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DETERMINANTS INFLUENCING PENSION FUND INVESTMENT PERFORMANCE IN KENYA

[1*]Anthony Kyanesa Mutula
Post Graduate Student: Human Resource Development
Jomo Kenyatta University of Agriculture and Technology
*Author's E-mail:kyanesa@gmail.com

[2]Dr. Assumptah Kagiri
Lecturers, Human Resource Development
Jomo Kenyatta University of Agriculture and Technology

Abstract

Purpose: The purpose of the study was to investigate the determinants influencing pension fund investment performance in Kenya.

Methodology: The study employed a descriptive research design. The study target population was all the 33 registered pension funds in Kenya, and the sample size was 66 senior employees involved in decision making. The study adopted a census approach and therefore data was collected from all the 33 registered pension funds. A questionnaire was used to collect primary data from the selected respondents. The data collected was analyzed using the statistical package for social sciences (SPSS) version 23.0. The software was used to produce frequencies, descriptive and inferential statistics which was used to derive generalizations and conclusions regarding the population. Multiple linear regression model was used to measure the relationship between the independent variables and the dependent variable. The study findings were presented using figures and tables.

Results: The study findings revealed a positive and significant relationship between diversification decisions, management competency, investment strategies, regulation compliance and investment performance of pension funds in Kenya.

Unique contribution to theory, practice and policy: The study recommended that the management of pension funds should establish a strong organization structure and policy implementation, which will enhance their portfolio composition; the firms should have highly competent management; should incorporate investment literacy and capability programs in their organizations; and should continue adhering to the set regulations.

Keywords: *determinants, pension fund investment, performance*

1.0 INTRODUCTION

1.1 Background of the Study

In the recent past, many countries around the globe have experienced rapid establishment and growth of pension funds. The growth of these institutions is one development that countries have given considerable attention because of the sensitivity of the transactions involved in pension funds. Pension funds act as an important stimulus to capital markets in most countries where they exist through financial intermediation. Pension funds tend to complement, and hence stimulate development of capital markets, while acting as substitutes for banks. Growth of pension funds is also the consequence of a number of non-financial and demand-side features, (Davis, 2010).

A pension fund is a legally separated pool of assets bought with contributions to a pension fund for the exclusive purpose of financing pension fund retirement benefits, (OECD 2008, Yermo 2002). Pension funds are the principal sources of retirement income for millions of people in the world. Pension funds are also important contributors to the gross domestic product (GDP) of countries. Retirement income accounts for 68% of the total income of retirees in Kenya, 45% in Australia, 45% in Austria and 80% in France while in South Africa 75% of the elderly population rely on pension income, (Alliance Global Investor, 2007).

In the United States of America 82% of retirees depend on pension income, (EBRI, 2007). In Kenya, pension assets account for 30% of the country's GDP. It is therefore important that pension funds be managed effectively, not only in Kenya, but also in other countries. The Global Pension crisis has threatened to erode contributions that pension funds make to the world economies, (OECD, 2008). The crisis manifests in countries that have inadequate funds to cater for the retirement income of the ageing population as a result of depressed financial markets, (Kakwani, Sun & Hizn 2006). In Kenya, the losses were estimated at 35% (RBA 2009). Effective pension fund investment strategies are needed to ensure that pension fund assets are protected against externalities in the investment universe.

Pension funds have shown an impressive growth pattern. In Chile, which reformed its system in 1981, pension funds are the leading institutional investors, managing a total of $32 billion at the end of 1997, worth some 44 per cent of GDP. Only five countries have proportionally larger pension fund sectors — Ireland, the Netherlands, Switzerland, the United Kingdom and the United States — where funds average 75 per cent of GDP. In these five countries, the value of funds has been growing rapidly: by 56 per cent between 1987 and 1996. Intersect, a financial data firm, expects world pension fund assets, currently $11,000 billion, to grow by 40 per cent over the next five years. In other Latin American countries and in Eastern Europe, reforms were more recent, and so funds are much smaller. The next largest system after Chile is Argentina, where assets are worth 3 per cent of GDP. But funds in other countries are forecast to grow rapidly. Goldman Sachs, an American investment bank, expects the value of Argentine funds to increase from $8.8bn in 1997 to $33bn in 2003, or 6.4 per cent of GDP, (Asher, 2008).

1.2 Statement of the Problem

Pension funds are the principal sources of retirement income for millions of people in Kenya. Pension funds are also important contributors to the gross domestic product (GDP) of countries. Retirement income accounts for 68% of the total income of retirees in Kenya, while pension assets account for 30% of Kenya's GDP (Omondi, 2008). However, there is need for better and more specific measures to protect the interests of stakeholders.

There have been concerns over the misuse of funds by the management. Some of the cases include Railway Corporation, National Society Security Fund, Postal Corporation and the University of Nairobi (Otieno, 2013).

Similar case was recently in Technical University of Kenya where the University was not remitting monthly pension deductions of over 800 employees to the pension fund, (Business Daily, 2015)

Reports from Retirement Benefits Authority show the overall returns from pension industry have been inconsistent. For instance in year 2010 the industry return was 37% which was attributed to good performance from the equity industry. However the following years, 2011 and 2012 reported returns of negative 20% and 0% respectively, wiping out all the gains which were reported earlier. The total assets growth from 2010 to 2015 averaged 3% implying poor investment decisions and also higher expenses for managing the funds especially NSSF.

The problem is further aggravated by bad investment decisions characterized by lack of diversification, for instance, a pension fund such as NSSF with an overwhelming 72% of total assets was in real estate. Additionally, 7% of the fund was invested in bank deposits with 16 financial banking institutions of which 10 have collapsed, thus leading up to 4.6% of the total fund assets (Odundo, 2013). Also, trustees who are the top managers of the employer and others are political appointees who misuse employer contributions, which has resulted in cases of poor pension investments, delays and denials in payments of dues to members, misuse and outright embezzlement of the scheme funds by the same trustees who are entrusted to guard the funds to the ultimate loss to the beneficiaries (Moridnat, 2015). It is, therefore, evident that there is a problem with the pension funds' investment management leading to poor performance.

