

Influence of Financial Control on the Sustainability of Pension Funds Administrative Institutions in Kenya

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ABSTRACT: This study sought to investigate the influence of financial control practices on the sustainability of pension funds administrative institutions (PFAIs) in Kenya. The study adopted a correlational research design with a target population of 85 PFAIs operating in Kenya from 2008 to 2016. Stratified sampling technique was used to select the sample size and a sample size of 70 PFAIs was drawn from the target population using Slovin's formula. The study utilized both primary and secondary data with the primary data collected using structured questionnaire and data was analysed using descriptive and inferential statistics in SPSS version 20.0. The reliability test of the instrument was tested by using Cronbach alpha. The findings of the study shows that financial control practices positively and significantly influences the financial sustainability of PFAIs in Kenya ($r^2 = 0.267$; $\beta = 0.415$; $p < 0.05$). This implies that 26.7% of the variations in financial sustainability observed in PFAIs is explained by financial control practices and for every unit increase in financial control leads to 0.415 increase in financial sustainability of PFAIs in Kenya. It is therefore recommended that PFAIs' management should consistently review policies that enhance regular preparations of proper accounting records and financial report and always ensure effective utilization of financial manuals so as to promote PFAIs' financial sustainability.

KEY WORDS: Sustainability, Pension funds administrative institutions, financial control practices.

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I. INTRODUCTION

Sound financial control is key to promoting financial sustainability of an institution. Hayles (2005) reports that a sound financial control system contributes towards safeguarding the stakeholders' investment and the institution's assets, facilitate effectiveness and efficiency of operations, ensures reliability of internal and external financial reporting and assist in compliance with laws and regulations. Alliset al., (2004) reports that financial resource is an important resource to many institutions and establishments. This means that it must be effectively and efficiently managed to bring about the needed change and results from the activity for which the funds have been made available. However, sometimes this important resource is mismanaged and misappropriated by those put in charge (Rosen & Gayer, 2010).

Pension funds plays an important part in provision of adequate income in retirement and also manages large asset and liability bases, thus they should be managed efficiently and effectively, as well as in the interest of their beneficiaries and sponsors (Kemp & Patel, 2011). The absence of adequate financial control measures exposes the financial management of pension funds to certain threats such as incorrect financial statements, loss of assets, mismanagement of vital documents, incorrect and unreliable financial records which may lead to loss of pension fund integrity, and implementation of accounting policies inconsistent with the applicable legislation. Whitehouse (2000) reports that sustainability comprises financial sustainability, adequate management, planning, and policy making. According to Odundo (2003) Kenya has several types of schemes offering social security including public schemes, occupational schemes and individual schemes. It has however been argued that pension schemes in Kenya are poorly managed and hence do not use minimal resources (Ambachtsheer, 2011). Mutuku (2007) indicates that among the problems faced by pension industry in Kenya is high service providers' expenses, inadequate returns, inability to meet pension promise requirements and the need for credible fund manager performance. Weak financial management practices may lead to pension funds failure to deliver adequate retirement benefits and may also expose them to financial abuse. Financial management duties in pension funds relates to funding management, investment management, financial controls and accountability, financial reporting and monitoring that should enhance the growth of assets and improve investment returns for members and sustainability of their institutions. This paper therefore evaluates the influence of financial control

on the sustainability of pension funds administrative institutions in Kenya with aim of advising on its contribution to their sustainability.

II. METHODOLOGY

1.1 Research design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose (Kothari & Garg, 2014). This study used correlational research design involving a quantitative method of research with two or more quantitative variables from the same group of subjects, from which a relationship was determined (or covariation) between the variables. This design was adopted so as to determine both the direction relationships among variables and also the relationships between different variables. Theoretically, any two quantitative variables can be correlated as long as there are scores on these variables from the same participants(Baumgartner et al., 2002). Mugenda and Mugenda (2003) and Kothari (2004) explain that a correlational research is used to explore the relationship between variables and this is consistent with this study which seeks to establish the relationship between financial management practices on sustainability of pension funds administrative institutions.

