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Impact of Asset Mix on Financial Performance of Registered Occupational Pension Schemes

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Abstract:

The Pension scheme industry plays a crucial role in providing an employment income replacement upon the retirement of the working pensionable population. Retirement income accounts for 68% of the total income of retirees in Kenya. Studies done in Kenya didn't address the issue of financial performance and Asset mix relationship in pooled work-related funds. The main objective of this research study was to assess the impact of Asset mix on the Financial Performance of the Registered Occupational Pension Schemes. Systematic sampling technique was used to select a probability sample of 297 sample units from a population of 1232 registered pension schemes for the period 2006–2016 according to the Retirement Benefits Authority(RBA) records. Information on this particular variable was obtained mainly through a questionnaire survey which was conducted between March and April 2017. The SPSS statistical package was used to analyze data. A panel regression model was used for data analysis. The study found a positive correlation where changes in financial performance of occupational Pension schemes could be explained by the variations in the Asset mix. The study was guided by the Modern Portfolio theory on investments as developed in the 1952 by Harry Markowitz in his article on investments.

Keywords: Asset mix, modern portfolio theory, sponsor, financial performance, occupational pension scheme, retirement benefits act (rba), segregated fund

1. Background/Introduction

Occupational pension schemes are statistically the fastest growing schemes in the Pension industry as they are created by companies to accumulate funds which are pooled together and professionally invested as required by the Retirement Benefits Act (RBA). Unlike other type of the schemes, the employers of the Occupational pension scheme top up their members' contributions. This arrangement makes this category of the pension schemes more attractive. Asset mix is a ratio of investments in either real or financial assets as prepared by the Occupational Pension Schemes in accordance with the Retirement Benefits Authority investment guidelines. The asset mix is ideally structured in a manner that would bring the highest returns to the schemes.

The main objective of the study was to find out whether Asset mix is actually a determinant of the financial performance of the registered occupational pension schemes in Kenya. Given the RBA guidelines, these Occupational Pension Schemes are, by all means, expected to generate the highest returns possible from their investments and management, even under harsh circumstances, as compared to not only other categories in the pension industry but also other forms of investments available in Kenya. Studies have however shown that generally this is not the case despite the professional management of the pooled funds (Raichura, 2011, RBA, 2014). The net investment returns from banks are far superior to the net returns from the investments of the Occupational Pension schemes. Thus Asset mix seems to be an impending factor on the amount of returns from the investments of the Occupational pension schemes.

Only a few studies in Kenya have been conducted in relation to the investment returns of the Pension schemes but not for the Occupational Pension Schemes (Tari, 2015). Other studies such as Husted (2012), OECD (2013), and Rudolph (2012), have mainly concentrated on administrative structures, the regulatory compliance, output of entities rather than the drivers of the financial performance. There is no study carried out on the impact of Asset mix on the performance especially on occupational Pension Scheme in Kenya. There is therefore, an informational gap on the impact of Asset mix on financial performance of arrangements where funding are continuous, investments are long term and payments of benefits to workers are largely not predictable. Owing to the rapid growth of this category of pension schemes and the great importance attached to their productivity by workers, it is imperative to urgently examine the impact of Asset mix on the financial performance of occupational pension schemes in order to fill in the

informational gap as well as improve investment income streams. Knowledge about Asset mix has mostly been derived from data in developed economies that have many institutional similarities (World Bank).

However, different countries have different institutional arrangements, mainly with respect to their values and investment systems. In addition, different countries have different levels of economic development. Different countries will therefore not have same regard for the Pension industry, particularly in relation to the Occupational Pension Schemes. These differences actually warrant taking a thorough look at the issue from the perspective of developing economies, especially within the context of sub-Saharan Africa. The few studies on developing countries have not even agreed on the basic facts that go hand in hand with investment returns. This study examined whether Asset mix is a determinant of financial performances of occupational pension schemes in Kenyan firms. It is relevant in the Kenyan context given the important role that the occupational pension schemes are expected to play as the engine of growth and providers of employment income replacements for the retirees.