There are studies that have addressed various aspects of pension funds. For instance, Kimeu (2015) determined the effect of portfolio composition on financial performance of investment companies listed in Nairobi Securities Exchange. The study found that investment in bonds positively influences the financial performance of investment companies listed in the Nairobi Securities Exchange. The study also found that investment in real estate and equity by investment companies positively impacted on their financial performance. Owino (2015) established the extent to which management competence impact on the overall performance of public service vehicle SACCOs in Nairobi County. The study findings revealed that there exist a positive relationship between management competence and SACCO performance.

Osano (2013) study sought to identify investment strategies adopted by investment funds in Kenya and their effect on financial performance of the funds. The study concluded that investment funds in Kenya take an active investment strategy. Ngetich (2012) investigated the factors influencing the growth of individual pension schemes in Kenya. The study findings revealed that fund regulation exerts a significant relationship on the growth of individual pension schemes. Kamwaro (2013), sought to determine the impact of investment portfolio choice on financial performance of investment companies. The study revealed that investment portfolio choice affects the financial performance of investment companies listed in the Nairobi Securities Exchange.

Despite the studies carried out on determinants of investment performance, there are no studies that have focused on determinants influencing pension fund investment performance in Kenya. The study thus sought to fill the existing knowledge gap by investigating the determinants influencing pension fund investment performance in Kenya.

1.3 Purpose of the Study

The purpose of the study was to investigate the determinants influencing pension fund investment performance in Kenya.

1.4 Research Question

i. What is the effect of diversification decisions on pension fund investment performance in Kenya?
ii. Does pension management competency affect pension fund investment performance in Kenya?
iii. To what extent do pension fund investment strategies influence pension fund investment performance in Kenya?
iv. What is the effect of pension fund regulation on pension fund investment performance in Kenya?

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Modern Portfolio Theory

Modern Portfolio Theory (MPT), a hypothesis put forth by Markowitz (1952) based on the idea that risk-averse investors can construct portfolios to optimise or maximise expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. It is one of the most important and influential economic theories dealing with finance and investment, (Kaplan & Schoar, 2005).

Also called "portfolio theory" management theory suggests that it is possible to construct an "efficient frontier" of optimal portfolios, offering the maximum possible expected return for a given level of risk. It suggests that it is not enough to look at the expected risk and return of one particular stock. By investing in more than one stock, an investor can reap the benefits of diversification, particularly a reduction in the riskiness of the portfolio. MPT quantifies the benefits of diversification, also known as not putting all of your eggs in one basket, (Kaplan & Schoar, 2005). The risk in a portfolio of diverse individual stocks will be less than the risk inherent in holding any one of the individual stocks. Markowitz showed that investment is not just about picking stocks, but about choosing the right combination of stocks among which to distribute one's nest egg.

The theoretical rationale for investing in an alternative assets class such as stocks, bonds and other securities is to improve the risk and reward characteristic of an investment portfolio with the expectation that the assets will offer a higher absolute return whilst improving portfolio diversification, (Bodie, 2005). In relation to the study, the pension funds' managers should be able to apply the concept of the modern portfolio theory. This implies that the managers should be able to make decisions that lead to diversification of investments. In order to maximize returns from investment, pension funds should invest in more than one venture.

2.1.2 The Market Segmentation Theory

The market segmentation theory explains the yield curve, or the term structure of interest rates, the theory assumes that financial instruments of different terms are not substitutable, (Hull, 1989). Both short and long-term interest rates are distinct markets, each with its own buyers and sellers, and are not easily substituted for each other.

As a result, the supply and demand in the markets for short-term and long-term instruments is determined largely independently. Prospective investors decide in advance whether they need short-term or long-term instruments. If investors prefer their portfolio to be liquid, they will prefer short-term instruments to long-term instruments. Therefore, the market for short-term instruments will receive a higher demand. Higher demand for the instrument implies higher prices and lower yield. This explains the fact that short-term yields are usually lower than long-term yields.

This theory explains the predominance of the normal yield curve shape. However, because the supply and demand of the two markets are independent, the theory fails to explain the observed fact that yields tend to move together (upward and downward shifts in the curve). In addition the theory overlooks the fact that there is considerable degree of overlapping between different markets, (Hull, 1989). Same institutions operate in different markets dealing in securities of different maturities. The theory attributes this to an investor preference for long-term securities, particularly pension funds that prefer guaranteed longer-term yields. The theory is therefore based on institutional practices followed by the commercial banks and insurance companies, pension funds and investment trusts. While the commercial banks mostly deal in short term securities, insurance companies, pension funds and investment trusts mostly deal in long-term securities. The theory informs the study since it explains the basis on which pension funds adopt certain investment strategies. Investment strategy is one of the variables being explored in this study.

2.1.3 Agency Theory

Agency theory argues that in the modern corporation, in which share ownership is widely held, managerial actions depart from those required to maximize shareholder returns. In agency theory terms, the owners are principals and the managers are agents and there is an agency loss which is the extent to which returns to the owners fall below what they would be if the principals (the owners) exercised direct control of the corporation. Agency theory specifies mechanisms also known as agency cost aimed at reducing agency loss. These include incentive schemes for managers which reward them financially for maximizing shareholder interests. Such schemes typically include plans whereby senior executives obtain shares, perhaps at a reduced price, thus aligning financial interests of executives with those of shareholders, (Eisenhardt, 1989).

In the case of pension funds, the owners are the members and the management works on behalf of the owners. The effect of managerial competency on pension fund investment performance, one of the issues covered by this study, is guided by agency theory. Managerial competence enables the agent make good investment decisions that would lead to better performance of the organization, thus benefiting both members and managers. Agency theory therefore informs of the relationship between managerial decision outcomes as effected through the managers and performance of the pension funds, (Mwangi, 2014).

2.1.4 Institutional Theory

The institutional theory was advanced by DiMaggio and Powell (1983). The theory observes that the governments may influence the organizational behavior of various industries. Scott (2004), defines institutions as social structures that have attained a high degree of resilience and are made up of cultural-cognitive, normative and regulative elements. These together with associated activities and resources, may provide stability and order in social life.