1.2 Target population

Population is a large collection of individuals or objects that is the main focus of a scientific query. A population also refers to an entire group of individuals, events or objects having a common observable characteristic. Zikmund et al.,(2010) defines population as all items in any field of inquiry, also known as the universe. The target population is asserted to be the entire set of units to which the study findings will be generalized (Levy & Lemeshow, 2013). This study comprised of 85 pension funds administrators in Kenya as at December 2016 from which the target and accessible population was drawn. According to RBA (2017), there were 54 internal pension funds administrators (in-house) and 31 registered fund administrators in Kenya which was also be the accessible population in this study as shown in table 1.

Table 1: Target Population

Description	Number
In-house	54
Outsourced	31
Total	85

Source: RBA Data 2016

1.3 Sample and sampling technique

A sample design is the architecture or the strategy used to select study participants or respondents (Kothari, 2004). Sampling refers to the systematic selection of a limited number of elements out of a theoretically specified population of elements. The rationale is to draw conclusions about the entire population. According to Kothari (2004), the ultimate test of a sample design is how well it represents the characteristics of the population it purports to.

This study used a combination of stratified and simple random sampling method on all the pension funds administrative institutions. Stratified random sampling was used in each category of funds administrators to group respondents into two strata. The strata were that of in-house and externally out-sourced pension funds administrators operating in Kenya. Within each of the two strata simple random sampling was done to identify individual respondents who were issued with a questionnaire to respond to research statements. Kothari (2004) supports random sampling as it satisfies the law of statistical regularity if a sample is chosen at random, on average it has the same characteristics and composition as the population.

2.4 Sample size

Sampling is the selection of a subset of individuals from within a population to yield some knowledge about the whole population, especially for the purposes of making predictions based on statistical inference (Black, 2011). The advantages of sampling are cost, speed, accuracy and quality of the data (Ader et al.,2008). The sampling process comprises of defining the population, sampling frame, sampling method, sample size and sample plan (Lavrakas, 2008).

Cooper and Schindler (2007) recommends that a sample can be drawn from a sampling frame using a formula for determining appropriate sample from a small population. This study adopted a stratified sampling technique to select the sample size of 70 from the internal and external funds administrators from the sampling frame as at 31st December 2016. If a population from which a sample is to be drawn does not constitute a homogeneous group, stratified sampling technique is generally applied in order to obtain a representative sample (Kothari, 2004).The sample respondents were selected randomly by the researcher on the basis that the sample units selected out of the sample size was typical or representative of the whole (Kothari & Garg, 2014). In

determining the sample size, Slovin’s formula was used to calculate the sample size (at 95% confidence level and $\alpha = 0.05$) as indicated on Equation 1.

$$n = \frac{N}{(1+N e^2)} \dots \dots \dots \text{Equation 1}$$

Where, n = is the desired sample size
 N = is the population size
 e = margin of error (at 95% confidence level).

Simple random sampling was then used to select the sample sizes from each stratum so as to increase the samples’ statistical efficiency. Table 2 shows the sample sizes and sample distribution from the strata. The sample size of 70 constituted 82.35% of the target population which was adequate based on the recommendation by Kothari (2004) and Creswell (2007) who assert that a sample of at least 10% to 15% is able to lead to meaningful generalizations about the general characteristics of a study population. The target sample size was distributed within the 85 pension funds administrative institutions in the two strata using the study population ratio representation. This ensured that sample distribution is unbiased and balanced.

Table 2: Sample size and sample distribution

Description	Target population	Sample size
In-house FAs	54	44
Outsourced FAs	31	26
Total	85	70

Source: Survey data, 2018

2.5 Data collection

Both primary and secondary data were collected for the purpose of this study. Primary data was collected using semi-structured questionnaire which comprised of both open and closed ended questions. This study also utilized secondary data from published reports and financial statements of the pension funds collected from the PFAIs’ Website, RBA, and pension schemes.

2.5.1 Primary Data

The primary data was collected using semi-structured questionnaire which comprised of both open and closed ended questions. Questionnaires are uniform and standardized and are less susceptible to biases due to deviations from instructions and method of administration are generally less costly, less time consuming, and considerably less demanding with respect to such matters such as selection, training, and supervision of personnel (Cooper and Schindler, 2003). A questionnaire is more preferred by respondents due to anonymity. In the current study, the questionnaire was based on a 5-point Likert scale. This scale was used to quantify responses on items in the questionnaires. The 5-point Likert scale was thus adopted for the predictor and the predicted variables so as to ensure that respondents make a definite choice rather than an inclination to a neutral response. Kothari & Garg (2014) defines a questionnaire as a document that consists of a number of questions printed or typed in a definite order on a form or set of forms, sent to persons concerned with a request to answer the questions and return the questionnaire.

