



DETERMINANTS OF FINANCIAL PERFORMANCE OF INDIVIDUAL PENSION SCHEMES IN KENYA

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ABSTRACT

The study focused on determining the influence of RBA regulations, investment strategies, firm characteristics and fund ethics on the financial performance of the individual pension schemes. The target population for this study was all the 34 registered individual pension schemes in Kenya (RBA Directory, 2018). The study used primary data and employed closed ended questionnaires as the main research instruments. A regression model was used to establish the relationship between the study variables. A multiple linear regression model was used to test the significance of the determinants of financial performance on Individual pension schemes in Kenya. This formed the basis for the discussion, findings and recommendations of the study. The findings of the study concluded that all the four variables had a significant effect on the financial performance. In order of ranking; investment strategies had the greatest influence on the financial performance of individual retirement benefit schemes followed by of fund ethics, firm characteristics and the lowest RBA regulations. It was evident from the findings of this study that individual retirement pension schemes in Kenya had not been operating at optimum. Therefore, a lot more needed to be done both in policy and regulatory frameworks, if these organizations were to attain financial sustainability. The study concluded that the method of risk diversification should be in line with the company investment policy. This would help in ensuring the investment strategy of the company is adhered to and subsequently improving the financial performance of the individual pension schemes in the country.

Keywords: Fund Regulations, Investment Strategy, Firm Characteristics, Fund Ethics, Pension Schemes

INTRODUCTION

Retirement benefit schemes are significant contributors to the gross domestic products of states and an important source of capital in financial markets. The pension funds stimulate capital and financial market development through their substituting and complementary roles with other financial institutions, particularly commercial and investment banks (Wanjala, 2017). There has been major growth of the pension funds in the recent past all across the globe. (Owinyo, 2017), contends that millions of the people in the globe depend on the pension funds as their principal sources of income at their retirement age and in Kenya, most of the total income of retirees is composed of 68% of the total retirement income. Bikker and Dreu (2011) maintained that due to the retirement benefits schemes' large size, their investment choices have a key impact in financial markets and in the lives of retirees.

Describing the pension crisis in developed countries, Ngetich (2012) note that the percentage of the elderly population (65 years and over) over the working age (15 - 64 years) was 12% in 1950, 21% in 2000 and predicted it to increase to 44% in 2050, thus threatening the sustainability of the PAYG system. According to Wyatt (2017), the growth of pension fund assets amounted to 100% of the GDP in Australia, 80% in Canada, 10% in France, 12% in Germany, 36% in Hong Kong, 50% in Ireland, 75% in Japan, 130% in Netherlands, 147% in Switzerland, 98% in the United Kingdom and 108% in the United States of America in 2016.

The growth of Pension funds exerts both quantitative and qualitative effects on financial markets (Njeru, 2014). Quantitative effects relate to asset allocation decisions while qualitative effects relate to corporate governance decisions. Pension funds increase offshore investments, which grow international

financial markets thus contributing to greater stability of the economies as a result of increased capital flows (Njeru, 2014). Lungu (2011) suggest that since pension funds face regulatory requirements and are required to allocate more funds to domestic investments, they are the most important institutional investors within a country. Furthermore the 2 pooling of pension fund assets boosts the stock market and increases the stock market's liquidity (Catalan, 2014).

A report released by (OECD, 2015) stated the five biggest countries in the OECD area in terms of pension funds' assets were the United States, the United Kingdom, Australia, Canada and the Netherlands, altogether totalling USD 21.7 trillion or more than 85% of OECD pension funds' assets. Studies have been done on various contexts relating to the financial performance of pension funds leaving knowledge gaps in the developing and developed countries globally. A study by (Nazi, M.S. & Naas, M.M., 2010) on the determinants of Mutual Fund Growth in Pakistan concluded that assets turnover, family proportion, and expense ratio are positively leading the growth of mutual funds, in contrast with management fee and risk adjusted returns which are negatively associated with mutual funds growth.

In Africa, South Africa is the country with the largest members of pension funds with over 1.2 million active members and about 360 pensioners and beneficiaries (Bikker and Dreu, 2011). However, just like most pension funds, South Africa pension fund is challenged with reduced cash flow and a decline in active membership. This decline in active scheme membership can have a substantial impact on cash flows and investment strategies because the annual contributions may fail to cater for pension benefits (Kigen, 2016). Occupational schemes have been growing and assets have reached the current market value of around 33 billion. However, this is not the situation in all African countries. For example, Botswana's 790,000 work force, but 84% of these

employees do not have any occupational pension coverage. (World Bank Report, 2012)

Pension funds in Kenya were first put in place after independence in 1963. The first post-independent pension fund body, the National Social Security Fund (NSSF), was established in 1965 (RBA, 2016). Prior to reforms, the pension fund system provided for benefits once a worker retired on attaining the mandatory retirement age of 60 (RBA, 2016).

