THE RELATIONSHIP BETWEEN INVESTMENT STRATEGIES AND RETURN ON INVESTMENT: A CASE OF NSSF IN THE ARUSHA REGION

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Abstract

This study analysed the relationship between investment strategies and return on investment, a case of NSSF in the Arusha region. This research adopted correlation research design. Secondary data were obtained through books, meeting minutes, newspapers, dissertations, letters, files, the internet, and the NSSF report. The data were analysed using inferential statistics with the aid of Statistical Package for Social Sciences (SPSS) version 20. Findings indicated that Real Estate Investment has significant relationship with Financial Performance. Also, findings unveiled that Treasury Bond Investment has a significant relationship with Financial Performance. Findings of this study revealed that Fixed Deposit also has a positive significant relationship with Financial Performance. The study therefore recommended that; since investments done by the NSSF found to perform poor in terms of returns, it is therefore recommended that, NSSF need to invest in profitable projects and for this to happen, a thorough feasibility study is of paramount importance in any investment. This study recommends a further in-depth study on other investments that can be used by NSSF to increase return on investment because, investing in real estate and capital market found to insignificant in determining return on investment.

Keywords: Real Estate Investment, Treasury Bond Investment, Fixed Deposit Financial Performance

1.0 Introduction

Pension funds are investment pools that pay for members' commitments after retiring from active employment (Kigen, 2016). The funds have a great role to play in providing retirement benefits to families, funds for development to the government, and capital to corporations (Autenne, 2017). They contribute to social-economic development, strengthen monetary markets as well as advance financial security (Stalebrink, 2014). According to OECD (2014), millions of individuals in the world have pension funds as their primary source of retirement income. Funds received on retirement form 68% of the total retirees' income in Kenya (RBA, 2016), 80% in France, 45% in Australia, and 75% in South Africa (OECD, 2014). Kompa and Witkowska (2015) depicted that 82% of retired individuals in the USA rely on income from pension funds. The income replacement rate is expected to rise if pension funds are to be run efficiently through sound investment plans, which will yield better returns for pensioners (Dögüs, 2018).

A global pension crisis has however emerged in the past two years owing to depressed financial markets. This has eroded funds to cater to the retirement income of the aging population (Aiyabei, 2018). It is therefore important that pension funds be managed effectively. The present study assesses the financial performance of pension funds, through a survey of selected pension funds in Tanzania. Social Security Regulatory Authority is working on measures to remove the challenges facing the pension schemes which hinder the provision of smooth services to their members. Currently, Tanzania has two major social security schemes after merging the Parastatal Pensions Fund (PPF), Local Authorities Pensions Fund (LAPF), and Government Employees Provident Fund (GEPF). The challenges are the different investment policies of the schemes and the low level of recruitment of pensioners by the schemes. Other challenges are the non-transferability of members, differences in members' contributions, lack of reliable data, differences in benefit calculations, high running c,costs and the low level of social security awareness among Tanzanians. The Social Security Regulatory Authority (SSRA), in collaboration with the Bank of Tanzania (BOT), is undertaking a comprehensive actuarial valuation of the five social security schemes it regulates.

The financial performance of defined contribution pension funds in Tanzania has continued to portray an unimpressive trend over the years against industry expectation. This trend results partly from the unstable investment returns realized from asset classes as invested in the overall portfolio of various pension funds. A survey done by the Zamara group revealed that pension funds' overall returns stood at 1.9% of the total investments in the year 2015. This was a decrease from 8.6% in the year 2014. However, there was an increase in the yeawhen6, where the returns from pension fund investments wwere4.2%. The returns in the years 2017 and 2018 were 2.5% and 3.8% respectively. The years that saw a decline in pension fund performance was majorly attributed to the decrease in returns realized due to non-optimal portfolio performance as managed by fund managers. The contemporary investment portfolio for DC pension funds in Tanzania is seen to be highly concentrated in a few asset classes which are perceived to be the best performers in the investment market while giving less attention to other available investment options (pension industry report, 2017). Overall, an ideal investment strategy would ensure pension fund investments are diversified in a manner that they can meet the targeted returns.

