Listed Corporate Bonds Investments and Financial Performance of Pension Funds in Kenya

Roba Adan Abdi Boyante¹Prof. Willy Muturi, PhD²Dr. Mouni Gekara, PhD³

School of Business Jomo Kenyatta University of Agriculture and Technology P. O. Box 62000-00200, Nairobi, Kenya

Abstract

Different pension schemes invest in different asset classes in line with their respective investment policy statements and in compliance with government regulations on investment by pension schemes. Different schemes have posted differing financial performance based on choice of asset classes and portfolio rebalancing decisions. A detailed study was required to determine how financial performance of pension funds is affected by the investment in listed corporate bonds. The objective of this study was to assess the influence of listed corporate bond investments on the financial performance of pension funds in Kenya. The study also determined the moderating effect of portfolio rebalancing on the relationship between listed corporate bonds investments and financial performance of pension funds in Kenva. A descriptive research design was used with data collection form used to gather secondary data. The target population for this study was 1,258 registered schemes as per RBA as of 31 December 2021. The sample consisted of 294 registered schemes. Secondary data was obtained from the Retirement Benefits Authority (RBA) for the study variable for the six-year period between 2016- 2021. The data was analyzed using multiple linear regression and subjected to diagnostic tests to ensure that the coefficients of the estimates are consistent and was relied upon in making economic inferences. The study findings on the influence of Listed Corporate Bonds investments on the financial performance of pension funds indicates that the coefficient had a negative and significant impact on performance of firms' (coefficient - 2.7177* 10⁻⁰⁸ and p value < 0.05). The p value was 0.000 which is smaller than 0.05 level of significance. This shows that Listed Corporate Bonds investments had an impact on the performance of firms. The findings are consistent with Miriti (2014) who avers that a unit increase in commercial paper and corporate bonds will lead to 0.221 units decrease in profitability of the pension schemes. The findings also agree with Kiplagat (2014) who posits that there is a negative correlation between ROI and corporate bond investments. The findings however contradict Mwenda (2014) whose study concluded that there is a high positive correlation between investment in listed corporate bonds and the financial performance of pension fund. The findings also agreed with Muia (2015) who states that an increase in the investments in fixed income assets negatively impacted on the financial performance of pension schemes. The findings however contradict Mungai (2017) and Mokaya et al. (2020) who state that private bonds had a greater contribution to return on investment than quoted equity by 0.583 and that the weight of corporate bonds significantly affected performance of Unit Trust Scheme funds respectively.

Key Words: Listed Corporate Bonds, Financial Performance

Date of Submission: 12-06-2022

Date of Acceptance: 27-06-2022

I. Introduction

A pension can perform two basic tasks. Firstly, it generates income for individuals based on their previous economic activity (Wang, 2016; Androniceanu, 2017; Papik, 2017). Secondly, a pension can be seen as a type of insurance based on long-term contracts between savers and pension administrators (Hainaut, 2014; De Hann, 2016; Alda, 2017; Wiafe et al., 2017). The pension economy aggregates knowledge of microeconomics, particularly in decision-making and risk perception, based on principles of macroeconomics, and it analyses the impact of the pension system on the capital market, labour market as well as the fiscal impact of the pension system on public finances (Gavurova et al., 2017; Ząbkowicz, 2016; Bartram, 2016; Fabuš, 2017; Farias, 2017). The above characteristics indicate that the pension economics deals with issues of the allocation, recovery and redistribution of scarce resources throughout the life cycle of a saver with implications on the macroeconomic and microeconomic perception of the state guaranteed pay-as-you-go pension system and private pension funds (Thomas et al., 2017; Tao et al., 2017; Vassallo et al., 2017). Barr et al (2006) aver that income

security in old age requires two types of instruments: a mechanism for consumption smoothing, and a means of insurance. They posit that people seek to maximize their well-being not at a single point in time, but over time and that in a model of certainty, individuals save during their working life to finance their retirement. This is where pension funds come in.

A pension fund, also called a superannuation fund, is any plan, fund, or scheme which provides retirement income. In the recent past, there has been a remarkable growth of the pension funds across the globe (Owinyo, 2017). An occupational scheme is a retirement benefit plan devised by an employer to avail retirement benefits to the workers on retirement. This is done by paying retirement contributions. A pension plan is a retirement plan for the future benefit of employees that requires the employers to contribute money into a pool of funds (Jacobsson & Jacobsson, 2012). Investments are done from the pool of funds in the pension scheme and the earnings from the investments yield income to the worker on retirement. The importance of pension funds as a source of long-term capital in many countries is emphasized by Morales et al. (2017).