There are some features nearly all institutional theories share. Institutionalism as social theory aims at explaining a variety of issues like why actors behave the way they do in societies, how social structures interact, what organizations are, and why some practices persist over time, (Scott, 2008). The point of departure for all institutionalism social theory is that social actions are embedded in, affected by and regularized through institutional forms: social structures that have reached a high degree of elasticity and resilience in social practices. These structures give meaning, constitute, enable and constrain courses of actions in society. Institutional structures are not determined functionally but have their own 'laws of motion', as Peck (2010) puts it.

The institutional frameworks for pension fund investments have recently gained much academic focus lately for example in terms of pension fund governance (Boeri et al., 2006; Clark, 2005), of pension fund investment regulation and changes of interest in it in formal-political system (Clark & Wójcik, 2007), and of more general habits, rules and norms framing and resources available to governance and decision-making practices, (Clark & Urwin, 2008). The same applies to pension fund investment decision-making, investment scheme and adopted corporate engagement practices in various disciplines in social sciences, (Langley, 2008).The theory is relevant to the study since it informs whether pension funds comply with the regulatory aspects such as governance, licensing, financial information disclosures and asset restrictions. As such, the theory supports the regulation compliance objective.

2.2 Empirical Review

Kimeu (2015), study sought to determine the effect of portfolio composition on financial performance of investment companies listed in Nairobi Securities Exchange. The study adopted a descriptive survey design and covered a period from 2012 to 2014. The study findings revealed that portfolio composition affects the financial performance of investment companies listed in the Nairobi Securities Exchange. The study found that investment in bonds positively influences the financial performance of investment companies listed in the Nairobi Securities Exchange. The study also found that investment in real estate and equity by investment companies positively impacted on their financial performance. The study recommended that the management of investment companies to have solid organization structure and policy implementation which will influence their portfolio composition which affect their financial performance.

Owino (2015), sought to establish the extent to which management competence impact on the overall performance of public service vehicle SACCOs in Nairobi County. The study used a descriptive research design. The study findings revealed that there exist a positive relationship between management competence and SACCO performance. The study recommended that SACCO members elect people with managerial competence to manage their SACCO affairs and that SACCO directors appoint/employ highly qualified staff to help them run their SACCOs because management competence was found to have a positive effect on SACCO performance.

Osano (2013), study sought to identify investment strategies adopted by investment funds in Kenya and their effect on financial performance of the funds. Descriptive analysis which aims at finding out type of investment strategy was used and classified them either active investment strategy or passive investment strategy. The study concluded that investment funds in Kenya take an active investment strategy. Further, the study concluded that investment strategies have a positive influence on investment funds performance.

The study recommended that to be successful, investment literacy and capability programs need to be incorporated in investment sector's innovation strategies.

The major reason why many developing countries fail to optimise pension fund efficiency is the existence of many laws to which pension funds are obliged to subscribe, (World Bank, 2005). The multiplicity of fragmented laws increases compliance costs and reduces the pension benefits, (Asher & Nandy, 2006). On the other hand, Hu, Stewart and Yermo (2007), reported that, in China, pension regulations on investments and governance resulted in more robust risk control mechanisms, better investor protection, more transparent information disclosure and subsequent stability of the pension funds. Eijffinger and Shi (2007) attributed the pension crisis in the European Union to regulatory failure.

They therefore suggested that pension laws be created in licensing, governance, asset restrictions, financial information disclosures and guarantees. The general view is therefore that pension funds need regulations to ensure they deliver on their pension benefit promises, (Odundo, 2008).