In Tanzania, NSSF as a pension fund, the investment climate is unfavorable and is one of the factors facing pension funds in underdeveloped nations investors sometimes are willing to take on the high level of risk and volatility associated with investing in an unfavorable climate because of the potential that the high risk will be rewarded with high returns (Hallward- Wallsten, and Xu 2003). However, the factors which affect the financial performance of pension Funds and the impacts of investment strategies on the financial performance of pension funds were not well addressed. If the challenges facing pension funds in Tanzania will not be solved in time, the pension funds will be discouraged and there will be fewer inflows of investments. Lack of low investments in Tanzania will affect the economic growth of the Country. The decline in economic growth will lead to an increase in the unemployment level and an increase in poverty. From this background, the study is built.

Pension funds face the regulatory requirement to allocate a large proportion of their capital domestically and, given the large size of their capital, are expected to invest in a wide range of domestic assets and diversify risk within the country as much as possible. Relative to other institutional investors, therefore, pension funds are assumed to be the ones that contribute most to domestic capital markets ' growth (Raddatz and Schmukler, 2008). Therefore, it is important to manage pension funds effectively, not only in Tanzania but in other countries as well. The international pension crisis has threatened to erode contributions made by pension funds to the world economies (OECD 2008). The crisis is emerging in countries with inadequate funds to compensate for the aging population's retirement income as a result of declining financial markets (Kakwani, Sun and Hizn 2006).

Effective pension fund investment strategies are needed to ensure that pension fund assets are protected against externalities in the investment universe. Currently, Tanzania has merged five social security schemes namely, National Social Security Fund (NSSF), Parastatal Pensions Fund (PPF), Local Authorities Pensions Fund (LAPF), Government Employees Provident Fund (GEPF) and the Public Service Pensions Fund (PSPF) into Public Service Social Security Fund is a social security scheme established by Public Service Social Security Act of 2018. PSSSF's main purpose is to raise donations and provide terminal benefits for public service workers. Investment has been found to be important aspects of host countries economic development and vital to building local business innovation capacities in developing countries (Boocock, 2002). Stanko (2002) describes "investment strategy" as an array of pension fund investments. The investment strategy defines the investment composition of a pension fund's overall assets and seeks to manage investment costs and returns carefully. (Stanko 2002; Eichholtz and Margaritova 2009). The investment strategy is therefore a plan that guides the choice of the investments that pension funds make.

The investment strategy, according to the OECD (2006), varies depending on the type of pension fund. The investment strategy's aim in the case of a DB is to achieve the highest possible returns in line with the pension fund's liabilities and 90 liquidity needs. The main goal of the investment strategy in a DB pension fund is to produce returns that accrue in terms of investment targets for individual member account balances. Therefore, the investment strategy leads to the returns on investments that directly affect the pension fund's financial performance (OECD 2006).

The investment strategy is therefore a plan that guides the choice of the investments that pension funds make. Risky assets (equity investments) generally generate higher returns compared to the less risky ones (bonds) (Al-Ajmi, 2018). This positive relationship between risk and returns causes a dilemma since to get more returns, pension funds have to take more risk (Almeida, 2015). It is therefore suggested that pension funds adopt appropriate investment strategies that provide higher returns on investments with moderate risk. According to Arnold (2010), the investment strategy varies depending on the type of pension fund. In the case of a DB, the goal of the investment strategy is to generate the highest possible returns consistent with the liabilities and 90 liquidity needs of the pension fund. In a DC pension fund, the main goal of the investment strategy is to generate gains that accrue to individual member account balances in light of the investment goals. The investment strategy thus contributes to the returns obtained on investments, which directly impacts the financial efficiency of the pension fund.

According to the Africa Asset Management 2020, the projected returns on equity for the period starting in 2011 to 2018 continued to decline from 7.8 to 7.2% as of the end of 2016 (Price Water Coopers, 2016). There is therefore lack of empirical Information on the subject area, particularly in Tanzania. Again, none of the studies carried out in developed, or developing countries weighed and ranked the financial viability variables to determine their degree of influence (Campello, 2016).