According to Dawson (2002), there are three basic types of questionnaires; closed ended, open-ended or a combination of both. Closed-ended questionnaires are used to generate statistics in quantitative research while open-ended questionnaires are used in qualitative research, although some researchers will quantify the answers during the analysis stage. Obtaining data from participants with different methods and experience will help prevent information bias thus, increasing credibility regarding the information collection (Louis et al., 2007). Sasaka et al.,(2014) showed that self-administered questionnaires are usually preferred for purposes of developing close relationship with the respondents and also assists in providing clarifications sought by respondents on the spot. The questions were formulated to address all the objectives of the study and consisted of three parts: Part A focused on the respondent’s demographics and part B assessed the measures of the relationship between pension funds financial practices and sustainability of PFAIs.

2.5.2 Secondary Data

This study also utilized secondary data from published reports and financial statements of the pension funds collected from the PFAIs’ Website, RBA, and pension schemes. The study reviewed secondary data for pension funds for eight (8) years from 2008 to 2016. Secondary data included total contributions, net assets available for benefits, investment returns, schemes expenditure, administrative expenses, number of active contributors and related pension funds information This data was used was used to compute the expenses ratios

and trends related to performance and growth of pension funds for assessment of sustainability of PFAIs. Secondary data was used to complement information from the primary sources (Zikmund, et al., 2010).

2.6 Data collection procedure

Data was collected through administration of questionnaires in which the researcher distributed the questionnaires in person to the institutions identified for the study. The unit of analysis for this study was the fund administrator. The questionnaires were self-administered to participants who included administrators, accountants, senior managers or chief administration managers working under the administrator with delegated authority. The questionnaires were first dropped with an introductory letter of authority to carry out research to the institutions identified for the study and follow up was done through telephone and personal visits to secure appointment dates for collection of the filed questionnaires.

2.6 Pilot testing

A pilot test is done to ascertain the reliability and validity of the instrument to be used for collecting data essentially to reveal the weakness that may be in the questionnaire, for instance unclear directions, ambiguous questions and general layout. Duncan et al., (2015) confirms that a pilot study helps in assessing the feasibility of the study; designing a research protocol and assessing whether it is realistic; establishing the effectiveness of the sampling frame and technique; identifying logistical problems that might occur with the proposed methodology; determining resources required for the planned study for assessment of the proposed data analysis techniques to uncover potential problems

The questionnaire was pre-tested on selected PFAIs before the study started. It was essential to pre-test the questionnaire so as to increase the validity and reliability to identify any ambiguous questions in the questionnaire to establish the range of possible responses for each question. Adjustments were made based on the outcome of the pre-test results. Seven questionnaires were used for pilot study. According to Creswell (2003) and Cooper and Schindler (2011) the respondents used in pilot test should constitute 10 percent of the sample used in data collection.

2.7 Validity of the instruments

Validity refers to the degree to which a test actually measures the variables that it is meant to measure (Recker, 2012). According to Kothari & Garg (2014) validity is the degree to which results obtained from the analysis of data actually represent the phenomenon under study. According to Mugenda and Mugenda (2003), validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. This study utilised both construct validity and content validity. For construct validity, the questionnaire is divided into several sections to ensure that each section assesses information for a specific objective, and also ensures the same was guided by the conceptual framework for the study (Cooper & Schindler, 2011). Validity of the questionnaire was initially tested by reviewing it with my supervisors. The questionnaire was also validated by discussing it with two randomly selected managers of the target administrative institutions whose views were evaluated and incorporated to enhance content validity of the questionnaire.