2.3 Conceptual Framework

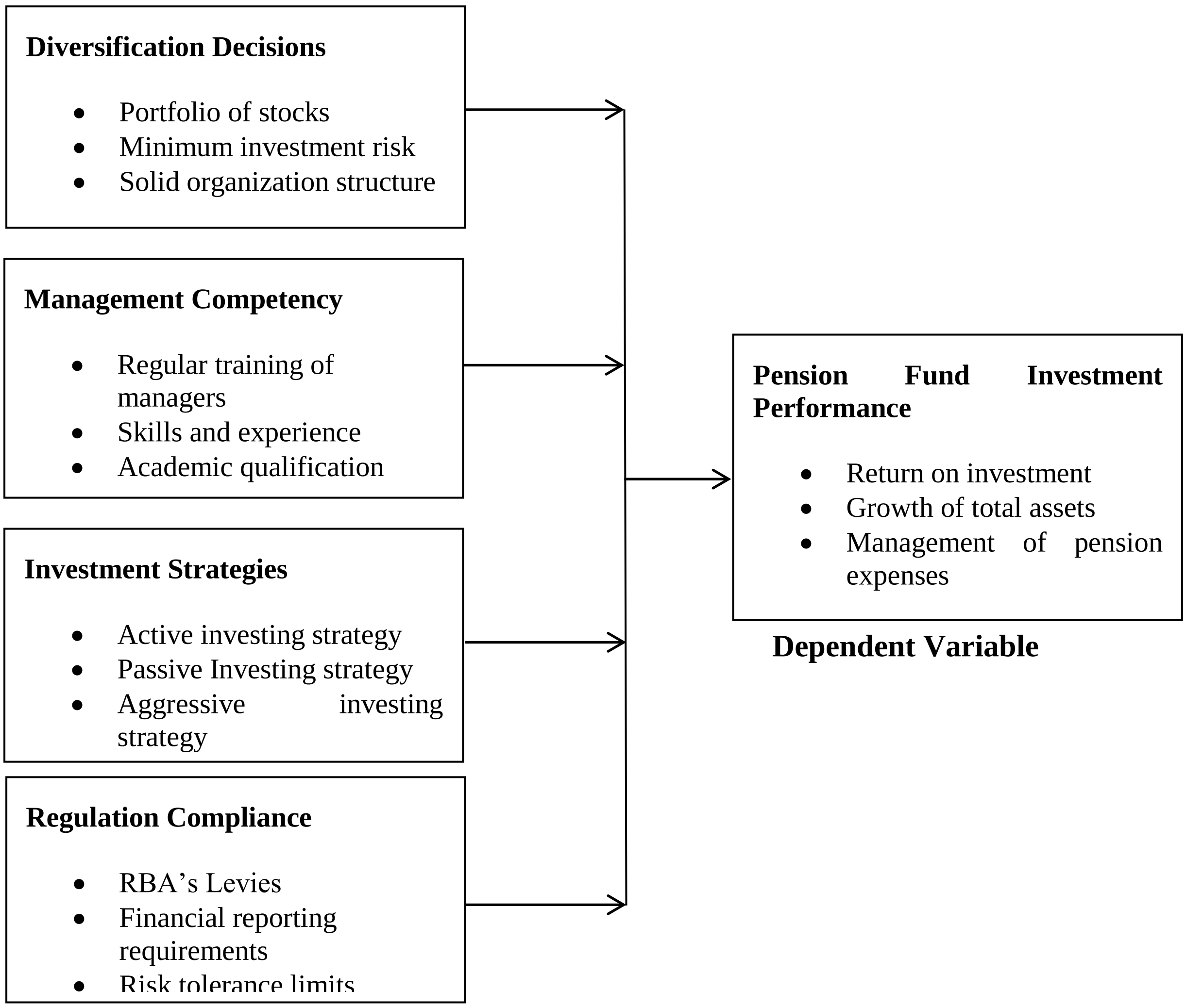

Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study employed a descriptive research design. The study target population was all the 33 registered pension funds in Kenya, and the sample size was 66 senior employees involved in decision making. The study adopted a census approach and therefore data was collected from all the 33 registered pension funds. A questionnaire was used to collect primary data from the selected respondents. The data collected was analyzed using the statistical package for social sciences (SPSS) version 23.0. The software was used to produce frequencies, descriptive and inferential statistics which was used to derive generalizations and conclusions regarding the population.

Multiple linear regression model was used to measure the relationship between the independent variables and the dependent variable. The study findings were presented using figures and tables

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1 Demographic Characteristics

4.1.1 Gender of the Respondents

The respondents were asked to indicate their gender. Results presented in figure 2 below reveal that majority of 61% of the respondents were male while 39% were female. The results imply that majority of the pension fund employees are male. This implies that there is male dominance in most pension fund organizations in Kenya. However, the gender composition reveals that the pension funds have met the minimum requirement of constitution (2010) which requires that no one gender should take up more than two thirds of employment positions in the workplace.

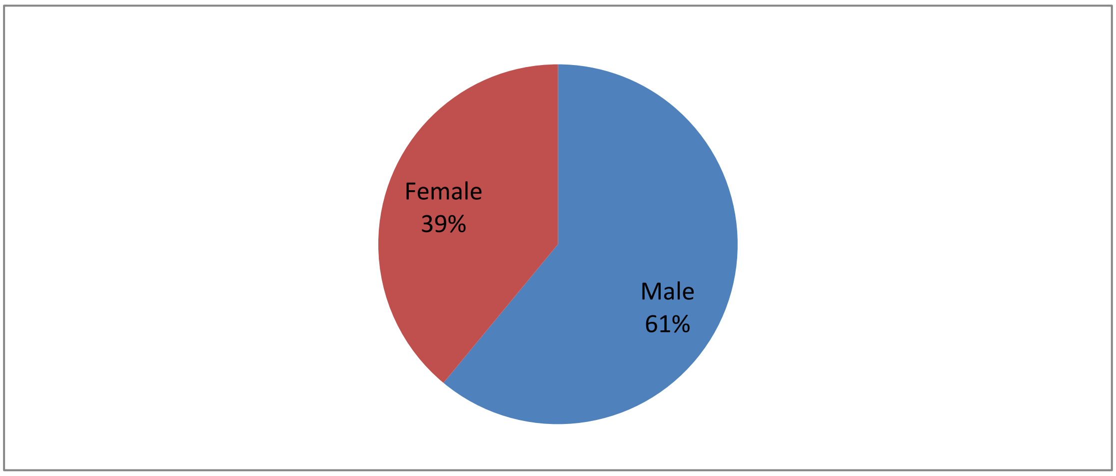

Figure 2: Gender of the Respondents

4.1.2 Position of the Respondents

The respondents were asked to indicate their position in the company. Results in figure 3 below reveal that 40.7% of the respondents were in the middle level management, 32.2% were in the supervisory level management whereas 27.1% were in the senior level management. The results imply that all the respondents interviewed are in the management level and, therefore, they are involved in decision making.

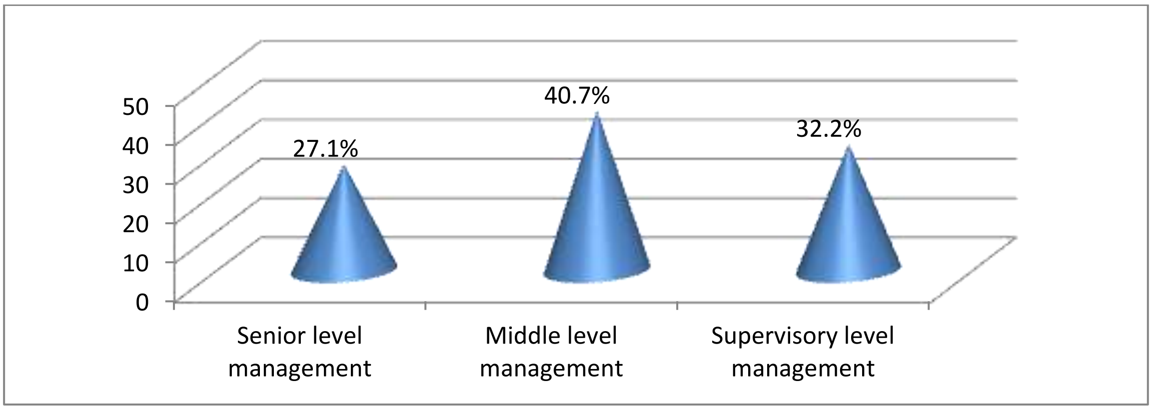

Figure 3: Position of the Respondents

4.1.3 Age of the Respondents

The respondents were asked to indicate their age bracket. Results presented in Table 1 reveal that 42.4% of the respondents indicated 30-40 years, 39% indicated 41-50 years, 13.6% indicated less than 30 years while 5.1% indicated above 50 years. This implies that majority of the respondents lie between 30 and 50 years. It also means that majority of the respondents were at their maturity stage and hence able to handle their duties.