Whereas it is a common understanding that pension funds are invested to yield returns for the benefit of retirees, little study exists on how best these funds can be invested to give maximum returns, while focusing on all the asset classes. Most scholars have only contextualized their theoretical anxiety about the effect of investment strategy on financial performance but not its practicability on the defined contribution pension funds in Tanzania. Other scholars have only focused on a few selected asset classes leaving out the rest which may influence financial performance as well. This study sought to examine the Investment strategies and financial performance of pension funds in Tanzania.

Another gap identified was the lack of enough information on the role of Investment strategies influencing the financial performance of pension funds in Tanzania. Little studies have been done to determine the effect of Real Estate Investment on Financial Performance, determine the effect of fixed deposits on Financial Performance, and establish the effect of Treasury Bond investment on Financial Performance. Hence, the researcher aimed to analyze the relationship between investment strategies and financial performance of NSSF in Tanzania.

2.0 Literature Review

2.1 Efficient Market Hypothesis

Theory in financial studies, the efficient market hypothesis is a widely used and accepted concept. It relays that all available information is included in the share price at any point in time and therefore the hunt for any new information not included in the "current price" is a waste of time. The theory also suggests that active investment management is futile and should therefore rely on using the market index to assess an investor's investment strategy (Malkiel 2003). Pension fund quality assessment has long been related to the question of market efficiency as originally posed by Fama (1970). Based on the theory markets are information all efficient, and thus would not generate excess returns from historical data. This is because all securities prices reflect publicly available information (Cochrane, 1999). This is of importance in understating the performance of the pension funds market since they are related to the performance of security markets. As such it is expected that any investment that pension funds make is related to the available public information and this will not lead to abnormal performance (Malkiel (2005). The efficient market theory was employed to understand the financial performance of pension funds given the publicly available information on the various pension fund investment strategies.

2.2 Empirical Literature Review

Nzau (2019) carried a study on the effect of bond issuance on financial performance of firms listed on Nairobi Securities Exchange. The study collected dated from all the six firms that had issued bonds in tranches or additional bonds within the period 2008 to 2017. Data was analyzed via regression to assess whether bonds issuance has any effect on the financial performance of firms listed on NSE. Results indicate that about 75.4 percent of variance in financial performance could be explained by bond issuance as characterized by bond price, bonds coupon rate, bond proportion, and bond yield to maturity. Bond proportion and bond yield to maturity were found to have a statistically significant effect on financial performance. The study concluded that bond issues affected financial performance of listed firms in Kenya. It was recommended that the listed firms ought to take into consideration the various aspects of bond issues in order to enhance their financial performance.

Badía (2019) evaluated the financial performance of government bond portfolios formed according to socially responsible investment (SRI) criteria. The study opened a discussion on the financial performance of SRI for government bonds. Our sample includes 24 countries over the period of June 2006 to December 2017. Using various financial performance measures, the results suggest that high-rated government bonds, according to environmental, social, and governance dimensions, outperform low-ranked bonds under any cut-off, although differences are not statistically significant. These findings suggest that social, and governance screenings can be used for government bonds without sacrificing financial performance. Manurung (2015) explore how bonds issuance affects banking performance. This paper uses data panel to analyse the data for the period of 2008 to 2012. The result are as follows: OCOR (operational cost to Operational revenue), CAR (capital adequacy ratio), LDR (loan deposits ratio), NIM (Net Interest Margin) statistically significantly affected the RoE (return on equity) but NPL (non-performance loan) does not affect

RoE. BOPO, CAR, NIM and NPL statistically significantly affected the RoA (return on assets), but LDR does not affect the RoA. Bonds issuance does not affect the RoE but affected to the RoA. Crisis period affected the RoE and RoA. The interaction between bond issuance and crisis period affected the RoE and RoA.