2.8 Reliability of instruments

Reliability is the extent to which an instrument is predictable, accurate and dependable to yield the same results every time it is administered (Kothari & Garg, 2014). Cronbach's alpha was used to test the reliability of the measures in the questionnaire (Cronbach, 1951). On testing the reliability of the instrument, 10% of the sample size was used as recommended by Sekaran (2003) and Kothari (2004) who stated that 5% to 10% of the sample could be adequate for running reliability tests. The reliability of the questionnaire was tested using the Cronbach's Alpha in Statistical Package for Social Sciences (SPSS) software. According to Cronbach (1951) and Sekaran (2003) the closer Cronbach's alpha coefficient is to 1, the higher the internal consistency of reliability. Cronbach (1951) as cited in Sekaran (2003) recommend Cronbach coefficient of 0.7 for a newly developed questionnaire.

2.9 Diagnostic Tests

It was essential to ensure non-violations of the assumptions of the classical linear regression model (CLRM) before attempting to estimate equation. Estimating these equations when the assumptions of the linear regression are violated runs the risk of obtaining biased, inefficient, and inconsistent parameter estimates (Brooks, 2008). Normality test, sampling adequacy, multicollinearity, and autocorrelation tests were used as diagnostic tests during this study.

2.10 Data analysis and presentation

Data was analyzed using both descriptive and inferential statistics in SPSS. Descriptive measures such as percentages and frequencies were used to draw inferences and make conclusions. Inferential analysis was done by use of Pearson’s correlation to determine the strength of the relationship between the variables and linear regression to establish the form of the relationship. The information were represented using tables.

2.11 Statistical measurement model

The following linear regression analysis model was used to guide the study:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

Where;

Y represents financial sustainability of PFAIs (Dependent variable),

X₁ represents financial control practices,

β₀, β₁, are regression coefficients to be estimated.

ε is the error term.

Analysis of variance (ANOVA) was used to test the significance of the overall model at 95% level of significance. Coefficient of correlation (R) was used to determine the strength of the relationship between the dependent and independent variables. Coefficient of determination (R²) was also used to show the percentage for which the independent explained the change in the dependent variable. The benchmark for this study for accepting or rejecting the null hypothesis was a level of significance of 5 percent. If the p-value was less than five percent, the null hypothesis was rejected and the alternate hypothesis was accepted. Also if the p-value was greater than 5 percent the null hypothesis was accepted and the alternate hypothesis was rejected.

III. FINDINGS AND DISCUSSION

3.1 Sample characteristics

The study sought to determine respondent’s demographic characteristics including their gender, education levels, designation, experience, type of pension administered, period taken to pay benefit claims and administrative services rendered as elaborated in table 3.

Table 3: Sample characteristics

Demographic characteristics	Frequency	% Response
Gender		
Male	34	56.7
Female	26	43.3
Level of education		
Diploma	3	5
Undergraduate Degree	34	56.7
Master Degree	23	38.3
Designation of the Respondents		
Chief Funds manager	8	13.3
Senior admin	15	25.0
Administrator	25	41.7
Business Development and Consulting	1	1.7
Manager pensions	2	3.3
Supervisor	1	1.7
Accountant	6	10.0
Actuarial analyst	1	1.7
Relationship manager	1	1.7
Chief Funds manager	8	13.3
Senior admin	15	25.0
Experience of the Respondents		
Less than 5 years	13	21.7
6-10 years	28	46.7
over 10 years	19	31.7
Types of Pension Schemes Administered		
Contributory	59	98.3
Contributory+ Non-Contributory	1	1.7
Period Taken To Pay Benefits Claims		
1-10 days	21	35.0
11-20 days	17	28.3
21-30 days	20	33.3
Over 30 days	2	3.3
Type of Administrative Services Rendered	Self-administered - 61.7%) Externally administered - 38.3%	

3.2 Descriptive and qualitative analysis on sustainability of PFAIs

In order to determine whether financial control practices had improved sustainability of PFAIs, the respondents were requested to indicate the importance of measures of sustainability for the study. The responses were rated on a five point Likert scale where: 1-least important, 2-Not important, 3- Somehow important, 4- Important, 5-Very important.

