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Why Trustees Shy Away From Investing in Riskier Asset Classes: The Kenyan Case

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ABSTRACT

This paper seeks to examine the influence of trustees on the choice of investment classes, for the Kenyan case.

We ask how trustees make decisions in investing in two classes allowed by the Retirement Benefits Act (2014) of Kenya which are considered relatively riskier: Private equity and Real Estate; and control for personal investment behavioral biases.

We perform a logit regression against factors which include: How long one has been a trustee, size of the fund, level of knowledge on what private equity is, their perception on the riskiness of private equity and demographic factors.

We find that trustees mainly are hesitant to invest in these risky assets mainly due to the pension fund characteristics, which do not allow them to invest in the risky assets. Moreover, trustees carry their personal risk characteristics while investing the pension fund assets, and thus influence decisions made on the board. We found that most trustees are risk averse, and consequently avoid investing the funds' assets in ventures that the return is not certain.

KEY WORDS

Private equity, Logit regression, Vignette data tool, Pensions, Investment, Returns, Investment Policy Statement

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CHAPTER ONE

INTRODUCTION

1.1 Research Background

There exist various forms of investment, which include public and private investments. Investors pick the ventures to invest in, according to their return objectives and the time to maturity they desire, as well as their level of risk tolerance. Private equity, however, offers higher returns as compared to public equity. Due to this reason, a number of investors prefer investing in private equity over public equity, including pension funds.

According to (Retirement Benefits Authority, 2014) the pensions have been defined as: A scheme of arrangement under which persons are entitled to benefits in form of payment upon retirement, death, or termination of service. The Kenyan pension industry is still growing and needs structural changes in management in order to meet the ever changing scheme member needs.

According to (Beer & Nkhelo, 2008) private equity refers to medium to long term shareholder capital investment in privately owned companies as opposed to publicly owned companies. It can also be defined as investment in an asset that cannot be traded in public markets (Wilson & Wright, 2013) Investors can invest in private equity through three major ways which are: Limited partnership, fund of funds and investment trust.

Investment in private equity offers higher returns in the long term as compared to public equity due to a prudent selection which offers diversified exposure to attractive sources of risk premiums. There exist opportunities throughout the lifecycle of a company, but each stage calls for particular skills in order to unlock a company's growth potential. Only some private equity managers have the right tools to consistently meet the investors' expectations. (Yates & Hinchliffe, 2016) Private equity returns might be negative in the first few years.

In the long term however, the returns increase. In pension funds, it would be advantageous since most pension investments are long term (Yates & Hinchliffe, 2016). The time horizons for investment in private equity range between ten to twelve years, and investors are compensated with a premium.

Investment in private equity may have some major drawbacks, but the high returns associated with these investments attract investors (Yates & Hinchliffe, 2016). These high returns may result due to active management, particular fee structures which include minimum entry amounts, long time horizon and limited liquidity. Pension funds are also expected to pay taxes on the capital gains they get upon investing in private equity. Under some circumstances, the law may require the tax to be high, thus reducing the overall returns.

In Kenya, most pension fund investment policies do not include private equity, partly because the specific allocation is so recent. According to the Retirement Benefits Act, these policies need to be updated to unlock further investment in the asset class.

One of the major reasons pension funds fail to invest in private equity is the cost. Fees are charged both on committed capital and of performance in carried interest. The cost as well decreases the return on the funds. The impact of cost becomes more significant as funds mature as the returns are higher, thus higher percentages are charged (Nielsen, 2008)

According to (Achleitner, Kaserer, & Wagner, 2005) Pension funds have also been reluctant to invest in private equity due to illiquidity risk. Since the investment time horizon is long, the liquidity of the funds' assets decreases. It becomes almost impossible for the fund to convert the investment into liquid cash before maturity of the period. This may lead a pension firm to ruin whereby it may be unable to pay benefits to its investors.

In Kenya, investors can invest either in private equity or in public equity. Public equity is preferred by most investors since it offers higher returns as compared to private equity in the short term. However in the case of pensions, Retirement Benefits Authority requires a company to only invest 10% of its assets in private equity.

Previously, researches have been conducted regarding investment in private equity by pension funds in Kenya, South Africa, and Nigeria among others. The researchers usually aim to find the suitability of investment in private equity by pension funds, and how good the returns are, considering returns are high for other investors.

Investment in private equity by pension funds in Kenya was introduced in the year 2015, according to the retirement benefits act. Fund managers invested Kshs. 170 million of the total assets under management.