Mbogo (2016) ought to examine how real estate investment strategies affect the financial performance of Investment groups in Kenya. Its objective was to investigate the investment strategies adopted by investment groups popularly known as chamas in Kenya and the effect of these strategies on the financial performance of the groups. Descriptive research design was adopted in this study targeting a population of members from 50 registered investment groups in Nairobi with emphasis on real estate property investors in Nairobi. Primary data was used for the study and was gathered through survey questionnaires which were administered to the investment groups in Nairobi. Microsoft Excel was used to analyze the data. The results were presented using figures, tables and cross tabulations. There was a positive correlation between real estate investment and financial performance with a beta of 4.496 specifically buy and hold strategy and own and operate posting results of great effect on financial performance of chamas. Out of these findings, the researcher recommends that investment groups should brainstorm among members to adopt a strategy that yields greater returns and seek advisory services to help them manage real estate investments. Secondly this study recommends that investment groups should explore local economic environment that are most suited with domestic and multi-domestic strategies instead of global strategies. The study further observes and recommends blending of real estate investment strategies that are best suited for the investment groups. It also recommends further research to be done on the advantages and challenges faced by the real estate investment groups in adoption of real estate strategies in global market and its effects on profits especially in an imperfect market.

3.0 Methodology

This research adopted correlation research design. The study conducted at NSSF in Arusha region. NSSF have been selected because it is the social security fund with wide coverage in employees in the private sector and it is the fund having many investments in the country, so a researcher expects to get the relevant information concerning the Investment strategies influencing the financial of pension funds in Tanzania. NSSF Arusha region it has a good number of population size where by it has enough officials and members for sample size. Through documentary review, secondary data was obtained from various sources include both published and unpublished sources such as books, journal articles (printed and electronic) research reports, dissertations, seminar and organization annual reports covered period of 2002 - 2021. The data were analyzed using inferential statistics with the aid of Statistical Package for Social Sciences (SPSS) version 20.

4.0 Findings

4.1 Correlation Analysis

Correlation method was used to test relationship between variables, the relationship of both independent variable and dependent variable were tested in order to assess whether the study objectives were achieved and the relations are stated below are met.

Table 1: Correlation Analysis

		Real Estate Investment	Treasury Bond	Fixed Deposit	Financial Performance
Real Estate Investment	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	20			
Treasury Bond Investment	Pearson Correlation	.486**	1		
	Sig. (2-tailed)	.000			
	N	20	20		
Fixed Deposit	Pearson Correlation	.345**	.096	1	
	Sig. (2-tailed)	.000	.295		
	N	20	20	20	
Financial Performance	Pearson Correlation	**.662**	**.609**	**.701****	**1**
	Sig. (2-tailed)	.001	.003	.000	
	N	20	20	20	20
. Correlation is significant at the 0.01 level (2-tailed).					

Source: Field Data (2022).

Findings shown in Table 1 indicate that Real Estate Investment has significant relationship with Financial Performance with a coefficient of 0.662. Also, Treasury Bond Investment has a significant relationship with Financial Performance with a coefficient of 0.609. Fixed Deposit also has a positive significant relationship with Financial Performance with a coefficient of 0.701. The correlations are significant at the 0.01 level. The above results imply that all independent variables have a positive significant relationship with Financial Performance.

4.2 Regression Analysis

Coefficient of determination (r^2) in the model summary explains 60.8% of the independent variables. This means that independent variables under *Fixed Deposit, Treasury Bond Investment, Real Estate Investment,* explain only 60.8% that affecting Financial Performance. The coefficient of determination is very significant because only 39.2% of variations are brought about by characteristics not captured in the independent variables.

Table 2: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.780[a]	.608	.598	6.79973
a. Predictors: (Constant), Fixed Deposit, Treasury Bond Investment, Real Estate Investment				

Source: Field Data (2022).

Table 3 is a summary of the analysis of the model. The significant (p-value) at 5% level of significance and 95% of confidence level was 0.000. As is illustrated in the table, thus the model is statistically significant and the assumption which states that at 5% level of significance and 95% confidence level, the significance value (P-value) in the ANOVA should be P, 0.000-0.05 was held.