Table 1: Age of the Respondents

Age	Frequency	Percent
less than 30	8	13.6
31-40	25	42.4
41-50	23	39
Above 50	3	5.1
Total	**59**	**100**

4.1.4 Education level of the Respondents

The respondents were asked to indicate their level of education. Results in figure 4 reveal that 47.5% of the respondents had attained graduate level, 28.8% had attained post graduate level whereas 23.7% had attained college level. This implies that the respondents interviewed are well educated and hence the information they gave could be relied upon.

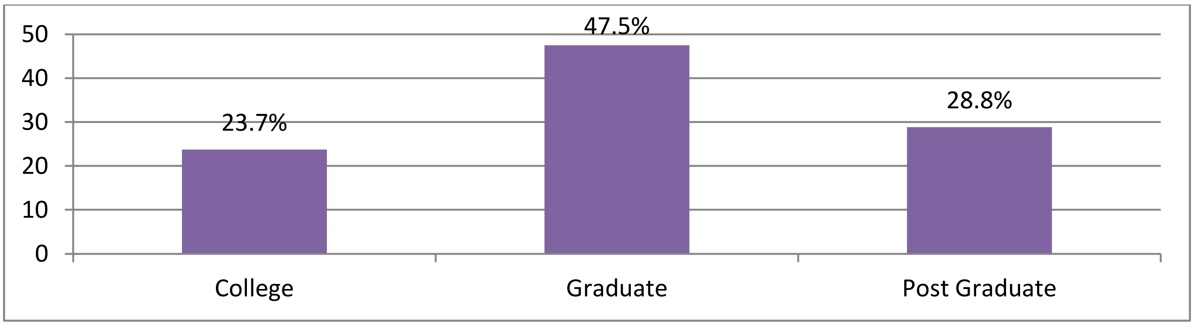

Figure 4: Education level of the Respondents

4.1.5 Respondents duration of work

The respondents were asked to indicate the period of time they had worked in the organization. Results in figure 5 reveal that 45.8% of the respondents had worked in their organization for more than 10 years, 28.8% had worked for 5 to 10 years, while 25.4% had worked for less than 5 years. This implies that majority of the respondents have been working in their current organizations for more than 5 years. It also means that the respondents have adequate skills and experience on matters to do with pension funds and, hence are in a position to give relevant information.

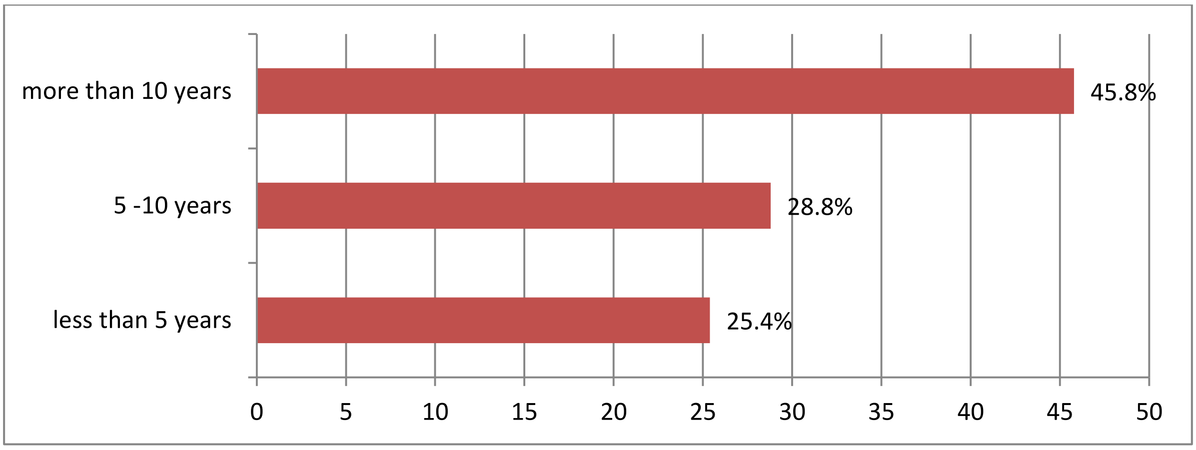

Figure 5: Education level of the Respondents

4.2 Descriptive Statistics Analysis

4.2.1 Diversification Decisions

The study sought to establish the effect of diversification decisions on pension fund investment performance in Kenya. This section presents findings to statements posed regarding diversification decisions. The responses were given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 2 presents the findings.

According to the results, a majority of respondents were found to highly agree that the pension fund usually holds a portfolio of stocks (3.73); the pension fund has investments in real estate (3.75); the pension fund has investment in the equity (3.68); and that the pension fund has a solid organization structure which promotes diversification in decision making (3.93). However, majority of the respondents were found to moderately agree that the organization faces minimum investment risks (2.65).Overall, a majority of the respondents were found to agree with most of the statements regarding diversification decisions (3.57), however the answers were varied as shown by a standard deviation of 1.15.

Kimeu (2015) study found that investment in bonds positively influences the financial performance of investment companies listed in the Nairobi Securities Exchange. The study also found that investment in real estate and equity by investment companies positively impacted on their financial performance. Similarly, Kamwaro (2013), found that investment in real estate and equity by investment companies positively impacted in the financial performance.

The findings of these studies concur with the findings of the current study in that they all agree that diversification decisions influences pension fund investment performance of firms.

Table 2: Influence of Diversification Decisions on Pension Fund Investment Performance

	Mean	**Std. Dev**
The pension fund usually holds a portfolio of stocks	3.73	1.08
The pension fund has investments in real estate.	3.75	1.17
The pension fund has investment in the equity	3.68	1.12
The organization faces minimum investment risks.	2.75	1.36
The pension fund has a solid organization structure which promotes diversification in decision making.	3.93	1.00
Average	**3.57**	**1.15**

Further, the respondents were asked whether diversification decisions influence the investment performance of pension funds. Results presented in Table 3 reveal that majority of the respondents who were 93.2% said yes while 6.8% said no. Similarly, Kimeu (2015) study found that investment in bonds positively influences the financial performance of investment companies listed in the Nairobi Securities Exchange.