1.2 Problem Statement

The study seeks to evaluate why trustees of pension funds prefer not to invest in private equity, but readily invest in other traditional asset classes. In Kenya, According to the retirement Benefits Authority, a pension firm can invest a maximum of 10% of its funds in private equity. Investment in private equity is expensive since there is a minimum requirement of assets of a pension fund for it to be eligible to invest in private equity. On the other hand, the Retirement Benefits Authority only allows for pension funds to invest in private equity firms that are registered with the Capital Markets Authority.

Investment policy statements for pension funds are viable for a certain period of time. For the fund to be allowed to invest in private equity, it must state that in its investment policy. Thus, if private equity is introduced in the market when the investment policy statement is already published, then the fund would have to wait for the policy to expire so as to include the terms of investment in private equity terms.

In Kenya, trustees of pension funds were trained with regards to investment decisions as at the end of the year 2016. Thus, they have the required level of knowledge to make investment decisions. They therefore make investment analysis before embarking on any investments, and the fact that they still avoid investment in private equity is alarming.

Investment in private equity by pension funds in private equity was licensed by the Retirement Benefits Authority in the year 2015. Then, pension funds were only allowed to invest 5% of their assets in private equity. Currently, pension funds can invest up to 10% of their assets in private equity.

1.3 Research Objectives

This research seeks to determine how investments in private equity would perform by observing how it has performed in other countries such as South Africa in case pension funds were more willing to invest in private equity. This is due to the fact that pension funds are not willing to invest in private equity. This research also seeks to determine how private equity managers have performed in the past, and whether that has an impact on the current investment decisions.

1.4 Research Questions

What has been the current trend in investment by pension funds in private equity?

What are the returns to pension funds upon investing in private equity?

What influence do trustees have in the choice of investment classes?

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to the (Retirement Benefits Authority, 2014) pensions have been defined as: A scheme of arrangement under which persons are entitled to benefits in form of payment upon retirement, death, or termination of service. According to (Beer & Nkhelo, 2008) private equity refers to medium to long term shareholder capital investment in privately owned companies as opposed to publicly owned companies. Investors to pension firms can opt to invest in private equity, but only for 10% of their total investments as required of them by the Retirement Benefits Authority.

Returns garnered from investing in private equity are high, as fund managers of private equity try and ensure that they get high returns by proper management and investing in the right ventures. However, the investors are reluctant to invest in private equity for pension firms, despite the assurance of high returns.

2.2 Investment in Private Equity by Pension Funds

According to (KPMG; EAVCA, 2015) Investments in private equity are rampant in the Sub-Saharan Africa region, especially the east African region. In East Africa, Kenya is the leader in terms of private equity, followed by Tanzania. Private equity constitutes of venture capital investments, leveraged buyouts, and mezzanine debt financing. Investments in private equity can be done in three ways: Limited partnership, fund of funds and investment trust.

Despite the fact that private equity is growing, it is still in its infant stages. As compared to other more advanced emerging markets. According to a research by deloitte, more private firms are being set up in the region due to high returns and a large number of opportunities.

(Missankov, Dyke, Biljon, Hayes, & Veen, 2006) Suggest that underlying private equity assets do not constitute a separate asset class. Methods through which pension funds may access private equity assets have unique characteristics which include:

Particular fee structure, specific style of active management, limited liquidity and a long investment horizon and therefore may be considered a separate asset class. However, these characteristics may have some drawbacks, but these drawbacks are mitigated by the high returns.

Investment in private equity by pension funds takes place via a limited partnership in a fund managed by a professional manager. For the private equity funds, there is active management by the fund's managers; there exist a minimum entry amount, specific fee structures, term of ten to twelve years, limited liquidity and cash flow, capital repayments, dividends and interest over the life of each investment.

For the South African case according to (Missankov, Dyke, Biljon, Hayes, & Veen, 2006) Sharpe ratios suggest that private equity has produced good risk-adjusted performance relative to the asset classes over the period of investigation. There also was a low correlation of 0.1 of the investment performance of private equity funds in the sample set with that of other conventional asset classes.

This high performance and high expected rate of returns may be as a result of the techniques used by managers in managing the underlying portfolio companies. These techniques include due-diligence investigations, negotiation of low entry and high exit prices, active involvement in the boards and management of the investee companies, the judicious use of financial leverage and the alignment of investor and management interests through significant stakes in the business for the company's management team. The long term and illiquidity of private equity investments suggest that the investors may require a higher liquidity premium for their private equity investments.

