinessKenya Limited Staff Provident Fund Scheme
107.   Moi Teaching and Referral Hospital Staff Pension Scheme
108.   Kenya Sugar Research Foundation Staff Retirement Benefits Scheme
109.   Hemingways Resort Staff Pension Scheme

110.	Sotik Tea Provident Fund
111.	CMC Holdings Ltd Staff Retirement Benefits Scheme (No. 5)
112.	Mt. Elgon Orchards Limited Staff Retirement Benefits Scheme
113.	Centreline Tea Brokers Limited Staff Provident Fund Scheme
114.	Finlays Horticulture Kenya Limited Staff Pension Scheme
115.	Githunguri Dairy Farmers Co-operative Society Limited Staff Provident Fund
116.	Kingsland Court Group Retirement Benefits Scheme
117.	Kenya Roads Board Stafff Retirement Benefits Scheme
118.	Amana Personal Pension Plan
119.	British Broadcasting Corporation(BBC) Staff Provident Fund
120.	Mumias Sugar Company Limited Staff Provident Fund
121.	The Riara Group of Schools Staff Provident Fund
122.	Opportunity International Wedco Limited Staff Provident Fund Scheme
123.	University of Nairobi Pension Scheme 2007

Appendix II Membership age

Life expectancy	
2009	55.56
2010	55.96
2011	56.83
2012	57.13
2013	57.88

Appendix III Fund size

2009	64824
2010	69208
2011	74895
2012	78702
2013	86678

Appendix IV Density of contribution

2009	8,821,131,735
2010	8,953,834,065
2011	11,171,490,818
2012	11,186,490,560
2013	11,715,199,556

Appendix V Fund value

2009	1,378,617,016,695
2010	1,709,770,127,625
2011	1,307,878,522,335
2012	1,308,122,238,600
2013	1,486,697,948,325

Appendix VI Returns

2009	3,576,483,840
2010	8,646,139,253
2011	9,167,063,225
2012	9,287,746,335
2013	8,339,057,119