3.2.1 Descriptive statistics

Sustainability was assessed by two measures namely, operational sustainability and financial sustainability. Descriptive data shown on Table 4 presents the relevant results. Responses on sustainability attracted various responses from the respondents. From the study findings, the pension funds had consistently been realising increasing investment returns (Mean = 4.15), schemes had consistent improvement in performance of services providers (Mean = 4.15), the pension funds had increasingly complied with relevant financial reporting framework (Mean = 4.0833) and the PFAIS had been experienced decreasing administrative cost in the past (Mean = 4.0333). Majority of the respondents agreed (mean = 4) that all the four factors were considered as appropriate measures of sustainability of PFAIs in Kenya.

Table 4: Descriptive statistics on sustainability of PFAIs

	N	Mini	Max	Mean	Std.Dev
1. Our institution has been experiencing decreasing administrative cost in the past	60	2.00	5.00	4.0333	.82270
2. The pension funds have consistently been realising increasing investment returns	60	2.00	5.00	4.1500	.79883
3. There has been consistent improvement in performance of services providers in the pension funds	60	3.00	5.00	4.1500	.65935
4. Pension funds have increasingly complied with relevant financial reporting framework	60	1.00	5.00	4.0833	.73857
Key: 1= very low extent, 2=Low extent, 3 = Somehow, 4 = Great extent, 5 = Very great extent.					

3.2.2 Sampling Adequacy for sustainability

To examine whether the data collected on sustainability was adequate and appropriate for inferential statistical tests such as the factor analysis, regression analysis and other statistical tests, two main tests were performed namely; Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett’s Test of Sphericity. For a data set to be regarded as adequate and appropriate for statistical analysis, the value of KMO should be greater than 0.5 (Field, 2000) as summarized in Table 5.

The findings showed that the KMO statistic was 0.676 which was significantly high; that is greater than the critical level of significance of the test which was set at 0.5 (Field, 2000). In addition to the KMO test, the Bartlett’s Test of Sphericity was also highly significant (Chi-square = 27.202 with 6 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Table 5: Sampling adequacy for sustainability KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.676
Bartlett's Test of Sphericity	Approx. Chi-Square	27.202
	df	6
	Sig.	.000

3.2.3 Factor Analysis on Sustainability of PFAIs

Factor analysis is used to produce a small number of factors from a large number of variables which is capable of explaining the observed variance in the larger number of variables (Theuri et al., 2015). According to Bartholomew et al., (2011), factor analysis works on the fact that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality. The broad purpose of factor analysis is to summarize data so that relationships and patterns can easily be interpreted and understood. It is normally used to regroup variables into a limited set of clusters based on shared variance (Yong & Pearce, 2013). Table 6 shows the variance explained for sustainability which is the dependent variable where constructs were subjected to a variance test through the principal component analysis test for data reduction and interpretation of the data.

Sustainability was assessed by two measures namely; operational sustainability and financial sustainability and four constructs were tested for factor analysis. Factor analysis was conducted after successful testing of sampling adequacy and reliability using KMO coefficient and Cronbach alpha results. The extraction of the factors followed the Kaiser Criterion where an Eigen value of 1 or more indicates a unique factor. Total Variance analysis indicates that the 4 statements on sustainability can be factored into 1 factor. The component identified to have the highest influence was the consistent improvement in the performance of services providers which had Eigenvalue greater than 1 and explained 52.61 % in this construct. This was therefore used as a main factor explaining more on sustainability of PFAIs in Kenya.

Table 6: Total variance explained on sustainability

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.105	52.613	52.613	2.105	52.613	52.613
2	.805	20.131	72.744			
3	.674	16.855	89.599			
4	.416	10.401	100.000			

Extraction Method: Principal Component Analysis.
Source: Survey data, 2018

Table 7 shows the factor loadings for sustainability statements on rotated component matrix. All the four factors attracted had coefficients of more than 0.4 hence all the statements were retained for analysis. According to Rahn (2010) and Zandi (2006) a factor loading equal to or greater than 0.4 is considered adequate. This is further supported by Rusuli et al. (2013) who asserts that a factor loading of 0.4 has good factor stability and deemed to lead to desirable and acceptable solutions.

Table 7: Rotated component matrix on sustainability of PFAIs

		Component
		Financial sustainability
1.	Decreasing administrative cost	.695
2.	Increasing investment returns	.787
3.	Improved performance of services providers	.795
4.	Compliance with financial reporting framework	.608
Extraction Method: Principal Component Analysis.		
a. 1 components extracted.		