Pension funds invest only a small percentage of total assets in private equity, which is 10% for the Kenya case. However, they play a significant role in the market. About half of United States funds available to private equity and venture capitalists and about thirty percent of the funds available to Canadian private equity come from pension funds (Chemla, 2004)

Private equity constitutes mainly three sources of entrepreneurial finance, which include venture capital, angel investors and corporate investments. Private equity funds only constitute a small percentage of the private equity market (Fenn, Liag, & Prowse, 1997)

Private equity has been growing rapidly over the last two decades (Fenn, Liag, & Prowse, 1997) This growth has been partly due to changes in regulatory measures that allow pension funds to invest in private equity.

Pension funds invest in private equity in order to diversify their portfolio. This is in order to broaden their exposure to different financial climates, while still seeking higher returns on their invested capital (Nielsen, 2008). Private equity returns have demonstrated low correlation to public equity and bond markets.

Despite the fact that trustees of pension funds rarely invest private equity, trends are currently changing. Pension fund consultants are paying more attention to private equity assets and managers, and trustees are looking to increase their knowledge regarding private equity investment (Nielsen, 2008) This trend is evident mainly due to international prominence of private equity investments, high internal rates of return quoted by private equity fund managers, desire on the part of trustees and consultants, and also influence by some members of the pension fund.

Private equity compared to public equity helps overcome free-rider problem in corporate control. Private equity goes along with controlled ownership in portfolio companies, thus generating sufficient incentives to undertake costly control activities (Beer & Nkhelo, 2008) This is due to the fact that private equity investors hold a large part of capital in the portfolio company. Thus, the investor is able to conduct continuous monitoring.

A pension firm can decide to invest in private equity maybe to increase the working capital base, Restructuring ownership and management of the pensions fund. Private equity has grown significantly over the past few years mainly due to financial globalization. Investors are more willing to invest in private equity in order to diversify their portfolio while seeking higher returns (Beer & Nkhelo, 2008)

2.4 Why Pension Funds Hesitate to Invest in Private Equity

Although private equity assets are not entirely new, trustees of pension funds are reluctant to invest their assets in it. This has been mostly due to lack of suitable performance data, concerns about liquidity and lack of understanding of private equity assets and investing.

Investment in private equity by pension funds requires regulation by various bodies. In Kenya, a pension fund first has to be regulated by the Retirement Benefits Authority in order to conduct business, which comes at a cost. The firm should also be regulated by the Commercial Bank of Kenya, as well as the Insurance regulatory authority, which also adds up to the costs. In order for the pension fund to invest in private equity, it has to be regulated by the Capital Markets Authority. All these regulations come as an added cost for the pension fund, as well as adding to the complexity of the management of the fund.

People prefer certainty as compared to uncertainty. Many avoid risk thus making them risk averse (Tversky & Kahneman, 1974). Pension fund trustees rarely risk their own money while making investments. Trustees invest using other peoples' money, and the question is whether they carry their risk preferences, which is averse, to their role as trustees. Given their role as being in charge of being in charge of the welfare of others, does this increase or decrease their preference for certainty?

There are also risks involved in investing in private equity, of which the trustees of pension funds may not be willing to deal with. Investment in private equity involves investing in assets that are not publicly listed. This fact makes investors reluctant since the stocks that are not listed publicly are less regulated as compared to stocks that are listed in the stock market.

Risks that investments in private equity are exposed to include:

i) Liquidity risk

For Investment in private equity, there may be a lack of investment alternatives due to lack of an organized secondary market. This brings about low liquidity or even illiquidity in the transfer of alternative asset ownership. This illiquidity risk brings about impossibility to transact at a given point in time with the occurrence of substantial cost.

Returns are based on the vintage year of the fund's inception. The capital is drawn down in the early years and returned later during the life of the fund.

Returns are usually negative in the early years, and then become positive as cash flow is generated in later years (Achleitner, Kaserer, & Wagner, 2005)

Since investment in private equity involves a long life span, of about ten years (Achleitner, Kaserer, & Wagner, 2005) also makes assets invested there illiquid. This is because the investor has to wait for the ten years for their investment to mature. Before the ten year period is over, it is close to impossible for the investor to get back their investments in terms of ready cash.

ii) Funding risk

Investment in private equity is costly as compared to other asset classes and this may cause some pension firms to shy away from investing in it may be due to limited resources (Driller & Jackel, 2015) .

A fee of up to 2% per annum is charged on committed capital and a further 20% of performance carried interest in the South African case. This cost of investment decreases returns from the fund by at least 6%. As funds mature, the costs become more significant. The existing fee structure may result in misalignment of interests of investors and managers.

iii) Market risk

The landscape of private equity in Sub-Saharan Africa is smaller as compared to that of other emerging economies such as Asia. There has been an increased investment appetite in the East African region. However, investment sizes in Africa, more so the Sub-Saharan region, remain small. Investment in private equity is also complicated due to the fact that expected returns are complex and obscure.