The guarantee was fixed as the worker's full basic salary throughout his life or that of the widow as the law did not envisage a situation where the wife would support the husband. This law was embodied in the NSSF Act and the Pensions Act (Cap 189).

Statement of the Problem

The pension subsector in Kenya is estimated to cover 15% of the labour force and has accumulated assets of 18% of the GDP implying that 85% of the labour force is not pensionable (RBA, 2016). The total coverage of the workforce under IPS is at a low of 194,510 individuals with 80% of them being company employed while 20% are members engaged in self-employment professional occupations (RBA, 2016). The growth of the schemes in Kenya is faced by multiple diverse problems (Hannah, 2011). They have been found to suffer from weak, inefficient, less transparent and cumbersome administration, leading to bureaucracy and highly liable to corrupt practices (Wanjala, 2017). Wyman, (2014) contends that embezzlement and mismanagement of public funds is the biggest obstacle to achieving the millennium development goals in developing countries.

Muriithi and Wamari, (2013) in their study pointed out that there were a frustrated lot of pensioners in Kenya who have not been paid, an example being University of Nairobi and Kenya Railway Corporation, or paid less than the minimum portfolio return based on their contribution and anticipated earnings of the schemes. The Technical University of Kenya staff retirement benefit scheme funding level was found to be below the minimum level prescribed in the

Retirement Benefits Act, Cap 197. This scenario manifests itself due to under-investment by pension fund managers leading to low returns.

Kitoo, (2016) contends that in the last one decade there have been an increasing number of cases of sponsors of pension schemes failing to meet their statutory obligations of submitting pension deductions within the statutory deadlines. Late remittances and outright failure by the scheme administrators to remit members contributions in full have continued to exacerbate the situation of pension schemes in Kenya (Ngetich, 2016).

Such has happened with Nairobi County Government who failed to remit employees' pension money amounting to Sh18.6 billion to the Local Authorities Pensions Trust (Laptrust, 2017). Technical University of Kenya pension scheme was wound up after the university failed to remit employee deductions for months, citing financial hardships. (RBA, 2016)

Former employees and retirees from the Co-operative Bank, Barclays Bank, Telkom Kenya, Postbank, Postal Corporation of Kenya, National Bank, National Museum of Kenya, Kenya Airports Authority, Kenya Commercial Bank and Standard Chartered Bank lodged various claims regarding their underpaid pension benefits with the RBA and The High Court as per petition no. 57 of 2014 against the Trustees of their respective Pension Scheme due to breach of contract by their trustees and administrators (Kenya Law, 2015 & RBA, 2016). The NSSF has been found to be corrupt in irregular sale and transfer of plots by senior staff and allocation and transfer of its shares, which sunk with discount securities. (Kenya Anti corruption Report, 2010)

Locally most studies done on this aspect have not focused on factors affecting the growth of individual pension schemes but rather the challenges faced by insurance firms in the management of pension funds, such as Muli (2008). Makori (2010) undertook a survey on asset liability management among defined benefits pension schemes. Macharia (2011) on the other hand studied risk management strategies and

returns by pension funds in Kenya. Gicharu (2011) carried out a study on corporate governance practices and firm financial performance; the case of pension schemes in Kenya. This study therefore sought to ascertain the gap by ascertaining the determinants of financial performance on individual pension schemes in Kenya.

Objectives of the Study

The main objective of the study was to establish the factors that determine the financial performance of individual pension schemes in Kenya with the specific objectives being:-

- To determine the effect of fund regulations on financial performance of individual pension schemes in Kenya
- To assess the effect of investment strategy on financial performance of individual pension schemes in Kenya
- To analyze the effect of firm characteristics on financial performance of individual pension schemes in Kenya
- To determine the effect of fund ethics affect financial performance of individual pension schemes in Kenya

LITERATURE REVIEW

Theoretical Review

The Theory of Economic Regulation

The theory of economic regulation was proposed by George Stigler in 1971. Stigler (1971) observed that the government, with its machinery and power, was a potential resource or threat to every industry in the society. This theory integrates the analysis of political behavior with economic analysis, Peltzman (1976). This implies that the outcome of regulatory processes can be influenced by interest groups by providing financial support to politicians. The main aim of the theory, as propagated by Stigler, is to explain who will receive the benefits or burdens of regulation, the

form the regulations will take and their effects on resources allocation.

Modern Portfolio Theory

The history of modern portfolio management (also known as modern portfolio theory (MPT), originates with Markowitz (1952, 1959). MPT foundation was hinged on the following concepts: risk return trade-off, correlations in returns of different assets, portfolio selection and investment optimization. MPT main aim is in providing the best combination that will provide the best combination of portfolio that maximizes returns for a given amount of risks. The risk of an asset is measured as the variance of the return on that asset, where variance is a measure of how returns can deviate from their expected value. The portfolio's return variance then is the sum over all assets of the square of the fraction held in a specific asset (weight) times the asset's return variance.