Table 3: Influence of Diversification Decisions on Pension Fund Investment Performance

	Frequency	**Percent**
No	4	6.8%
Yes	55	93.2%
Total	**59**	**100**

4.2.2 Management Competency

The study sought to establish the effect of management competency on pension fund investment performance in Kenya. This section presents findings to statements posed regarding management competency. The responses were given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). The scores of ‘strongly disagree’ and ‘disagree’ have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of ‘Neutral’ has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of ‘agree’ and ‘strongly agree’ have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 4 presents the findings.

According to the results, a majority of respondents were found to highly agree that the management of the pension fund undergoes regular training on matters to do with investment(3.90); the pension fund is run by highly skilled and qualified management team (3.64); the pension fund managers have a vast of experience in running the organization (4.08); academic qualification is a critical factor when appointing managers(3.98); and that the pension fund managers are knowledgeable about the environment in which the organization operates (3.81).

Overall, a majority of the respondents were found to agree with most of the statements regarding management competency (3.88), however the answers were varied as shown by a standard deviation of 1.01. Owino (2015) study found that there exist a positive relationship between management competence and firm performance.

Further, Muriuki (2010) observed that governance had enormous effects on firm performance. These studies support the findings of the current study that management competence influences pension fund investment performance.

Table 4: Influence of Management Competency on Pension Fund Investment Performance

Statements	Mean	Std. Dev
The management of the pension fund undergoes regular training on matters to do with investment.	3.90	1.11
The pension fund is run by highly skilled and qualified management team	3.64	1.10
The pension fund managers have a vast of experience in running the organization	4.08	1.01
Academic qualification is a critical factor when appointing managers.	3.98	0.88
The pension fund managers are knowledgeable about the environment in which the organization operates.	3.81	0.97
Average	**3.88**	**1.01**

Further, the respondents were asked whether management competency influences the investment performance of pension funds. Results presented in table 5 reveal that majority of the respondents who were 91.5% said yes while 8.5% said no. Similarly, Owino (2015) study found that there exist a positive relationship between management competence and firm performance.

Table 5: Influence of Diversification Decisions on Pension Fund Investment Performance

	Frequency	Percent
No	5	8.5
Yes	54	91.5
Total	59	100

4.2.3 Investment Strategies

The study sought to assess the effect of pension fund investment strategies on pension fund investment performance in Kenya. This section presents findings to statements posed regarding investment strategies. The responses were given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 6 presents the findings.

According to the results, a majority of respondents were found to highly agree that the pension fund focus on high risk high return investment strategies (3.86); the pension fund aims at outperforming the market with its investment portfolio (3.83); the pension fund adopts an active investment strategy (3.81); the Pension fund adopts a passive investment strategy (3.63); and that the pension fund adopts an aggressive investment strategy (3.85).

Overall, a majority of the respondents were found to agree with most of the statements regarding investment strategies (3.80); however the answers were varied as shown by a standard deviation of 1.04. Osano (2013) study concluded that investment strategies have a positive influence on investment funds performance. Osano (2013) study concurs with the results of the current study that investment strategies determines the returns from investment.

Table 6: Influence of Investment Strategies on Pension Fund Investment Performance

Statements	**Mean**	**Std. Dev**
The pension fund focus on high risk high return investment strategies	3.86	1.09
The pension fund aims at outperforming the market with its investment portfolio.	3.83	1.15
The pension fund adopts an active investment strategy	3.81	1.01
The Pension fund adopts a passive investment strategy	3.63	1.02
The pension fund adopts an aggressive investment strategy	3.85	0.94
Average	**3.80**	**1.04**

Further, the respondents were asked whether investment strategies influence performance of pension funds. Results presented in table 7reveal that majority of the respondents who were 84.7% said yes while 15.3% said no. Similarly, Osano (2013) study concluded that investment strategies have a positive influence on investment funds performance.

Table 7: Influence of Investment Strategies on Pension Fund Investment Performance

	Frequency	**Percent**
No	9	15.3
Yes	50	84.7
Total	59	100

4.2.4 Regulation Compliance

The study sought to assess the effect of pension fund regulation compliance on pension fund investment performance in Kenya. This section presents findings to statements posed regarding regulation. The responses were given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 8 presents the findings.

According to the results, a majority of respondents were found to highly agree that the pension fund complies with the Retirement Benefit Authority's levies (3.80); the pension funds adhere to Tax on non-exempt incomes of pension fund members as imposed by the Kenyan Revenue Authority (3.90); the pension fund complies with the application of a risk based approach adopted by RBA in the supervision of pension funds (4.02); the pension fund adheres to the RBA financial reporting requirements (3.88); and that the pension fund complies with the risk tolerance limits imposed by the RBA (3.90).

Overall, a majority of the respondents were found to agree with most of the statements regarding regulation compliance (3.90); however the answers were varied as shown by a standard deviation of 1.00. Ngetich (2012) study revealed that fund regulation exert a significant relationship on the growth of individual pension schemes. This findings support the findings of the current study that regulation compliance plays an important role in influencing investment performance.

Table 8: Influence of Regulation Compliance on Pension Fund Investment Performance

Statements	**Mean**	**Std. Dev**
The pension fund complies with the Retirement Benefit Authority's levies	3.80	1.13
The pension funds adhere to Tax on non-exempt incomes of pension fund members as imposed by the Kenyan Revenue Authority	3.90	0.98
The pension fund complies with the application of a risk based approach adopted by RBA in the supervision of pension funds	4.02	0.96
The pension fund adheres to the RBA financial reporting requirements	3.88	1.02
The pension fund complies with the risk tolerance limits imposed by the RBA	3.90	0.92
Average	**3.90**	**1.00**

Further, the respondents were asked whether regulation influences performance of pension funds. Results presented in table 9 reveal that majority of the respondents who were 91.5% said yes while 8.5% said no. Similarly, Ngetich (2012) study revealed that fund regulation exert a significant relationship on the growth of individual pension schemes.