(Kathurima & Kipanga, 2013) Suggest that the Kenya market has also been affected by the market volatility in recent years. This has been partly contributed by the 2007/2008 post-election violence, and the Global economic crisis between 2008/2009., and the steep depreciation of the Kenya shilling in 2011. Investment of funds in private equity by pension firms was highly affected by this volatility (Mutuku, 2012)

iv) Capital risk

This is whereby the value of private equity investments can be affected by various factors such as the quality of the fund manager, equity market exposure, foreign exchange and interest rates.

CHAPTER THREE

METHODOLOGY

This chapter describes the research design and methodology used and the description of the population and the sample design that was used to carry out the study. The methodology used includes the research design selected, the population, sampling, data collection and analysis.

3.1 Research Design

The research design selected is an experimental methodology. (Robson & MarcCartan, 2016) Explains that a research design portrays an accurate profile of persons, events or situations. Surveys are conducted to establish the nature of the existing condition or situation. In experimental methodology, manipulation and controlled testing are used to understand casual processes. One or more variables are manipulated to determine their effect on a dependent variable.

This method is suitable in that it helps us gather information about why trustees shy away from private equity investments, and come up with the relationship between their characteristics and their investments decisions.

3.2 Target Population

Population defines the whole set of objects or events under investigation about which one wants to make inference (Cooper & Schindler, 2003)The target population is all the pension funds in Kenya that are registered with the Retirement Benefits Authority.

3.3 Sample

3.3.1 Sampling Frame

A sampling frame is an objective list of the population from which the researcher can make a selection (Descombe, 1998)The research will be conducted on all the registered pension schemes in Kenya.

3.3.2 Sampling Technique

The study adopted a random sampling method to select the schemes to be sampled. Random sampling gives a researcher a fair or representative view of the entire population. Random sampling also enables the researcher to have an in-depth study and insight on the topic being studied (Merriam, 2009). This technique is justified since the number of the total pension schemes in Kenya is known, and our aim is to determine how the trustees in these pension funds make investment decisions. Thus, the particular pension funds to be observed will be randomly determined.

3.3.3 Sample Size

The sample size of a statistical sample is the number of observations that constitute it and must be carefully selected to be a representative of the population.

The sample size includes all current trustees of pensions registered with the Retirement Benefits Authority.

3.4 Data Collection

Secondary qualitative data on trustee characteristics and rules regulating these trustees will be collected from the trustees themselves using questionnaires that will be distributed vial electric mail. Qualitative data regarding the requirements of one to be a sitting trustee in Kenya will be collected from the Retirement Benefits Authority website. Quantitate data regarding investments in private equity will be collected from the Retirements Benefits Authority website, as well as the Capital Markets Authority website.

The Retirement Benefits Authority and the Capital Markets Authority are reliable and are a cheaper source of data. Data from these websites is reliable because all fund managers are required to submit this data to these authorities, and these are the regulatory authorities in Kenya. Retirement Benefits Authority registers and regulates pension funds in Kenya, and the Capital Markets Authority registers and regulates private equity firms in Kenya.

3.5 Data Analysis

The data collected is to be analyzed using a vignette data tool, that will be used to evaluate whether trustees do not understand or do not see the need to invest. Various questions will be used to do this evaluation.

A logit regression will then be done against stable variables which include investment characteristics of trustees, members' characteristics and the characteristics of the fund itself.

3.5.1 Vignette data tool

(Nurs, 1996) Suggest that a vignette data tool is a simulation of real life events that can be used in research studies to elicit subjects' knowledge, attitudes or opinions according to how they state they would behave in the hypothetical situation depicted. A vignette data tool is advantageous in that:

- i) information can be collected simultaneously from a large number of subjects
- ii) manipulate a number of variables at once in a manner that would not be possible
- iii) Absence of observer effect
- iv) Avoidance of ethical dilemmas commonly encountered during observation

However, the vignette data tool would be disadvantageous in that it will be difficult to establish reliability and validity.

The aim of the vignette data tool is to evaluate whether trustees fear, do not understand or do not see the need to invest in private equity.

In a vignette study participants are issued with vignettes, short descriptions with specific information randomly manipulated by the researcher.

In this study, we intend to find out the characteristics of trustees, by randomly combining characteristics. The number of characteristics should be limited for ease.

In order to determine this, questionnaires were distributed to pension fund trustees. The questionnaires were sent via email, and the following is the questionnaire.

Prior to issuing the to the target trustees, a pilot study was conducted among selected individuals for testing by sending them the questionnaires, in order to determine biasness, ambiguity o questions, and the approximate time required to fill the questionnaires.