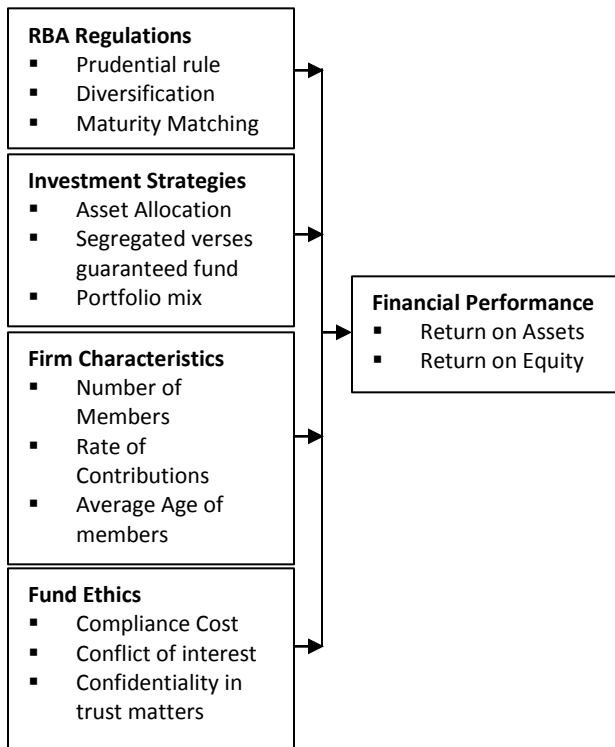
Theory of Constraints

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 broad 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.

The Black-Litterman Model

This is a mathematical model for portfolio allocation developed in 1990 at Goldman Sachs by Fischer Black and Robert Litterman, and published in 1992. It seeks to overcome problems that institutional investors have encountered in applying modern portfolio theory in practice. The model starts with the equilibrium assumption that the asset allocation of a representative agent should be proportional to the market values of the available assets, and then modifies that to take into account the 'views' (i.e. the specific opinions about asset returns) of the investor in question to arrive at a bespoke asset allocation (Black and Litterman 1992).

Conceptual Framework



Independent Variables Dependent Variable

Figure 1: Conceptual Framework

Source: Author (2018)

RBA Fund Regulations

According to (Miriti, 2014), regulation has been a big influential factor in the management of pension industry. Regulations stabilize financial systems which provide a favorable environment for efficient resource allocation which therefore promotes economic growth. Pension funds were not prudently invested or managed before the introduction of the RBA Regulations hence the value of funds was not preserved. It became clear that government's intervention was necessary (Rono, Bitok & Asamoah, 2010). The Act devotes several sections to provide guidelines on investment of pension funds and their management.

Investment Strategies

The investment strategies adopted by a pension scheme are determined by the trustees of the scheme based on the guidelines provided by the Retirement Benefits Authority (Brown, 2013). These decisions to be made by the trustees include deciding on; the asset classes to be considered for investment, what policy percentages to assign to each chosen class, determining the allowable allocation ranges based on policy limits and what specific securities to purchase for the portfolio. There are two types of asset allocation strategies namely: tactical asset allocation and strategic asset allocation. Tactical asset allocation is based on the investor's short term forecasts to determine how the funds are to be divided at any particular moment. Strategic asset allocation is a strategy based on the portfolio manager's long term forecasts of expected returns, variance and covariance to determine how portfolio funds will be divided given the portfolio manager's long term forecasts of expected returns, variance and covariance, (Kiplagat, 2014). The decision determines what deviations based on current market valuations should be made from the strategic asset allocation projections (Mwachanya, 2015)

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). (Rockhart, 2011) provides a useful summary of similar but distinct definitions: key areas of engagement in which favourable results are absolutely necessary to reach financial goals; 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.

Pension Fund Ethics

According to the Social Investors Forum (2017), an ethics framework should view trustees as being individually and collectively subject to the common law, statutes and fiduciary responsibilities to the members of the pension fund. Trustees are therefore inherently bound by some degree of ethos to which they should adhere to in decision-making. Ethical investing involves assessing extra financial risks in investments and in particular those related to environmental, social and corporate governance variables (Yenno, 2018). Firms, including pension funds are increasingly screened for unethical investing.

Financial Performance of pension schemes

According to Owinyo (2017), the financial performance of pension funds is a useful element in determining net income, and is also instrumental in assessing the financial risk of the organization. Retirement benefit schemes' financial performance can be assessed by evaluating the increase in income streams. The main source of funding for retirement benefit schemes is the contributions received. Blome et al. (2010) stated that other source of income for pensions include the net returns made from investment of contributions. The increase in income,

coupled with reduction in administrative costs will lead to an increase in the fund value of a scheme. Schemes whose financial performance is healthy will generally be able to safeguard and grow members' funds; hence such schemes will be in a position to meet their financial liabilities to members who retire.