The increased role of pension funds and life-insurance companies in the economy has been bolstered by the aging populations and government policies encouraging private pension saving (Coletta and Zinni, 2013). Through their "substituting" and "complementary" roles with other financial institutions, particularly commercial and investment banks, the pension funds facilitate the capital and financial market growth (Were et al., 2017). On average, retirement assets as a proportion of GDP was 50.7% in the OECD area and 19.7% of total GDP in the sample of non-OECD jurisdictions in 2017 (OECD,2017). An article by the financial times in February 5, 2018 titled "value of global pension assets surges to \$41.3tn", states that the institutional pension funds' assets across 22 major retirement markets touched\$41.3 trillion at the end of 2017; a growth by13 per cent based on the prior year statistics. For the first time since 1997, the aggregate worth of pension assets increased to \$4.8trillion. Assets of the pension funds in OECD countries are considered relatively large as they are 36.6 percent of GDP. As of end-2013, pension-fund assets were even in excess of 100 percent in countries such as the Netherlands, Iceland, Switzerland, Australia, and the United Kingdom. In absolute terms, pension funds in OECD countries held \$10.4 trillion of assets. While large pension funds (LPFs) held about \$3.9 trillion of assets, assets in public and private sector and public pension reserves (PPRFs) stood at \$6.5 trillion (Leveraging Pension Funds for Financing Infrastructure Development in Africa, March 2017).

A Citigroup Report, 2016, "The Coming Pensions Crisis" indicates that the combined worth of unfunded or deficit government pension liabilities for twenty OECD countries is an astounding \$78 trillion, twice the \$44 trillion published national debt obligation. Companies have also not been successful in steadily meeting their pension responsibilities. Many retirement programmes are facing a deficit. A good example is in US and UK where the corporate pension programmes at a huge deficit. The total fund status in the US is at just 82%. Interestingly, while the developing nations in Africa, Asia, the Middle East, the EEC and Latin America are struggling to enhance the adequacy and penetration levels of their pension systems, the systems of the industrialized world are being threatened by longevity, low birth rates, unending fiscal deficits, public debt problems and bankruptcies. They have experienced negative or low returns on pension fund investments due to underperformance of equities and low returns on bonds, which are attributed to prevailing low interest rates as well as high unemployment rates (Amenc, Martellini, &Sender, 2009).

Population aging is expected to accelerate between the years 2010 and 2030, as more people live to age 65 (AfDB, 2011). Forecasts indicate that the elderly will constitute 4.5% of the population by 2030 from 3.2% in 2010. These statistics underpin the importance of pension and retirement structures in ensuring social wellbeing of senior citizens. As per Price Waterhouse Coopers (PwC) forecasts, pension funds' Assets under Management (AuM) in 12 African markets are expected to rise to around USD 1.098 Trillion by 2020, from a 2008 total of USD 293 billion. David Ashiagbor and Olivier Vidal in their paper; "Pension Funds in Botswana, Kenya, Namibia and Nigeria: New Avenues for Funding Private Equity (2016)" mention that between December 2013 and December 2014, assets under management (AuM) in Kenya increased to USD 7.7 billion or by 13.1 per cent. As per OECD Pension Markets in Focus report, 2016, private pension assets topped USD 38 trillion worldwide in 2015. Assets invested through all pension vehicles in financial markets reached USD 36.9 trillion in the 35 OECD countries in 2015 and amounted to USD 1.3 trillion in a sample of 45 non-OECD countries. Pension funds were the main investors of these assets worldwide (USD 26 trillion, 68% of the total), followed by banks and investment companies (USD 7.7 trillion, 20.2%), insurance companies (USD 4.3 trillion, 11.3%) and employers through their book reserves (USD 0.2 trillion, 0.5%).

As per RBA, the retirement benefits assets under management increased by 5.77 percent from Kshs. 1,322.59 billion in June 2020 to Kshs. 1,398.95 billion in December 2020 compared to 7.76 per cent in December 2019. The slow growth in the assets during the period was attributed to the adverse effects of the Covid-19 pandemic which adversely affected the financial markets and the wider economy in the first half of 2020. As per RBA (2016), the pension subsector in Kenya is estimated to cover 15% of the labour force and has accumulated assets of 18% of the GDP. This implies that 85% of the labour force is not pensionable. In 2017, the retirement schemes assets increased by Kshs. 167.44 billion surpassing the KSh1 trillion mark ever. This was attributed to the heightened supervision by the RBA and better compliance by the employers (RBA, 2017).

By December 2017, pension schemes managed Kshs. 1.08 trillion in December 2017, 18.35 per cent more than KSh912.66 in 2016. As per the RBA Act, Pension fund managers in Kenya are required to submit Investment Policy Statements (IPSs) to RBA. IPSs represent the broad outlines of the investment principles and strategies to be adopted in managing a pension fund portfolio. As per the RBA, IPS's must be subjected to independent reviews of every 3 years. The retirement funds' AuM in Kenya are estimated to rise to USD 1.098 Billion by 2020 as per the Africa Asset Management 2020 report.