3.5.2 Logit regression

A logit regression model is a regression model whereby the dependent variable is categorical.

To estimate the pension fund trustees investment characteristics, we use a logit analysis. The logit regression is done against stable variables which may include:

- i. Age of fund
- ii. Portfolio constitution
- iii. Trustees' risk appetite
- iv. Trustees' level of knowledge
- v. Size of fund
- vi. The pension fund policies

The logit regression will be done using Stata.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This section will give a description of the data, and the findings derived from this data. Qualitative data was collected from trustees using google forms, whereby questionnaires were distributed. This was done with an aim to know the investment characteristics of trustees.

According to (P, Slager, Henkens, & Koedijk, 2010) pension fund trustees are assumed to carry their personal investment characteristics when making investment decisions from the fund. Thus, I assumed that the trustees' personal characteristics are reflected on their investment decisions.

4.2 Data Validity

The data was collected using questionnaires, which were distributed via electric mail, to Three hundred and fifty contacts. Other ten mails were also sent to contacts that I was referred to, who are currently serving as trustees.

The responses were one hundred and one, which would be suitable for my study's data analysis.

4.3 Data coding

Since the data collected from the trustees was quantitate data, I had to code it for it to be analyzable using Stata. I gave numeric to represent the data.

The data coded was of two types:

i) **Binary data**

This is whereby the data takes the values zero (0) or one (1).

Zero represents (No) and one represents (Yes)

ii) Non-binary dependent variables

These are variables which take values other than zero and one.

4.4 Data cleaning

Data cleaning was done in order to check for incompleteness and ambiguity. In case the data was not cleaned, the findings would not be authentic, and comprehensive.

In the first stage of data cleaning, the responses in which the respondents said they were not currently serving as pension fund trustees in Kenya were eliminated. This is because the study was targeting persons who are currently serving as pension fund trustees.

In the second data cleaning stage, responses which had blanks were eliminated. This was done in order to ensure that the results obtained from the study were conclusive.

In the third and last data cleaning stage, I checked for consistency. Responses which were not consistent were eliminated. This was checked using a control question, whereby the trustees' responses were not matching the schemes fund table.

After cleaning the data, the responses I was left with were seventy seven, which is also a viable size.

In the remaining data:

- i) All the responses were that they are currently serving as trustees
- ii) All the respondents have a Personal Investment Portfolio
- iii) All the respondents are working as trustees for companies that have Investment Portfolio Strategies

4.5 Data analysis

The data was analyzed using a logit regression model, which was run in Stata.

TABLE 1
Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
length_tru~e	76	2.065789	.6992477	1	3
type_trustee	76	2.171053	1.159174	1	4
mgtlevel_org	76	2.421053	.7530057	1	3
gender	76	1.302632	.4624496	1	2
agegroup	76	2.052632	.7098307	1	3
educnlevel	76	1.526316	.6423641	1	3
kOwledge_a~i	76	2.855263	.9480358	1	5
kOwledge_b~t	76	4.210526	.753937	2	5
kOwledge_e~n	76	3.789474	.8534759	1	5
kOwledge_f~e	76	3.855263	.9480358	1	5
kOwledge_r~k	76	4.394737	.5905692	3	5

This table represents the stable characteristics of the trustees.

The average length of period the trustees have been in that position is 3-6 years. This is in accordance with the requirement by the retirement benefits act (Retirement Benefits Authority, 2014).

Most of the trustees are member elected, and they fall under the middle level management. Other trustees from the study fall under the senior management level, and only a small percentage of the trustees fall under the technical non-management staff.

Trustees who are elected under the trust secretary tend to fall under the technical non-management staff, and have served for a period of lower than three years.

A greater percentage of the trustees are males, and most of them fall under the age group of 41 to 50 years.

A great percentage of the trustees have only acquired an undergraduate certificate, while smaller percentages have acquired the masters and doctoral degrees.

In the level of knowledge in various subjects, risk is the best understood as compared to other subjects. Business management is also well understood by the trustees. Trustees also understand Finance better as compared to economics, and actuarial science is the least understood subject among the stated disciplines.