Empirical Review of Related Literature

Regulation of Pension Funds

Kikete (2012) studied the effect of regulatory control changes on the financial performance of pension schemes in Kenya. This study aimed to find out what has been the effect of the regulatory control changes passed since 2008 to 2013 on the financial performance of pension schemes. The study used cross sectional survey design. The population for this study was the 1216 pension schemes registered and a sample of 10 pension schemes was selected. Secondary data was collected from the industry reports and analysis was performed using ratio analysis and paired sample t-tests using MS Spreadsheets and SPSS. The results for the tests for significance of the differences in performance of the firms after the introduction of the regulatory changes show that there is a significant difference in the performance of the schemes. It also found that reducing the benefits processing period, regulating the fees charged by the service providers, and allowing access of 50% of the employer's portion have influenced the financial performance of individual pension schemes in Kenya.

Investment Strategies of Pension Funds

Mutuku (2011) conducted a study to determine the relationship between portfolio composition, risk and return among fund management firms in Kenya. The research was studied with a descriptive survey. The population of the study was 18 registered fund managers operating in Kenya at that time. Both secondary data and primary data were used to carry out this study. The secondary data was collected from the registered fund managers' financial statements,

other published sources and annual returns to regulatory authorities like Capital Markets Authority and Retirement Benefits Authority. Primary data was collected by a drop and pick questionnaire. The study concluded that the fund management firms determine the percentage return of the investment portfolio. The method used by the firms in determining percentage rate of return was geometric or time-weighted returns. The data was analysed using a model developed specifically for the study.

Firm Characteristics

Nyangeri, (2014) did a study on the effect of firm characteristics on the financial performance of pension schemes in Kenya. 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. He concluded that 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.

Pension Fund Ethics

Ethics refers to benchmarks of conduct that indicate how individuals should behave based on moral duties and virtues, which themselves are derived from principles of right and wrong (Hugman, 2008; Baron, 2008). Empirical studies fund ethics (Roe 2016; Merton and Bodie, 2015; Clark, 2017) report a link between pension fund trustees upholding ethical behaviour and the achievement of long-term objectives set in the trust deed. Ambachtsheer et al. (2017) however found that unethical behaviour in pension funds in decisions relating to investments, benefit promises and fund performance does exist.

METHODOLOGY

The study adopted the descriptive research design. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984). The target population for this study comprised of 34 individual pension schemes in Kenya (RBA Directory, 2018) out of which all were privately owned and compete for customers in the market. The target respondents of the study were the fund managers and the trustees of individual pension schemes in Kenya in order to make the findings reliable. The researcher therefore made generalizations and conclusions based on its findings on all IRS in Kenya. The researcher used primary data. The data aided the researcher to establish a regression model on how the variables are related. The study used descriptive and inferential statistics to seek answers for the study question. The study used the following model with four independent variables and one dependent variable;

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i$$

Y= Financial performance of Individual pension schemes

X₁= Fund regulation

X₂= Investment strategy

X₃= Firm characteristics

X4= Pension Fund Ethics

$\hat{\epsilon}_i$ = Error term.

The F-Test was used to determine whether the regressions were of statistical importance at 95 % confidence level.

The first objective was to establish the effect of RBA regulation on financial performance of the individual pension schemes. The members were asked whether they agreed or do not agreed with the following statements concerning RBA regulations. The results were shown in table 1 below.

RESULTS AND DISCUSSIONS

RBA Regulation and financial performance

Table 1: RBA regulations and financial performance

Statement	Not important	Less important	Fairly important	Important	Very important	Mean
The existence of RBA as retirement benefit regulator	13%	15%	6%	30%	36%	3.61
Tax on non-exempt incomes of pension fund members as imposed	25%	10%	15%	30%	20%	3.10
The scheme compliance with RBA prudential rule	2%	5%	21%	40%	32%	3.95
The scheme's regulatory meetings (once in every 4 years)	34%	10%	11%	22%	23%	2.90
The application of a risk-based approach to diversify risk	8%	12%	14%	20%	46%	3.84
Adherence of RBA financial reporting regulation and maturity matching	15%	10%	9%	30%	36%	3.62
The risk tolerance limits imposed by the RBA	5%	8%	14%	27%	46%	4.01

The researcher to ascertain the factors determining the financial performance of individual pension schemes, The respondents were instructed to responded based on a 5 point likert scale and they indicated the extent they considered the statement an important factor, that is: 5-very important, 4-important, 3-fairly important, 2-less important and 1-not important. 36% of respondents stated that it is very important to have RBA as the individual pension schemes, 30% of the respondents agreed with the statement and only 15% stated that it is not very important. Most of the people 32% and 40%

emphasized that the scheme compliance with RBA prudential rule is very important.