Table 9: Influence of Regulation on Pension Fund Investment Performance

	Frequency	Percent
No	5	8.5
Yes	54	91.5
Total	59	100

4.2.5 Pension Fund Investment Performance

The study sought to investigate the determinants influencing pension fund investment performance in Kenya, attributed to the influence of diversification decisions, management competency, investment strategies and regulation. This section presents findings to statements posed regarding pension fund investment performance. The responses were given on a five-point likert scale (where 5 = Strongly Agree; 4 = Agree; 3 = Neutral; 2 = Disagree; 1= Strongly Disagree). The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement agreed upon moderately, equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 10 presents the findings.

According to the results, a majority of respondents were found to highly agree that portfolio diversification results to increase in investment returns (3.75); competent managers are able to make informed investment decisions and therefore improve pension fund investment performance (3.73); the choice of an investment strategy is important for the success of an investment venture (3.59); and that compliance with the set regulations increases the chances of getting more returns from an investment (4.14).

However, majority of the respondents disagreed that compliance with the set regulations reduces the chances of getting more returns from an investment (2.54). Overall, a majority of the respondents were found to agree with most of the statements regarding investment decisions (3.55); however the answers were varied as shown by a standard deviation of 1.11.

Kigen (2016) study concluded that pension contribution, costs and accumulated fund assets significantly affect the financial performance of pension funds. This finding concur with the results of the current study that performance of pension funds is determined by several factors.

Table 10: Pension Fund Investment Performance

Statements	Mean	Std. Dev
Portfolio diversification results to increase in investment returns.	3.75	1.15
Competent managers are able to make informed investment decisions and therefore improve pension fund investment performance	3.73	1.01
The choice of an investment strategy is important for the success of an investment venture.	3.59	1.07
Compliance with the set regulations increases the chances of getting more returns from an investment.	4.14	0.96
Compliance with the set regulations reduces the chances of getting more returns from an investment	2.54	1.37
Average	**3.55**	**1.11**

4.3 Inferential Statistics

4.3.1 Correlation Analysis

Table 11 presents the results of the correlation analysis. The results revealed that diversification decisions and pension fund investment performance are positively and significantly associated (r=0.820, p=0.000). The table further indicated that management competency and pension fund investment performance are positively and significantly associated (r=0.844, p=0.000). It was further established that investment strategies and pension fund investment performance are positively and positively and significantly associated (r=0.805, p=0.000). Finally, results showed that regulation and pension fund investment performance are positively and significantly associated (r=0. 672, p=0.000). This implies that diversification decisions, management competency, investment strategies, regulation compliance and pension fund investment performance of pension funds change in the same direction.

Table 11: Correlation Results

		Pension Fund Investment Performance	Diversification Decisions	Management Competency	Investment Strategies	Regulation Compliance
Pension Fund Investment Performance	Pearson Correlation	1.000				
	Sig. (2-tailed)					
Diversification Decisions	Pearson Correlation	.820**	1.000			
	Sig. (2-tailed)	0.000				
Management Competency	Pearson Correlation	.844**	.754**	1.000		
	Sig. (2-tailed)	0.000	0			
Investment Strategies	Pearson Correlation	.805**	.726**	.760**	1.000	
	Sig. (2-tailed)	0.000	0	0		
Regulation Compliance	Pearson Correlation	.672**	.718**	.709**	.678**	1.000
	Sig. (2-tailed)	0.000	0	0	0	

** Correlation is significant at the 0.01 level (2-tailed).

4.3.2 Regression Analysis

The study adopted a multiple regression analysis so as to establish the relationship of independent variables and dependent variables. The study applied SPSS to compute the measurements of the multiple regression analysis.

According to the model summary Table 12, the coefficient of determination (R^2) is used to measure the extent to which independent variables explain variations in the dependent variable. The results revealed that the R squared is 0.781. It shows that the independent variables explain 78.1% of the total variations in the investment performance of pension funds in Kenya while the remaining 21.9% is explained by other variables that are not part of the model.

Table 12: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
	0.883	0.781	0.764	0.2249087

F-test is done to test the effect of independent variables on the dependent variable simultaneously. The F-statistic test basically shows whether all the independent variables included in the model jointly influence on the dependent variable. Based on the study results of the ANOVA Test or F-test in Table 13, obtained F-calculated was 48.019 greater the F-critical (2.61) with significance of 0.000.

Since the significance level of 0.000<0.05 we conclude that the set of independent variables affect the investment performance of pension funds (Y-dependent variable) and this shows that the overall model was significant.

Table 13: Analysis of Variance

Model	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	9.716	4	2.429	48.019	$.000^b$
Residual	2.732	54	.051		
Total	12.447	58			

NB: F-critical Value = 2.61;

Regression of coefficients results in Table 14 shows that diversification decisions and pension fund investment performance are positively and significantly related (β=0.125, p=0.032). The table further indicates that management competency and pension fund investment performance are positively and significantly related (β=0.411, p=0.000). It was further established that investment strategies and pension fund investment performance are positively and significantly related (β=0.345, p=0.007). Finally, regulation compliance and pension fund investment performance are positively and significantly related (β=0.119, p=0.017).

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The results imply that, holding all factors (independent variables) constant, the investment performance of pension funds in Kenya was 0.265. Also, a unit increase in diversification decisions would lead to 0.125 units increase in pension fund investment performance; a unit increase in management competency would lead to 0.411 units increase in pension fund investment performance; a unit increase in investment strategies would lead to 0.345 units increase in pension fund investment performance while a unit increase in regulation compliance would lead to 0.119 units increase in investment performance of pension funds in Kenya.

The study finding agrees with that of Kigen (2016) who found that administration expenses, investment expenses, pension contribution and accumulated fund assets all have a significant effect on the financial performance of pension fund in Kenya. This was indicated by p-values of 0.04, 0.000, 0.000 and 0.019 respectively.

Table 14: Coefficient Results

Model	β	Std. Error	t	P value
(Constant)	.265	.298	.888	.379
Diversification Decisions	.125	.063	1.996	.032
Management Competency	.411	.110	3.737	.000
Investment Strategies	.345	.123	2.796	.007
Regulation Compliance	.119	.107	1.117	.017

The optimal model for the study is;

$Y = \beta 0 + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + \beta 4X_4 + \epsilon$

$Y = 0.265 + 0.125X_1 + 0.411X_2 + 0.345X_3 + 0.119X_4$

Where;

Y- Pension Fund Investment Performance

X1-Diversification Decisions

X2-Management Competency

X3-Investment Strategies

X4-Regulation Compliance

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

5.1.1 Diversification Decisions

The study sought to establish the effect of diversification decisions on pension fund investment performance in Kenya. Majority of the respondents agreed that the pension fund usually holds a portfolio of stocks, have investments in real estate, have investment in equity and have a solid organization structure which promotes diversification in decision making. However, majority of the respondents were found to moderately agree that the organization faces minimum investment risks.