TABLE 2
How do trustee characteristics affect their investment portfolios?

```
Iteration 0: log likelihood = -68.101327
Iteration 1: log likelihood = -54.034023
Iteration 2: log likelihood = -53.011832
Iteration 3: log likelihood = -52.994181
Iteration 4: log likelihood = -52.994175
Iteration 5: log likelihood = -52.994175
```

```
Ordered logistic regression      Number of obs =          76
                                LR chi2(9) =          30.21
                                Prob > chi2 =          0.0004
                                Pseudo R2 =          0.2218

Log likelihood = -52.994175
```

educnlevel	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
invtype_land	1.859636	.6305206	2.95	0.003	.6238379	3.095433
invtype_rates	1.709636	.5850401	2.92	0.003	.5629785	2.856293
invtype_listedshares	.6427967	.6527697	0.98	0.325	-.6366083	1.922202
invtype_onlistedshares	1.38102	.663281	2.08	0.037	.0810128	2.681027
invtype_gvtsec	.4261063	1.118407	0.38	0.703	-1.765932	2.618145
invtype_fixeddep	1.509705	.6196825	2.44	0.015	.2951499	2.724261
invtype_endowment	.8813651	.5804483	1.52	0.129	-.2562926	2.019023
invtype_unitttrust	.4144405	1.746197	0.24	0.812	-3.008044	3.836925
invtype_others	-.9480359	1.179684	-0.80	0.422	-3.260174	1.364102
/cut1	4.030683	.9450366			2.178446	5.882921
/cut2	7.166101	1.267661			4.681531	9.650671

This table shows how the education level of trustees affects their investment portfolios. From the table, the trustees' level of education affects their investment decisions in Land, Real estates, Fixed deposit and investment in shares of a company not listed on the stock market. From the study, trustees who have acquired higher education levels tend to be older, and tend to be more willing to invest in riskier assets.

However, the results show that the gender of the trustees, and the age of the trustees do not directly affect the trustees, investment portfolio.

TABLE 3
Trustees' Investment goal

```
Iteration 0: log likelihood = -99.955557
Iteration 1: log likelihood = -88.348717
Iteration 2: log likelihood = -87.248609
Iteration 3: log likelihood = -87.240575
Iteration 4: log likelihood = -87.240573
```

```
Ordered logistic regression          Number of obs =          76
LR chi2(6) =          25.43
Prob > chi2 =          0.0003
Pseudo R2 =          0.1272

Log likelihood = -87.240573
```

investment_goal	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
invest10m_govtbonds	.5699132	.2621976	2.17	0.030	.0560154 1.083811
invest10m_corporatebonds	-.1988114	.3035182	-0.66	0.512	-.7936962 .3960734
invest10m_unlistedcompany	.6340133	.3861581	1.64	0.101	-.1228427 1.390869
invest10m_listedcompany	-.0441311	.3493117	-0.13	0.899	-.7287694 .6405071
invest10m_moneymarket	-1.130719	.3239262	-3.49	0.000	-1.765602 -.4958349
invest10m_foreignsecurities	1.470903	.429707	3.42	0.001	.6286933 2.313114

This table shows how the invest goal of the trustees would affect potential investment opportunities. A greater percentage of the trustees indicated that their investment goal is to see moderate growth with some variability in interest income and reasonable exposure to loss. The trustees' investment goal will greatly affect their investment in money markets and foreign securities. Trustees whose investment goal is very high growth are more willing to invest in Real Estates and Foreign Securities, which have a relatively high risk.

TABLE 4
Scheme Characteristics

Iteration 0: log likelihood = -89.515777
 Iteration 1: log likelihood = -84.532169
 Iteration 2: log likelihood = -84.482803
 Iteration 3: log likelihood = -84.482739
 Iteration 4: log likelihood = -84.482739

Ordered logistic regression	Number of obs	=	76
	LR chi2(7)	=	10.07
	Prob > chi2	=	0.1849
Log likelihood = -84.482739	Pseudo R2	=	0.0562

scheme_fundvalue	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
schemefunds_govtbonds	-.3789665	.2453578	-1.54	0.122	-.8598589	.101926
schemefunds_realestate	.6455445	.3856632	1.67	0.094	-.1103415	1.401431
schemefunds_unlistedcompany	-.2990567	.37899	-0.79	0.430	-1.041864	.4437501
schemefunds_moneymkt	-.0305566	.2950439	-0.10	0.918	-.608832	.5477189
schemefunds_foreignsecurities	-.2277794	.4062376	-0.56	0.575	-1.02399	.5684316
schemefunds_corporatebonds	-.4460641	.3463748	-1.29	0.198	-1.124946	.232818
schemefunds_listedcompany	-.2640958	.3430061	-0.77	0.441	-.9363755	.4081838
/cut1	-6.576294	1.499474			-9.515208	-3.63738
/cut2	-3.751025	1.282122			-6.263938	-1.238112
/cut3	-2.052999	1.218832			-4.441867	.335868

This table shows how the fund value affects investments in various sectors by the fund. The value of the fund greatly affects the fund's investment in Real Estates, which is a high risky venture.

From the results, the age of the fund and the type of the fund, do not greatly affect the investment decisions made by the fund. A great percentage of the fund which falls under the study were defined contributions funds.