This finding agreed with the findings by Rono, Bitok and Asamoah (2010) who assessed the effect of Retirement Benefit Act (RBA) on investment returns to pension funds in Kenya. He concluded that annual investment return for retirement benefits schemes in the past 3 years ranged between 10 and 27.52%. The overall weighted returns before the implementation of RBA Guidelines was low (average scale of 1.9) while the weighted returns after the implementation of RBA Guidelines was high, at an average scale of

3.7. Njeru (2014) also concluded that since the enactment of the Retirement Benefits Authority Act, there has been significant growth in performance of retirement benefits fund.

Hence, we concluded that adherence with the prudential rule, regulations and the establishment of RBA has streamlined the growth and performance of pension schemes in the country.

The areas which most people did not agreed with was the aspect of meetings which are schedules 4 times a year as 34% of respondent disagreed with it(M=2.90).

They stated that the meeting should focus on the business environment and policy issues as opposed to what currently is happening. This is an area which should be looked at and corrective measures taken. The most important factor with the highest impact is the risk tolerance with a mean of 4.01.

Investment strategies and financial performance

The second objective was to establish whether investment strategies of individual pension schemes affects financial performance of the various pension schemes. The results are shown in the table 2 below.

Table 2: Investment strategies and financial performance

Statement	Not important	Less important	Fairly important	Important	Very important	Mean
Guidelines which doesn't have restriction on investment	18%	15%	6%	20%	41%	3.51
Investment decisions on allocation made by investment committee	15%	10%	2%	17%	56%	3.89
More investment in fixed interest securities than equity	10%	13%	0%	32%	45%	3.89
Adherence to RBA rules on investment portfolio mix	34%	45%	0%	7%	14%	3.78
Conducting confirmation of the rates given by the fund managers	9%	9%	14%	20%	48%	3.89
Having a clear investment policy that is strictly implemented	6%	10%	7%	32%	45%	4.00
Adopting investment strategies based on market research	5%	10%	6%	27%	52%	4.11

The research further investigated how investment strategies used by the fund managers affects the financial performance of the various schemes. Based on the findings, the factors which the respondents considered to affect the financial performance of individual pension schemes in order of their importance include; Adopting investment strategies based on market research (M=4.11) 52% of respondent agreed with this statement while 5% totally disagreed with the statement, having a clear investment policy which was clearly adhered to came in second (M=4.00) the argument was whether the scheme would be liquid enough to pay the investors,

45% of the respondent stated that was very important since this policy would help in achieving the goals of the scheme. RBA rules on investment portfolio mix & Investment in fixed securities both had a mean of 3.89.

Differences in investment policies explained 45% of the variations on the return among different schemes. 68% of agreed that the scheme conducting independent confirmation of the rates given by the fund managers. 52% of respondent further agreed that the fund should adopt investment strategies which are based on the findings of market research conducted by fund manager. The findings of this

study were in line with the findings of Mutuku (2011) who conducted a study to determine the relationship between portfolio composition, risk and return among fund management firms in Kenya. In his submission, he concluded that the method of risk diversification should be in line with the company investment policy.

The factor with the lowest mean was RBA regulations on investment portfolio mix (M=3.78) with only 14% stating that this was an important factor. The findings here echo the findings by Nguthu (2009) who did a study on the effect of assets allocation on retirement Benefits schemes performance in Kenya. The findings of his study showed that that the variation in returns over time for retirement benefit schemes was 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.

Firm Characteristics and financial performance

The researcher further investigated how the characteristics of a scheme influence financial performance. The results were shown in the table below: -

The research further investigated the total membership of different schemes which exist in the country. The results showed that there were 11 (32.4%) schemes with the total membership of less than 1,000 members, 20 (58.8%) with membership between 1000 and 15,000, between 15,001 and 50,000 were only 2 (5.9%) while schemes with membership above 50,000 were the least populated which was 1 (2.9%). This indicated that a large majority of Kenyans were not registered to any of the schemes above hence need to do more education concerning the benefits of pension schemes. This brought the question as to which were the major source of customers to the pension schemes. The results showed that 85.3% of the members to the

individual pension schemes were employed individuals while only 14.7% were from the informal sector. This was a clear indication that majority of the people who were contributing towards pension scheme in Kenya were the employed individuals and those in the informal sector like Jua Kali sector were left out. This further begged the question as to which age group formed the highest percentage of contributors to the individual pension schemes in Kenya. 14% of the individual's saving in pension schemes were 60 years and above, 43% of individuals were aged between 47-59 years of age, 36.5% of individuals were aged between 31 and 46 years of age while only 6.5% of individuals were aged 18-30 years of age. This was a clear indication that most young people do not save with pension schemes only middle age and older people were the ones saving with the most saving schemes.

Percentage of contribution per individual indicated the percentage of income the individuals contribute towards their retirement. The results indicated that 26.5% of total individual pension schemes had members saving between 0-5% of their income, 29.4% saving 6-10% of their income, 23.5% saving between 11-20% of their income and 7 (20.6%) saving over 21% of their income.