The correlation results indicated that diversification decisions and pension fund investment performance are positively and significantly associated. The regression results showed that there was a positive and significant relationship between diversification decisions and pension fund investment performance. These findings mirror those of Kimeu (2015) who found that investment in bonds positively influences the financial performance of investment companies listed in the Nairobi Securities Exchange. The study also found that investment in real estate and equity by investment companies positively impacted on their financial performance. Similarly, Kamwaro (2013), found that investment in real estate and equity by investment companies positively impacted in the financial performance

5.1.2 Management Competency

The study sought to establish the effect of management competency on pension fund investment performance in Kenya. Majority of the respondents were found to highly agree that the management of the pension fund undergoes regular training on matters to do with investment, the pension fund is run by highly skilled and qualified management team, the pension fund managers have a vast of experience in running the organization, academic qualification is a critical factor when appointing managers and that the pension fund managers are knowledgeable about the environment in which the organization operates.

The correlation results indicated that management competency and pension fund investment performance are positively and significantly associated. The regression results showed that there was a positive and significant relationship between management competency and pension fund investment performance. These findings support those of Owino (2015) who found that there exist a positive relationship between management competence and firm performance. Further, Muriuki (2010) observed that governance had enormous effects on firm performance

5.1.3 Investment Strategies

The study sought to assess the effect of pension fund investment strategies on pension fund investment performance in Kenya. Majority of the respondents were found to highly agree that the pension fund focus on high risk high return investment strategies, the pension fund aims at outperforming the market with its investment portfolio, the pension fund adopts an active investment strategy, the pension fund adopts a passive investment strategy and that the pension fund adopts an aggressive investment strategy.

The correlation results indicated that investment strategies and pension fund investment performance are positively and significantly associated. The regression results showed that there was a positive and significant relationship between investment strategies and pension fund investment performance.

These findings agree with those of Osano (2013) who concluded that investment strategies have a positive influence on investment funds performance.

5.1.4 Regulation Compliance

The study sought to assess the effect of pension fund regulation compliance on pension fund investment performance in Kenya. Majority of the respondents were found to highly agree that the pension fund complies with the Retirement Benefit Authority's levies. The firms adhere to Tax on non-exempt incomes of pension fund members as imposed by the Kenyan Revenue Authority. Also, the pension fund complies with the application of a risk based approach adopted by RBA in the supervision of pension funds. Further, the pension fund adheres to the RBA financial reporting requirement and that the pension fund complies with the risk tolerance limits imposed by the RBA.

The correlation results indicated that regulation compliance and pension fund investment performance are positively and significantly associated. The regression results showed that there was a positive and significant relationship between regulation compliance and pension fund investment performance. This finding agrees with that of Ngetich (2012) who revealed that fund regulation exert a significant relationship on the growth of individual pension schemes.

5.1.5 Pension Fund Investment Performance

The study sought to investigate the determinants influencing pension fund investment performance in Kenya, attributed to the influence of diversification decisions, management competency, investment strategies and regulation. Majority of the respondents were found to highly agree that portfolio diversification results to increase in investment returns. Also, competent managers are able to make informed investment decisions and therefore improve pension fund investment performance. Further, the choice of an investment strategy is important for the success of an investment venture and compliance with the set regulations increases the chances of getting more returns from an investment. However, majority of the respondents disagreed that compliance with the set regulations reduces the chances of getting more returns from an investment.

5.2 Conclusion

From the correlation results, the study concluded that there is a positive and significant association between diversification decisions and investment performance of pension funds. Further, from the regression results the study concluded that diversification decisions have a positive and significant influence on the investment performance of pension funds in Kenya.

The study also concluded that there is a positive and significant association between management competency and investment performance of pension funds. Further, from the regression results the study concluded that management competency has a positive and significant influence on the investment performance of pension funds in Kenya.

Additionally, the study concluded that there is a positive and significant association between investment strategies and investment performance of pension funds. Further, from the regression results the study concluded that investment strategies have a positive and significant influence on the investment performance of pension funds in Kenya.

Lastly, the study concluded that there is a positive and significant association between regulation compliance and investment performance of pension funds. Further, from the regression results the study concluded that regulation compliance has a positive and significant influence on the investment performance of pension funds in Kenya.

5.3 Recommendations

Based on the findings, the study recommended that the management of pension funds should establish a strong organization structure and policy implementation, which will enhance their portfolio composition. A solid organization structure will also influence the firms' investment portfolio choice leading to improved investment returns.

The study also recommended that pension funds management team should be composed of individuals with high managerial competence. This will ensure smooth and effective running of the firms' operations. A competent management will also be able to make informed investment decisions, which will ultimately result to improved returns from investment.

Further, the study recommended that pension funds should incorporate investment literacy and capability programs in their organizations. This will allow their employees an opportunity to learn more about various investment strategies and how they can apply them to realize maximum returns.

In addition, the study recommended that pension funds should continue adhering to the set regulations. From the study findings, regulation was found to have a positive and significant influence on pension fund investment performance and hence, pension funds should put more measures in place to ensure that they are compliant.

5.4 Suggestion for further Studies

The study is a milestone for further research in the field of investment performance in pension funds in Africa and particularly in Kenya. The findings illustrated the important factors that determine pension fund investment performance as investment strategies, diversification decisions, and management competency and regulation compliance. Other factors such as firm size, density of contribution, cumulative assets, retirement age and cost should also be studied to determine their influence on pension fund investment performance.

Based on the study findings, it is evident that investment strategies, diversification decisions, management competency and regulation compliance influence investment performance of pension funds. Future studies should undertake similar research in other organizations in Kenya and other countries in order to establish whether the explored factors can be generalized.

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