From the analysis, most of the smaller funds tend to invest more than forty percent of their assets in government bonds. This is in accordance with the (Retirement Benefits Authority, 2014) which allows them to invest up to 80% of their assets in government bonds.

TABLE 5

Investment in Real Estates and shares of a company not listed on the stock exchange.

Variable	Obs	Mean	Std. Dev.	Min	Max
schem-e_ctrl	76	.3157895	.4679181	0	1
schem-y_ctrl	76	.3157895	.4679181	0	1
reasons_0t-t	51	2.098039	.9001089	1	3

This table shows a summary of the pension funds which have invested in real estates and shares of a company not listed on the stock exchange.

51 of the respondents indicated that their pension funds do not invest in these areas, due to lack of funds, advice by financial advisors not to do so, or the high risky nature of investments in these areas. Only 25 of the respondents indicated that their pension funds invest in these areas.

5. DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section will give a description of the data, interpretation and conclusion of the research results.

The aim of the study was to determine why trustees of pension funds do not invest in private equity, by determining whether trustees fear, do not understand or do not see the need to invest in private equity.

5.2 Discussions

The sample constituted of trustees of pension funds in Kenya. The data collected was qualitative in nature, but was coded in order to ease analysis. Out of the one hundred and one responses received, only seventy six were used in the analysis due to data screening.

From the results of the data analysis, all trustees have attended the Kenyan Trustee Training Program and all the funds have an Investment portfolio Strategy. This is in compliance with what provided by the Retirement benefits act. According to the Retirement Benefits Authority, all trustees should attend the Trustee Training Program of Kenya, in order for them to be eligible to serve as a trustee.

The results indicate that larger pension funds, which have been in existence for longer periods, of above fifteen years, are more likely to invest in riskier assets which include foreign securities, Real Estates, and shares of a company not listed on the stock exchange. Smaller funds are more likely to invest in less risky areas such as government bonds.

Most pension funds rely on the advice of financial experts, and not solely the expertise of the trustees, when making investment decisions.

4.3 Conclusions

From the analysis, I concluded that pension funds mainly do not invest in high risky areas, due to the fund characteristics, which may not allow them to invest in high risky areas. The characteristics of the trustees also influence the decisions made when investing the funds' assets in various ventures, but not entirely.

Due to the fact that schemes which have been in existence for longer periods tend to invest more in riskier assets, then it would be possible for the smaller younger funds to consider investing in these areas in the future.

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APPENDICES

QUESTIONNAIRE

SECTION ONE: INTRODUCTION

SURVEY ON PENSION FUND TRUSTEES INVESTMENT DECISION MAKING

Thank you for taking your time to participate in this survey.

My name is Petronillah, a fourth year student at Strathmore University undertaking a Bachelor of Business degree in Actuarial Sciences.

I am conducting a survey on investment personalities of trustees of retirement benefits plans registered under the Retirement Benefits Authority of Kenya.

The survey consists of five sections with 29 questions. It should take about 25 minutes to complete.

I will use the information that you provide by completing the questionnaire strictly for research purposes.

Thank you once again.

SECTION TWO: ABOUT YOU

A brief description about you and your role as a trustee

1. Are you currently serving as a trustee of a retirement benefits scheme registered under the Retirement Benefits Authority of Kenya?
 - Yes
 - No

2. How long have you been a trustee of the scheme?

- Less than three years
- 3 – 6 years
- Over six years

3. Under what category of trustees do you fall?

- Member elected trustee
- Sponsor nominated trustee
- Corporate trustee
- Other(please specify)

4. Which level of management do you hold in the sponsor organization* of the scheme?

(*The sponsor organization refers to the employer that sets up the retirement plan for the benefit of the organizations' employees)

- Lower level management
- Middle level management
- Senior level management
- Technical on-management staff
- Other (please specify)

5. What is your gender?

- Male
- Female

6. Which age group do you fall under?

- 18 – 30 years
- 31 – 40 years
- 41 – 50 years
- 50 and above years

7. What is the highest level of education achievement?

- Kenya Certificate of Primary Education (KCPE)
- Kenya Certificate of Secondary Education(KCSE)/General Certificate Education(GCE)
- University undergraduate certificate
- Master's degree award
- Doctoral Degree award
- I have no formal education

8. Have you attended the trustee development program of Kenya?

- Yes
- No

9. How would you grade your understanding of the following subjects?

Subject	Excellent	Good	Average	Fair	Poor
Actuarial Science					
Business Management					
Economics					
Finance					
Risk					

10. How familiar are you with investment matters?

- Not familiar at all with investments and feel uncomfortable with the complexity
- Not very familiar when it comes to investment. I rely on recommendation from friends and public opinion

- Somewhat familiar: I don't fully understand investments, including the share markets
- Fairly familiar: I understand the various factors which influence investment performance
- Very familiar: I use research and other investment information to make investment decisions

11. What is your definition of risk?

- Exposure to loss
- Uncertainty of return
- Uncertainty of loss or drop in value

SECTION THREE: IDENTIFYING YOUR INVESTMENT PROFILE

12. Do you currently have a personal investment portfolio*?

(*An investment portfolio refers to assets that you own with an expectation of earning some return such as land, real estate, shares bonds etc.)