2. Theoretical Framework

The funds that are collected from their members by the Pension schemes are pooled together and then invested in the income generating activities such as trading in stock exchange, government securities, real estates and even in the off-shore investments. The prices of stocks and bonds rise and fall over time depending on what happens to the interest rates, economic expectations among other factors (Mudida and Ngene 2010). Financial Performance is defined as the overall financial results after considering the influence of the agency costs, the contribution densities, Asset mix, Risk management procedures and the regulatory policies in the pension industry. The theoretical basis for this study is derived from the Modern portfolio theory as developed in the 1952 by Harry Markowitz in his article on investment returns. The theory states that, returns on financial investment can be maximized for a given amount of portfolio risk. According to Markowitz, the prices of financial Asset move together either in a certain way or in the opposite way. Such prices are said to be either positively correlated or negatively correlated (Pandey, 2009). In order to minimize the systematic risk, the theory recommends investment in a number of financial categories that have negative relationship (co-variance) between the securities. In regard to this theory, financial Asset s should be chosen on the basis of how they interact with one another rather than how they perform in isolation (Orina,2011). An optimal combination of investments would secure for the investor the highest possible return for a given level of risk or the least possible risk for a given level of return. The efficiency of a portfolio is naturally affected by not only the number of the securities forming the portfolio but also the nature of the relationship.

The power of compound interest is such that when a small amount of money is saved every month it results in a huge payout later, and especially more if the returns on those investments are not taxed. The principle policy of investment is that funds are allocated to the most valuable investment opportunities, at the lowest possible cost and investment risk. The range of investment opportunities available to Kenyan pension schemes is very limited resulting in over-concentration of portfolios in two Asset s, namely equities and government securities (RBA 2014). This has exposed schemes to greater fluctuations in performance in line with market volatility. Research has shown that about 20-25 well selected securities would form an efficient portfolio (Orina,2011). Both the Pensions Act and RBA Regulations stipulate the investment areas and proportions which are appropriate for the Occupational Pension Schemes. The two regulations place greater emphasis on assigning more funds to the Government Bonds and other safer and reliable securities (RBA,2014). Since investments are done based on agreed upon Asset mix, this theory provided guidance in addressing the effect of the Asset mix on the financial performance of Occupational Pension Schemes .The effectiveness (or not) of the Asset mix was determined by the amount of the investment returns derived in a given period of time. These returns were reflected in the amount that goes to the contributor upon exiting the job. The study has proved that there is a strong positive correlation between Asset mix and the financial performance of Registered Occupational Pension Schemes

3. Empirical Review

Empirical evidence on the relationship between Asset mix and Financial Performance indicates a positive relationship. This indicates that as the Investment guideline focuses on Assets with higher returns, the financial performance improves. Some studies conducted in the past confirmed the same behavior. In the United Kingdom Blake, Lehmann, and Timmermann, (2010) examined the Asset allocations of a sample of 364 UK occupational pension funds who retained the same fund manager over the period 2002-2009. They found that the total return was dominated by the Asset Mix(allocation).According to Nyakundi (2009), the Asset mix guide the Funds managers on the area and maximum percentages of funds allocated for investments for a particular class of Occupational Pension Scheme. According to (Forbes 2011), 51% of the total Occupational Pension schemes, by number, invest their funds in guaranteed funds (i.e. invested with insurers on a pooled basis) whilst 49% of the occupational pension schemes invest their funds in segregated fund. According to Ogonda (2006) who studied the extent of compliance with the retirement benefits Act by retirement benefits schemes in Kenya, a number of Pension schemes were not complying with the RBA regulations especially in relation to the Asset mix. However the researcher gave the general view of the Pension industry, without considering the uniqueness of the various categories of the pension schemes. According to Pandey (2009), since the uncertainty is unpredictable, managers and investors need to continuously review the cash flows of the investments they deal with. Thus Asset mix require to be reviewed from time to time depending on the prevailing investment environment .From the above studies, the rationality of maximizing returns and even cash flows, at minimal cost and within the parameters of the regulatory framework is clearly evident in this particular type of schemes.

4. Research Methodology

The study was conducted through a descriptive research design. This is where a researcher provides numeric descriptions of some parts of the population (Sekaran and Bougie 2015).The survey is ideally suitable for studies where independent variables are described

as they are (Kothari 2011,Oso,&Onen, 2013). The sampling frame was a list of Occupational Pension schemes registered,2006 - 2016, from the Retirement Benefits Authority of Kenya. A systematic sampling technique was used to select the sample units for purposes of study from registered Occupational Pension schemes. A sample of 293 participants was selected. These included the Trust secretaries and the Trust Chairpersons. The data for the empirical analysis were derived from the financial reports submitted to the RBA by the Pension Schemes during the period 2006–2016. Information on the Asset mix was obtained through a questionnaire survey. The field survey was carried out between March and April 2017.