Source: Survey data, 2018

3.3 Descriptive and qualitative analysis on Financial Control Practices

3.3.1 Descriptive Statistics

Financial control practice was assessed by two measures namely internal control and risk management systems and control of services providers. Descriptive data shown on table 8 presents the relevant results on a scale of 1 to 5 (where 5 = Very great extent and 1 = very low extent). The incorporation of financial control practice was measured using eight statements on a Likert scale. From the study findings, majority of the respondents agreed that; the schemes prepared proper accounting records and financial reports (mean = 4.5667), the schemes maintained secure information technology (ICT) systems (mean = 4.3500), the schemes effectively used finance manuals (mean = 4.3167), the schemes consistently monitored effectiveness of internal control and risk management systems (mean = 4.3000), the schemes reliably outsourced specialized management functions (mean = 4.1500), the schemes regularly monitored performance of services providers (mean = 4.0667), the schemes offered timely relevant statutory financial training/education to all stakeholders (mean = 4.0333) and the schemes adhered to the provision conflict of interest policy (mean = 3.6833). Results therefore indicated that most of the respondents agreed (mean = 4) on the incorporation of financial control practice in the management of pension funds. The results were in agreement with Owino (2015) study which found that there existed a positive relationship between management competence and firm performance. Further, Muriuki (2010) observed that governance had enormous effects on firm performance. The study is also supported by findings of study by Mutula (2018) that found out that management competence influences pension fund investment performance.

Table 8: Descriptive statistics on financial control practice

	N	Min	Max	Mean	Std Dev
1. The schemes consistently monitors effectiveness of internal control and risk management systems	60	2.00	5.00	4.3000	.80885
2. The schemes reliably outsources specialized management functions	60	2.00	5.00	4.1500	.84020
3. The schemes regularly monitors performance of service providers	60	2.00	5.00	4.0667	.75614
4. The schemes adheres to the provision conflict of interest policy	60	1.00	5.00	3.6833	.94764
5. The schemes prepares proper accounting records and financial reports	60	2.00	5.00	4.0333	.78041
6. The schemes effectively uses finance manuals	60	2.00	5.00	4.5667	.59280
7. The schemes offers timely relevant statutory financial training/education to all stakeholders	60	1.00	5.00	4.3167	.89237
8. The schemes maintain secure information technology(ICT) systems	60	2.00	5.00	4.3500	.81978

Key: 1= very low extent, 2=Low extent, 3 = Somehow, 4 = Great extent, 5 = Very great extent.

Source: Survey data, 2018

3.3.2 Sampling Adequacy on Financial Control Practice

Table 9 shows the results in the sampling adequacy for financial control practices. Findings showed that the KMO statistic was 0.752 which was significantly high; that is greater than the critical level of significance of the test which was set at 0.5 (Field, 2000). In addition to the KMO test, the Bartlett’s Test of Sphericity was also highly significant (Chi-square = 158.905 with 28 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Table 9:Sampling Adequacy on financial control practice

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.752
Bartlett's Test of Sphericity	Approx. Chi-Square	158.905
	Df	28
	Sig.	.000

3.3.3 Factor Analysis on Financial Control Practice

Factor analysis was done on pension funds financial control practice variables where constructs were subjected to a variance test through the principal component analysis test. Eight factors were used in this study to measure financial control practice. On subjecting these to factor reduction, only two (2) factors remained to explain further on financial control practice representing 68.5% of the total variation observed in financial control practice (Table 10). Factor 1 contributed the highest variation of 55.49% (Eigenvalue 4.439), factor 2 contributed 12.97% (Eigenvalue 1.037) of variations. Therefore, the components identified to have the highest influence were regular preparation of proper accounting records and financial reports and the schemes effectively using finance manuals. These two factors had their Eigen values greater than 1 and were considered

to have the greatest influence on financial control practice. The contributions decreases as one moves from one factor to the other up to factor 2.