- Yes
- No

13. Currently, do you own any of the following investments?(Tick where applicable)

- Land
- Real Estate
- Shares of a company listed in the stock exchange
- Shares of a company not listed on the stock exchange
- Government securities(Treasury bills and bonds)

- Fixed deposit account
- Endowment fund
- Derivatives securities
- None of the above
- Other (please specify)

14. Which statement best describes your investment goal?

- Preferably guaranteed interest income which avoids losing money
- Small stable, reliable interest income, with minimal exposure to loss
- Moderate growth with some variability in interest income and reasonable exposure to loss
- Above average growth with Moderate variability in interest income and reasonable exposure to risk
- Very high growth with unstable but potentially higher interest income and higher exposure to loss

15. Which of these statements would best describe your attitudes about the next three years' performance of investment?

- I don't mind if I lose money
- I can tolerate a small loss
- I'd have a hard time tolerating any losses
- I need to see at least a little return

16. If the value of your investments fell to 50% over the next 12 months would you:
(If your portfolio has experienced a drop like this, choose the answer that corresponds to your likely behavior)

- Sell all the remaining investment
- Sell a portion of the remaining investment
- Hold your investments and sell nothing, expecting conditions to improve
- Invest more funds. You can tolerate short term losses in expectation of future growth

17. Now imagine you have a choice between choosing two different lotteries. After listening to two choices, tell me which one you prefer. Lottery 1: If you win, you get 3000 KES. If you lose, you get 2000 KES. Lottery 2: If you win, you get 5000 KES. If you lose, you get 1000 KES.

- Lottery 1
- Lottery 2

18. Now imagine you have a choice between two different prizes. After listening to two choices, tell me which one you prefer to receive. Option A: 5,000 KES now
Option B: 6,000 KES in 1 month

- Option A
- Option B

19. If you had Kshs.10 million to invest today, please indicate what proportion of the money you would allocate to each of the following types of investments, assuming each investment is independent from the others

Investments	0%	1% - 20%	21% - 40%	41%-60%	61% - 80%	81% - 100%
Land						
Real Estate						
Agricultural Ventures						
Government bonds						
Corporate bonds						

Shares in a private unlisted company						
Shares in a listed company						
Money Markets						
Overseas financial products						

SECTION FOUR: ABOUT THE SCHEME

20. What is the type of the retirement benefit scheme for which you serve as trustee?

- Defined benefit
- Defined contribution
- Provident fund
- I am not sure
- Other (please specify)

21. What is the total fund value of the scheme?

- 0 – 100 million Kshs
- 101 – 500 million Kshs
- 501 million – 1 Billion Kshs
- Above 1 billion Kshs
- I do not know

22. How long has the scheme been in existence?

- 0 – 5 years

- 6 – 10 years
- 11 – 15 years
- 16 – 20 years
- Greater than 20 years

23. Does your scheme have an investment policy statement?

- Yes
- No
- I would not know

24. Which of the following reflects the investment management of the scheme's funds:

- We invest all the funds in Government Securities
- We engage professional fund managers to invest all our funds with a guaranteed minimum return
- We engage professional fund managers to invest all our funds with no guaranteed minimum return
- We engage professional fund managers and have part of the funds with guaranteed return
- We invest on our own based on trustees' expertise
- We do not actively invest the funds; they are left in the custodian account

25. From the following investment sectors, what percentages has the fund invested in each?

Investment	0%	1% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Government bonds						
Real estate						
Shares in a private unlisted						

company						
Money markets						
Foreign securities						
Corporate bonds						
Shares in a listed company						

SECTION FIVE: REASONS WHY

26. I) Has your fund invested in:

1. Real Estate

- Yes
- No

27. b) Shares of a company not listed in the stock exchange?

- Yes
- No

28. ii) If no, why do you shy away?

- Too risky
- Lack of funds
- Advised not to do so by investment advisors
- We are not permitted by the Retirements Benefits Authority
-

SECTION SIX: THE END

Thank you very much for your participation. Would you have any comments or feedback?

29. Comments or feedback