1.1 Statement of the Problem

Private and public pension schemes are currently facing several challenges (Mačí & Valentová Hovorková, 2017; Vychytilová, 2015). Population aging leads not only to an increase in the retirement age population in proportion to the (employed) working age population, but also to an increase in the number of years spent in retirement. Sinicakova & Gavurova (2017) posits that the slow pace of economic growth reduces the scope for potential appreciation of retirement savings. Hannah (2011) posits that the growth of the schemes in Kenya is faced by multiple diverse problems. Muriithi and Wamari (2013) in their study pointed out that there were a frustrated lot of pensioners in Kenya who have not been paid or paid less than the minimum portfolio return based on their contribution and anticipated earnings of the schemes. A great quandary exists to the members of pension funds, elected trustees, fund managers and sponsors as to what can be considered an optimal asset mix and which choice of asset classes can maximize financial performance of pension funds.

In 2014, it was reported that Kenya Railways scheme sits on Sh30b as thousands of retirees live in misery (Dominic, 2016). The financial performance of pension funds schemes both public and private have in the past come under increased criticism (Gakure & Gakera, 2015). According to Mutuku, Kathurima, and Toroitich (2013) pension industry investments have been subject to significant volatility resulting in large variation in investment performance which contribute to negative returns periods, even to those schemes invested in guaranteed funds. Former employees and retirees of various public sector a private pension funds have lodged various claims regarding their underpaid pension benefits with the RBA and the high Court as per petition no. 57 of 2014 against the Trustees of their respective Pension Scheme due to breach of contract by their trustees and administrators (Kenya Law ,2015 & RBA, 2016). Matimbwa (2021) did a study on the factors influencing performance of pension funds: evidence from LAPF in Tanzania. The study concluded that the assets acquired by the pension scheme do not translate into higher returns.

Pension funds invest in different assets in line with their approved investment policy statements. Consequently, choice of assets of different pension funds will vary in line with their respective investment policy statements. The investments and choice of assets must also be in compliance with government regulations on retirement schemes in Kenya. Available research reveals that there are variations in the returns declared to members of pension funds every year. Beath (2014) posits that the variance in performance among defined benefit pension funds in the U.S. can mainly be understood from the differences in the asset allocation decisions by the different schemes. Babalola (2017) states that fund returns are significantly affected by the tactics employed in investing the scheme assets. Njeru et al. (2015) avers that retirement funds are impacted by the directives issued on funds' investments; notwithstanding whether the directives are flexible or non-discretionary. Obwoge (2013) asserts that investment strategy is not the significant factor that affects the performance results of the investment funds in Kenya.

In summary, studies on the influence of listed corporate bond investments on the financial performance of pension firms have yielded mixed results. It is not clear which choice of assets will yield maximum returns on assets under management by the pension funds. It is for the foregoing reasons that this study is conducted.

1.2 Objective

To determine the influence of the listed corporate bondsinvestments on the financial performance of pension funds in Kenya

1.3 Scope of the Study

The study focused on the pension firms that have been in existence for five years between 2016 and 2021 and registered with the Retirement Benefits Authority (RBA). As at closure of business in December 2021, they were one thousand two hundred and fifty-eight (1,258) pension funds registered with RBA (RBA, 2021). The study however used a sample of 294 firms selected using stratified and random selection techniques. The choice of the pension schemes regulated by RBA was informed by availability of information and their significant contribution to savings mobilization and investments in Kenya. The asset classes used in the study was listed corporate bonds. The financial performance measures used was time weighted return. The study used secondary data which was obtained from the annual reports submitted by different schemes to the RBA and also other research papers and market reports prepared by the regulator.

II. Theoretical Framework

The study is underpinned by modern portfolio theory, risk return trade off theory and liquidity preference theory since all of them support both the dependent and predictor variables as shown in the conceptual framework. The Modern Portfolio Theory outlines the selection and construction of asset portfolios whose premise is to maximize the portfolio expected return and the concurrently minimize the attendant risk. The theory has four basic steps (Brodie, 2009); security valuation which describes a universe of assets in terms of expected return and expected risk; determining how assets are to be distributed among classes of investment (asset allocation decision); reconciling risk and return in selecting the securities to be included (portfolio optimization); and dividing each stock's performance (risk) into market-related (systematic) and industry/security-related (residual) classifications(performance measurement). The Risk-Return Trade-Off Theory posits that there is an expectation of greater return by investors taking high levels of risk. As explained by Markowitz (1952) as well as Fama and French (2001), the investors choice is affected by the risk and return of a given asset and for every higher level of risk taken, the investors will expect a greater return to compensate for the high risks. The expected return of an asset rises with risk or uncertainty because investors hold a risky asset (security) if they are compensated with commensurably higher returns (Mollik & Bepari, 2015). The liquidity preference hypothesis implies that the longer the term to maturity of a security, the higher its term premium (Ornelas & Antonio, 2014). Lee (2016) avers that Investors value financial assets not only for their intrinsic value, i.e., their expected dividend or payment stream, but also for their liquidity: their ability to help agents facilitate transactions.