A panel regression model was used in this study. Panel data involves the pooling of observations on a cross-section of units over several time periods (Orodho 2005, Saunders, Lewis and Thorn Hill 2012). According to Mugenda and Mugenda 2003, panel data approach is more useful than either cross-section or time-series data alone. The panel data provide several data points, it increases the degrees of freedom, but more importantly, it reduces the Multi-collinearity between Asset mix and other possible explanatory variables. Thus the reliability and efficiency of the tests measures are enhanced. The general form of the model can be specified as:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + e_{it}$$

The variable, Y_{it} , represents the dependent variable in the model (Financial Performance), the β_0 being the constant, β_1 representing the coefficient subscript 'i' denoting the cross-sectional dimension and 't' representing the time-series dimension., the X_{it} contains the explanatory variable(Asset mix) in the estimation model. The error term e_{it} represents the unexplained changes in the dependent variable Y_{it}

5. Data Analysis

Data collected was analyzed using SPSS which includes percentages, mean scores and frequency tables. The correlation coefficient that measures the relationship between two variables was determined using the Pearson correlation coefficient formula in the SPSS program. The chi-square test of fit model was used to test the fitness of the variables.

The outcome showed that the variable is well represented since it showed a P-value of 0.00 which was below the recommended 0.05 level of significance. The r^2 was determined to assess the degree of influence of the independent variable on the dependent variable. The regression was carried out using a Prais–Winsten specification because this approach shows signs consistent with theoretical predictions(Saunders *et al.* 2012). In addition, it is useful for estimating linear cross-sectional time series models when the disturbances are assumed to be either heteroscedastic across panels or heteroscedastic and contemporaneously correlated across panels. The regression model employed is popular with this type of study and is also in line with what was used in previous studies, with some modifications for the analysis(Saunders *et al.*,2012,Ajai,& Sanjaya,2010,,Sekaran *et al.* 2015)

In testing the hypothesis test H_0 : Asset mix are not determinants of financial performances of Occupational Pension Scheme at the significance level of 0.05, it was established that the P-value was 0.000. This was far below the recommended significance level of 0.05 hence we reject the null hypothesis and conclude that Asset mix has an effect on Occupational pension scheme performance.

6. Research Findings

In the regression analysis,' r' value measures the goodness of prediction of the variance. In this case'r' value of 0.813 is a good predictor of the pension financial performance by the independent variable(Asset mix).On the other hand the r^2 is the coefficient of determination which measures the extent to which dependent variable can be explained by the independent variable. In this case, the r^2 value of 0.661 means that 66.1% of the variation in financial performance of pension schemes can be explained by the independent variable Asset mix. Hence, there is strong positive correlation between the dependent variable and the independent variable

Model	r	r Square	Adjusted r Square	Std. Error of the Estimate	Change Statistics				
					r Square Change	F Change	df1	df2	Sig. F Change
1	.813 ^a	.661	.660	.419	.660	1248.226	1	248	.000
a.	Predictors: (Constant), Asset Mix								
b.	Dependent Variable: Financial Performance								

Table 1: Asset mix and scheme performance

However, there are other variables not covered by the study which account for 33.9% of performance of pension schemes. This study shows that the financial performances of pension schemes are largely inhibited by the predictor (the Asset mix).Hence, the more the value of the predictor, the higher the performance of pension schemes.

This finding is in line with the studies in UK by Blake, Lehmann, and Timmermann, (2010) who found that the total return from investment of pooled funds was dominated by the Asset allocation which was in such a way that it reduced investment risk (RBA, 2014). In addition, Lumby & Steve (2011) established that when risks are well controlled through wise and prudent selection of investment opportunities such as financial Assets and other properties, the pension scheme performance improves tremendously. Pandey (2009) established that when investment Mix are wisely chosen through trading in stock exchange and government security bonds and real estate establishments, the schemes financial position grows strongly which lead to remarkable financial performance of the scheme.

7. Conclusion and Recommendations

The study found that Asset mix has an immense positive influence on the financial performance of Occupational Pension Schemes. Those schemes that are more conservative will always fetch moderate returns as opposed to those schemes that have aggressive investment policies and act within the regulatory requirements of the Retirement Benefits Authority. The schemes should try as much as possible to come up with investment structures that are aggressive in order to bring forth more returns and justify their existence in the investment market.

The study focused on the registered occupational pension schemes only. It did not investigate the unregistered occupational pension schemes, which account for a sizable number of firms in the pension industry. The study therefore recommends that further research on the unregistered occupational pension firms to be investigated in order to have generalized information of financial performances of the pension schemes in Kenya. In addition, since the study established that 66.1% of the change in the dependent variable was explained by the independent variable, while 33.9% of the change in the dependent variable was not accounted for by the independent variable there is an urgent need to investigate the other factors that could have an impact on the dependent variable such as tax, contribution density as well as agency costs among others.

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