On whether the pension scheme was sufficiently funded if it was an individual scheme, the results showed that 47% believed that their schemes were sufficiently funded while 53% believed that they were not sufficiently funded. Whether the underfunding affects individual pension schemes, the results showed that 15(44.1%) respondents believe that underfunding affects the operations of the schemes, 10 (29.4) respondents do not believe that underfunding affects its operations while 9 (26.5%) were not sure whether underfunding affects operations of the scheme or not. The findings of this study are in line with the findings by Oluoch (2013) who sought to establish the determinants of performance of pension schemes in Kenya, he started

that weak positive relationships between returns and fund value which indicated that fund values were not utilized in the generation of income for the pension schemes in Kenya. It also echoed the findings by Njuguna (2010) evaluated strategies to improve pension fund efficiency in Kenya. The findings from the study indicated that fund size was 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.

Table 3: Firm Characteristics and financial performance

Statement	Not important	Less important	Fairly important	Important	Very important	Mean
The management of administration costs	42%	15%	6%	19%	18%	2.56
Adherence to benefits processing period stipulated by RBA	15%	10%	2%	17%	56%	3.80
Usage of an effective internal control system by the scheme	15%	10%	2%	13%	60%	3.93

42% of respondent stated that the management of administration costs being incurred by the scheme was not important, 56% of respondent stated that the adherence of benefits processing period stipulated by RBA was very important while 60% of respondent stated that the usage of an effective internal control system by the scheme is very important.

Based on the findings, the usage of an effective internal control system and adherence to the stipulated benefits processing period were the most important factors (M= 3.95 & M=3.89 respectively).

The findings of this study were in line with the findings of (Nyangeri, 2014) who stated that other than the sources of retirement income; the age of individuals; the rate of contributions; the target replacement rate; the expected density of contributions; and the risk aversion of policymakers and individuals, usage of an effective internal control system also has a positive effect on the performance of pension schemes. The management of administrative costs had the least impact on the financial performance of the individual pension schemes.

Fund Ethics and financial performance

Table 4: Fund Ethics and financial performance

Statement	Not important	Less important	Fairly important	Important	Very important	Mean	
Strict adherence to the schemes code of conduct		5%	6%	1%	43%	45%	4.17
Trustees ensuring confidentiality in all trust matters		4%	5%	2%	45%	44%	4.20
Transparency in sharing schemes information with the members		9%	9%	14%	20%	48%	3.89
Complying with the requirements by all the		10%	9%	12%	23%	46%	3.86

stakeholders

Avoiding Bias in decision making	7%	9%	12%	27%	45%	3.94
Compliance cost incurred by the scheme	12%	11%	9%	28%	40%	3.73
Proper utilization of authority	11%	7%	4%	44%	34%	3.83

The researcher asked whether the scheme having a code of conduct that is strictly adhered to had an effect on the financial performance of their scheme, 45% stated that it is important, 44% of respondents stated that trustees ensuring confidentiality in all trust members is very important, 48% of respondent stated that honesty in sharing schemes information with the members is very important and may help in building confidence among members. 45% of respondent further stated that avoiding bias in decision making is important and will help in financial performance. The findings of this study are in line with the findings by Kiungu (2012) who used BRITAM equity fund to investigate the influence of behavioral biases on the trading decisions of equity fund investors in Kenya. The objective of this study was to identify behavioral biases and phenomena present amongst investors in the equity fund market in Kenya. This study sought to identify if investors 'selling behavior is influenced by the disposition effect and loss aversion. The bottom line was all about biasness in decision making and how that can influence the decision by investors.

Compliance cost incurred by the scheme as stipulated by the RBA regulation was largely supported by 28% and 40% of respondent and they believed that cost is an important area in pension scheme. The findings support Miriithi, (2017) who carried out a study on the effect of operating cost on financial performance of occupational pension schemes in Kenya. He sought to establish the effect of operating costs on pension schemes which consist of administrative and investment costs which can substantially increase the

cost of retirement security. It was concluded that there was a strong inverse relationship between financial performance and investment management costs as well as administrative cost.

The study recommended that trustees/authorities should monitor and regulate the operating costs incurred by the pension schemes. Therefore, were schemes did not adhere to cost ethics, financial performance of scheme will run low.

From the findings, the factors that were very important for growth in financial performance of pension schemes as indicated by the respondents included: Trustees ensuring confidentiality in all trust matters (M=4.20), Schemes having a strict code of conduct (M=4.10), avoiding bias in decision making (4.00),honestly sharing scheme information with the members (M=3.89)

Regression Analysis

The study used the following model with four independent variables and one dependent variable;

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_i$$

Y= Financial performance of Individual pension schemes

X₁= Fund regulation

X₂= Investment strategy

X₃= Firm characteristics

X₄= Pension Fund Ethics

ε_i= Error term.