Table 10: Total variance explained on financial control practice

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.439	55.486	55.486	4.439	55.486	55.486
2	1.037	12.969	68.454	1.037	12.969	68.454
3	.693	8.661	77.115			
4	.586	7.321	84.436			
5	.461	5.768	90.205			
6	.407	5.092	95.296			
7	.199	2.486	97.782			
8	.177	2.218	100.000			
Extraction Method: Principal Component Analysis. Source: Author, 2018						

Table 11 depicts the rotated component factor loadings for attributes of financial control practice measures. Component 1 was internal control and risk management systems and Component 2 was control of services providers. All the financial control practice variables had a factor loading of higher than 0.4. Therefore, the component values indicated that they were highly interrelated with each other.

Table 11: Rotated component matrix results on financial control practice

3.3.4 Normality Tests on Financial Control Practice

Component	1=ICRM	2=SP
1. The schemes consistently monitors effectiveness of internal control and risk management systems	.622	
2. The schemes reliably outsources specialized management functions	.713	
3. The schemes regularly monitors performance of service providers	.670	
4. The schemes adheres to the provision conflict of interest policy	.677	
5. The schemes prepares proper accounting records and financial reports	.808	
6. The schemes effectively uses finance manuals		.797
7. The schemes offers timely relevant statutory financial training/education to all stakeholders	.737	
8. The schemes maintain secure information technology(ICT) systems	.713	
Extraction Method: Principal Component Analysis.		
Rotation Method: Varimax with Kaiser Normalization.		
KEY: ICRM = Internal Control and Risk Management Systems, SP = Control of Services Providers		
Source: Survey data, 2018		

Normality test was done on the data to determine its distribution. Ali et al. (2016), showed that the assumptions and application of statistical tools as well as suitability of the tests were important aspects for statistical analysis. To check for normality, the study adopted the skewness and Kurtosis tests. Measures of skewness are based on mean and median while kurtosis is measured through the peaked-ness of the curve of the frequency distribution (Kothari & Garg, 2014). Financial control practice had a skewness coefficient of -0.502 and kurtosis coefficient of -0.044. According to George & Mallery (2010), values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal distribution as per Table 12. All the statistical values for both skewness and kurtosis were within the recommended range. Based on these results therefore, it was concluded that the data was normally distributed since their statistical values were between -2 and +2.

Table 12: Normality tests on financial control practice

	N	Minimum	Maximum	Mean	Std. Dev	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Financial control practices	60	2.00	5.00	4.0333	.78041	-.502	.309	-.044	.608

Source: Survey data, 2018

3.4 Inferential Analysis

The objective of this study was to assess the influence of financial control on sustainability of PFAIs in Kenya. Inferential analysis were performed to determine the relationship between the dependent and independent variables as well as the strength of the relationship. This therefore led to the testing of the hypothesis as per Pandya (2010) who states that inferential analysis is aimed at testing of hypothesis.

3.4.1 Correlation Analysis

Correlation analysis was done to establish the nature and strength of the relationship between financial control practice measures (internal control and risk management systems and services providers), and sustainability (operational sustainability and financial sustainability) of PFAIs in Kenya. The results in table 13 shows the correlation analysis with varied degree of interrelationship between financial control practice and sustainability of PFAIs.

The Pearson correlation coefficient was generated at 0.05 significance level (2-tailed). The output indicated a positive relationship between financial control practice and sustainability of PFAIs in Kenya ($r = 0.484$; $p < 0.05$). This indicates that sustainability of PFAIs increases with increases in financial control practice of pension funds. Ambachtsheer (2011), found that in private pension schemes, organizational performance was strongly correlated with good mechanisms to understand and communicate with plan stakeholders. The findings of the study are consistent with the results of a study by Kyanda (2014) who found that the internal control systems to monitor and mitigate risks had improved and the mechanism for members to make complaints regarding service provision had also improved. The findings were collaborated by Stewart (2010) who identified a requirement by the board to set acceptable levels of risk, measuring, monitoring and controlling these risks and ensuring that adequate and effective internal control systems were in place as a key responsibility of the board of trustees of a pension fund.