Table 3: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8313.390	3	2771.130	59.934	.000[b]
	Residual	5363.410	16	46.236		
	Total	13676.800	19			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Fixed Deposit, Treasury Bond Investment, Real Estate Investment						

Source: Field Data (2022).

Table 4 explains the overall relationship between the independent variables and the dependent variable and the significance of each relationship. The table depicts that Fixed Deposit, Treasury Bond Investment, Real Estate Investment are prominent in Financial Performance.

Table 4: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.358	3.412		6.553	.000
	Real Estate Investment	.231	.213	.410	5.790	.000
	Treasury Bond Investment	.136	.071	.128	1.923	.007
	Fixed Deposit	.456	.034	.830	3.345	.000
a. Dependent Variable: Financial Performance						

Source: Field Data (2022).

Using the results above, we have the regression equation as:

$(Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \alpha)$

$Y = 2.358 + 0.231 X_1 + 0.136 X_2 + 0.456 X_3 + \alpha$

Whereby Y = Financial Performance

X1 = Real Estate Investment

X2 = Treasury Bond Investment

X3 = Fixed Deposit

According to the regression equation established, taking all factors into account with constant at zero, outcomes will be 2.358. The data analysed also show that Financial Performance is greatly contributed by Real Estate Investment, Treasury Bond Investment and Fixed Deposit. Taking all other independent variables at zero, Real Estate Investment Increases Financial Performance by 0.231. While Treasury Bond Investment will result in 0.136 increase in Financial Performance and Fixed Deposit will result in a 0.456 increase in Financial Performance.

4.4 Discussion of Findings

Findings indicated that Real Estate Investment has significant relationship with Financial Performance.

This is in line with Mbogo (2016) who found a positive correlation between real estate investment and financial performance. Nevertheless, the findings established that the NSSF should practise independent assessment of investment, engage in service and product diversification, and establish private public partnerships that add value as well as enhance forward integration linkages for sustainability and be internationally competitive.

Also, findings unveiled that Treasury Bond Investment has a significant relationship with Financial Performance. These findings are in line with Nzau (2019) and Manurung (2015) who found treasury bonds have a statistically significant effect on financial performance while Chin and Abdullah, (2018) confirm that there is a signalling effect of bond issuance announcements. It was recommended that the firms ought to take into consideration the various aspects of bond issues in order to enhance their financial performance. Although, findings of this study are in tandem with Badía (2019) who posited that, the treasury bonds are not statistically significant with financial performance. The literature reviewed did not find any recommended remedies for the regarding the effect of treasury bond on the financial performance. NSSF ought to be keen on the timing of additional bonds and tranche issues as well as the there is need to create awareness on the role of bond market in the Tanzanian economy and there is need to establish how sound macroeconomic policies influence the uptake of treasury bonds

Findings of this study revealed that Fixed Deposit also has a positive significant relationship with Financial Performance. These finding correlate with findings of Gibson's (2016) report on the impact of the United Kingdom's (UK) strategic asset allocation decision on pension fund that the overall variance in monthly investment returns could be explained by typical asset class holdings across funds on average. The NSSF should make an investment in attracting fixed deposits. This is due to the fact that deposits play a critical part in bank funding, since a large number of commercial banks' assets are typically funded by public deposits.

5.0 Conclusion and Recommendations

This study concluded that Real Estate Investment has significant relationship with Financial Performance. Also, the study concluded that Treasury Bond Investment has a significant relationship with Financial Performance. The study concluded that Fixed Deposit also has a positive significant relationship with Financial Performance. The study therefore recommended that; since investments done by the NSSF found to perform poor in terms of returns, it is therefore recommended that, NSSF need to invest in profitable projects and for this to happen, a thorough feasibility study is of paramount importance in any investment. This study recommends a further in-depth study on other investments that can be used by NSSF to increase return on investment because, investing in real estate and capital market found to insignificant in determining return on investment.

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