The results were shown in below.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821 ^a	.675	.627	.80352

This table 5 above displays R, R squared, adjusted R squared, and the standard error. R is the correlation between the observed and predicted values of the dependent variable. The values of R range from -1 to 1, in our case above R = 0.821 with a positive sign indicating the direction of the relationship. The absolute value of R indicates the strength, with larger absolute values indicating stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model with R = 0.821, it indicates strong relationship between the variables. The sample R squared tends to optimistically estimate how well the models fits the population. Adjusted R squared attempts to correct R squared to more closely reflect the

goodness of fit of the model in the population. We find that the adjusted R² of our model is 0.627. R-squared measures the proportion of the variance for a dependent variable that's explained by an independent variable hence it is a goodness-of-fit measure for linear regression models. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The R square = .675 meaning that 67.51% of the changes in the financial performance is explained by the four predictors (RBA regulations, investment strategies, firm characteristics and fund ethics) hence an indication that the model fits data well.

Besides R-squared, we can use ANOVA (Analysis of variance) to check how well the model fits the data.

Table 6: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.503	3	15.168	20.721	.000
Residual	21.952	30	.732		
Total	67.455	33			

The *F* test is a ratio of the mean square for the regression equation to the mean square for the "residual" (the departures of the actual scores on *Y* from what the regression equation predicted). The *F* value of 20.721 using an α of 0.05 is $F_{0.05;3,33} = 2.892$. Since the test statistic was much larger than the critical value, we reject the null hypothesis and conclude that there is a (statistically) significant difference among the population means. Also significance value of the *F* statistic is small ($F < 0.05$), then the independent variables does a good job explaining the variation in the dependent variable. In

the table above, the linear regression's *F*-statistics has the null hypothesis that there is no linear relationship between the two variables (in other words $R^2=0$). With $F = 20.721$ and 33 degrees of freedom the test is highly significant, thus we can assume that there is a linear relationship between the variables in our model.

After checking for the model fit, the researcher was interested to determine the relative importance of each Independent variable in predicting dependent variable. The unstandardized (*B*) coefficients are the coefficients of the estimated regression model.

Table 7: Coefficient of Regression Equation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.656	.190		3.456	.001
RBA Regulations	.215	.088	.209	2.435	.016
Investment Strategy	1.541	.703	.130	2.191	.031
Firm Characteristics	.453	.082	.482	5.509	.000
Fund Ethics	.650	.141	.724	4.611	.000

The established multiple linear regression equation becomes:

$$Y = 0.656 + 0.215X_1 + 1.541X_2 + 0.453X_3 + 0.65X_4 + 0.80352$$

Where

Y= Financial performance of Individual pension schemes

X₁= Fund regulation

X₂= Investment strategy

X₃= Firm characteristics

X₄= Pension Fund Ethics

é_{i,t}= Error term

Often the independent variables are measured in different units. The standardized coefficients or *betas* are an attempt to make the regression coefficients more comparable. From the results, Constant = 0.656 implied that without the existence of predictors, the financial performance of individual pension schemes in Kenya increased by 0.656 units

First the P-value of RBA regulation was 0.001 < 0.05 hence it was statistically significant with a coefficient value of 0.215 implying that one unit change in RBA regulations results in 0.215 unit increase in financial performance of individual pension schemes; indicating positive influence of RBA regulation on financial performance. These findings agreed with the findings of Rono, Bitok and Asamoah (2010) who assessed the effect of Retirement Benefit Act (RBA) on investment returns to pension funds in Kenya. The study determined that annual investment return for

retirement benefits schemes in the past three years ranged between 10 and 27.52%.

The overall weighted returns before the implementation of RBA Guidelines was low (average scale of 1.9) while the weighted returns after the implementation of RBA Guidelines was high, at an average scale of 3.7. Njeru (2014) also concluded that since the enactment of the Retirement Benefits Authority Act, there was significant growth in performance of retirement benefits fund. Hence, we concluded that adherence with the prudential rule, regulations and the establishment of RBA has streamlined the growth and performance of pension schemes in the country.

Investment strategy was statistically significant with p-value of 0.031 < 0.05 hence we rejected null hypothesis and conclude that investment strategy influences financial performance of pension funds. The coefficient value was given as 1.541 implying that one unit change in investment strategies results in 1.541 unit increase in financial performance of individual pension schemes;. The findings of this study were in line with the findings of Mutuku (2011) who conducted a study to determine the relationship between portfolio composition, risk and return among fund management firms in Kenya. In his submission, he concluded that the method of risk diversification should be in line with the company investment policy. The findings further echo the findings by Nguthu (2009) who did a study on the effect of assets allocation on retirement Benefits schemes performance in Kenya. The findings of this

study showed that that the variation in returns over time for retirement benefit 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.

Firm characteristics with p-value of $0.000 < 0.05$ hence we rejected null hypothesis and concluded that firm characteristics were statistically significant. The coefficient value was given as 0.453 implying that one unit change in firm characteristics results in 0.453 unit increase in financial performance of individual pension schemes. It indicated that there is positive relationship between firm characteristics and financial performance. The findings of this study are in line with the findings by Oluoch (2013) who sought to establish the determinants of performance of pension schemes in Kenya, he stated that weak positive relationships existed between returns and fund value, assets and contributions of pensioners indicating that fund values, assets, and contributions were not utilized in the generation of income for the pension schemes in Kenya.