Table 13: Correlation analysis on financial control practice

	Financial sustainability	Financial Control Practices (X ₁)
Financial sustainability	1	.484**
		.000
	60	60
Financial Control Practices (X ₁)	.484**	1
	.000	
	60	60

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

Source: Survey data, 2018

3.4.2 Regression analysis

This study tested the null hypothesis that financial control practice does not have a significant influence on sustainability of PFAIs in Kenya. Regression analysis was conducted to empirically determine whether financial control practice measures had any significant influence on sustainability of PFAIs in Kenya. The results in table 14 shows that financial control practice measures (internal control and risk management systems and services providers) had explanatory power on sustainability as it accounts for 26.7% of its variability ($r^2 = 0.267$) as indicated in the model. These results indicates that pension funds financial control practice explains about 26.7% of the variations observed in sustainability among PFAIs in Kenya.

Based on these findings, the model equation $Y = \beta_1 X_1 + \varepsilon$ explained 26.7% of the variations in sustainability as measured by the goodness of fit (R-square). These findings are consistent with the results of Kyanda (2014) who also determined that improved efficiency was as a result of Kenya Power Pension Fund having formed board committees to deal with specialized matters such as audit, investments, governance, staff and administration, internal control systems to monitor and mitigate risks, the mechanism for members to make complaints regarding service provision had improved.

Table 15: Goodness-of-fit model results on financial control practice

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516 ^a	.267	.241	.57443
a. Predictors: (Constant), Financial Control Practice				
Source: Survey data, 2018				

Brunner et al., (2008) reports that proper risk management led to better financial results for pension funds as it focuses on a proactive approach to losses. According to Gifford (2004) proper fund governance controls in pension fund management minimizes compliance costs and ensures that the risks taken by the

trustees are acceptable and within the appropriate thresholds as prescribed in the investment policy, thus improving efficiency.

Table 16 presents the analysis of variance (ANOVA) results of the study on financial control practice measures (internal control and risk management systems and control of services providers) and sustainability (operational sustainability and financial sustainability). These results shows that a significant relationship exists between financial control practice and sustainability ($F = 10.367$, $p = 0.000$) as indicated in the ANOVA model. The results of coefficients to the model $Y = 1.758 + 0.350X_1$ estimates were both significant at the 0.05 level of significance. The ANOVA results revealed that the model was statistically significant ($p < 0.05$) in that financial control practice has a positive significant influence on sustainability of PFAIs in Kenya. The constant term implied that at zero financial control practice, sustainability of PFAIs in Kenya performs at 1.758 units. The coefficient 0.350 implied that improvement in financial control practice by one unit increased sustainability by 0.350 units.

Table 16: ANOVA results on financial control practice

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.842	2	3.421	10.367	.000 ^a
	Residual	18.808	57	.330		
	Total	25.650	59			
a. Predictors: (Constant), Financial Control Practice						
b. Dependent Variable: Sustainability						
Source: Survey data, 2018						

Table 17 displays the regression coefficients results of financial control practice measures ($\beta = 0.350$, p -value = 0.001) which were statistically significant in explaining sustainability of PFAIs in Kenya. The influence of financial control practice was therefore significant indicating that the greater the financial control practice, the greater the sustainability. Thus, higher levels of financial control practice in pension funds are associated with increased sustainability of PFAIs.

Table 17: Regression coefficients of financial control practice

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.758	.612		2.876	.006
	Financial Control Practices (X ₁)	.350	.103	.415	3.408	.001
	Financial Control Practices (X ₂)	.214	.135	.193	1.584	.119
a. Dependent Variable: Sustainability						

Source: Survey data, 2018

This therefore led to rejection of the null hypothesis and instead stated that financial control practice significantly influenced sustainability of PFAIs in Kenya. Based on these findings, holding all the other factors constant, a unit increase in financial control practice led to an increase of 0.350 units in sustainability among PFAIs in Kenya.

IV. CONCLUSIONS

This study sought to determine the influence of financial control practice on sustainability of PFAIs in Kenya. The obtained results provide sufficient statistical evidence to justify the relationship between financial control practice and sustainability of PFAIs in Kenya. Based on these findings it is concluded that financial control practice exerts a significant influence on sustainability of PFAIs in Kenya.

RECOMMENDATIONS

To improve financial control practice, pension funds should regularly review policies that enhances regular preparation of proper accounting records and financial reports and also always ensure effective utilization of financial manuals by pension funds managers. Pension funds in Kenya should ensure that financial control practice decisions are factored in financial management practices to enhance financial performance for sustainability.

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