It also echoes the findings by Njuguna (2010) evaluated strategies to improve pension fund efficiency in Kenya. The findings from the study indicate that density of contribution 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 the average age of scheme members influence how schemes funds are invested.

Lastly fund ethics with P-value of $0.000 < 0.05$ indicating statistically significant value hence we reject null hypothesis. The coefficient value is given as 0.65 implying that one unit change in investment

strategies results in 0.65 unit increase in financial performance of individual pension schemes. This shows a positive relationship between fund ethics and financial performance. The findings of this study were in line with the findings by Kiungu (2012) who used BRITAM equity fund to investigate the influence of behavioral biases on the trading decisions of equity fund investors in Kenya. The objective of this study was to identify behavioral biases and phenomena present amongst investors in the equity fund market in Kenya. This study sought to identify if investors 'selling behavior is influenced by the disposition effect and loss aversion. The bottom line was all about biasness in decision making and how that can influence the decision by investors.

The findings further supported Miriithi, (2017) who carried out a study on the effect of operating cost on financial performance of occupational pension schemes in Kenya. He sought to establish the effect of fund ethics on pension schemes which consist of administrative and compliance costs which can substantially increase the cost of retirement security. It was concluded that there was a strong relationship between financial performance and adherence to the ethical practices such as transparency in trust matters. The study recommends that trustees/authorities should monitor and regulate the operating costs incurred by the pension schemes. Therefore, schemes that did not adhere to cost ethics, their financial performance will run low. Therefore, in conclusion we can state that RBA regulation, Investment strategy, firm characteristics and fund ethics are all determinant of financial performance of pension schemes.

CONCLUSIONS

The objective of the study was to establish the determinants of the financial performance of individual pension funds in Kenya. From the study, it was concluded that, Investment strategy, fund ethics, firm characteristics and RBA regulation are the key determinants of the financial performance of pension

schemes. The funding levels of scheme were of great importance since it forms the basis for decision making by fund managers. Investment strategies was found to be the most influential factor, Fund ethics was found to be the second most influential variable, Firm characteristics third and finally, RBA regulations was the least influential variable on the financial performance of individual pension scheme in Kenya.

RBA regulation especially the imposing of quantitative limits on different classes reduces the set of otherwise admissible investment policies with a consequential effect on return on investment. The financial performance of these schemes was also influenced by the low membership and the low contribution rates which in turn reduces the funds available for investment. The study concluded that since all the variables were loaded into one factor for each of the variables, this was a good indication that the constructs used in the measurement of all the variables were adequate and they measured the financial performance.

RECOMMENDATIONS

The issue of asset risk should be given more attention when investing funds. Literature showed that there were costs associated with high risk of assets. An effective way is to institute a pension risk insurance fund that will underwrite and compensate such losses as will be prescribed.

According to the responses given by the respondents concerning legal restrictions on investment of funds, a majority of them indicated that they are not satisfied with the limits imposed on certain investments on the fund. Therefore it is recommended that this be reviewed and the concerns of the fund managers be considered. The spectrum of investment options available in Kenya is not satisfactory. Therefore the researcher would recommend that additional investment instruments not currently available in Kenya such as derivatives be introduced in the capital and money markets.

Retirement Benefits Authority needs to strengthen its compliance and enforcement function in order to ensure that it appropriately deals with emerging present and future regulatory challenges. The RBA also needs to move away from proactive supervision of schemes toward a more risk-based supervision approach. The primary areas of risk once a scheme was properly set up in compliance with the law were: financial loss of funds; violation of member protection regulations; inefficiencies that increase costs or reduce returns to member's; and poor quality of service to members or beneficiaries Investment regulations should be reviewed to enhance growth of the sector and financial performance.

Suggestion for Further Research

Comparative studies should be conducted to evaluate the performance of one component against its peers or a study of all the four components in one research. The data used majorly primary data years. The findings may, therefore, not apply across all years since as evidenced by the data itself variations in the relationship may vary from time to time dependent upon the policies concerning how pension funds are utilized in Kenya. Secondary data should be used 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.

The study was focused on Kenya alone. Currently Kenya is active in uniting the East African countries into a single and united economic union. The results would be stronger and of higher utility if the study considered all the countries in the East African Community. Such a study would be more useful due to the higher relevance of the results to countries outside Kenya but within the East African Community. Various restrictions exist on portfolios of pension schemes, while these might appear at first glance to be regulatory constraints, which unambiguously

lower consumer welfare and financial performance. The issues of investment freedom and solvency regulation for pension funds can be quite intertwined. The study on financial performance should involve both secondary and primary data from RBA.

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