2.1 Empirical Review

Bessembinder & Maxwell (2008) posit that the corporate bonds are a favored investment for insurance companies and pension funds, whose long horizon obligations can be matched reasonably well to the relatively predictable, long-term stream of coupon interest payments from bonds. Correspondingly, most or all of a bond issue is often absorbed into stable "buy-and-hold" portfolios soon after issue. A bondholder is exposed to several kinds of risks. However, bonds are considered low risk compared to other financial assets.

Mokaya et al. (2020) investigated the effects of asset allocation on financial performance of unit trust schemes in Kenya. A descriptive research design was adopted, and the study period was 5-years. The ratio of the composition of different asset classes to the fund value was used as the independent variables. Fund age was used as the control variable. Sharpe ratio was used to measure investment returns and that represented the dependent variable of the study. Data was collected from secondary sources and a multiple linear regression model was adopted to assess the association of the variables. The study findings indicated that the weight of corporate bonds significantly affected performance of Unit Trust Scheme funds.

Mungai (2017) evaluated the effect of alternative investments on the financial performance of pension funds in Kenya. Secondary data for 5 years (2012-2016) was provided by RBA. The study comprised 90 schemes which were selected using stratified sampling technique. Alternative investments included private equity & venture capital, real estate investments, immovable property & private bonds. From the regression coefficients, private bonds had the largest contribution to the ROI followed by immovable property. The study found out that private bonds had a greater contribution to return on investment than quoted equity by 0.583.

Muia (2015) did a study on the effect of asset allocation on the financial performance of pension funds in Kenya. A sample of fifty (50) segregated schemes that have been in existence for more than ten years and which have used the same fund manager over the period of study were adopted for the study from 1297 registered schemes as of December 2014. To establish the relationship between the independent variables and the dependent variable of the study, inferential analysis was conducted. The coefficient of determination was carried out to measure how well the statistical model was likely to predict future outcomes. The study findings revealed that increase in the investments in fixed income assets negatively impacted on the financial performance of pension schemes.

Miriti (2014) investigated the relationship between retirement benefits authority investment guidelines and financial performance of pension schemes in Kenya. The study population was 1188 being the number of occupational retirement benefits schemes registered with the RBA in Kenya as at October 2013. Systematic random sampling was used to pick a sample of 28 RBS from the above population. A multiple regression model was used to analyze the data collected. The estimated model indicates a unit increase in commercial paper and corporate bonds will lead to 0.221 units decrease in profitability of the pension schemes. A study by Mwenda (2014) concluded that there is a high positive correlation between investment in commercial papers ad listed corporate bonds and the financial performance of pension fund. A random sample of 28 schemes was selected from a population of 1188 registered pension schemes by the Retirement Benefit Authority. Data from the sample was collected for the period 2003 to 2009. Multiple regression model techniques were adopted to show the relationship between the dependent and independent variables. Kiplagat (2014) did a study on the effect of asset allocation on the financial performance of pension funds in Kenya. The study adopted a descriptive survey and utilized a sample of 40 schemes drawn from a population of 1232 schemes in Kenya. The correlation indices for the relationships between ROI and corporate bonds was -0.209 respectively, which was below -0.4. These results indicate that there is a weak and negative correlation between ROI and corporate bond investments.

III. Methodology

The study adopted three philosophical positions. They included positivism, realism and interpretivism. The study adopted positivism and realism approaches. This study adopted deductive research approach given that sampled data was used to infer about the population which consisted of all pension schemes registered with Retirement Benefits Authority. This study used epistemology, positivism and deductive approach for research design, choice of sampling technique, data collection and data analysis given that this the research variables revolved around resources available to pension schemes and how trustees and fund managers make investment decisions over these resources. The study used descriptive survey research design. The target population for this study was 1,258 registered schemes as per RBA as at 31December 2021. The registered pension fund providers Kenya as at close of the year on the 31st of December 2021 constituted the sampling frame for this study. Cochran (1977) formulae was used to determine the sample for the study. The study used data collection form to obtain quantitative data for analysis.

3.1 Analytical Model

The study employed multiple linear regression model to analyze the influence of listed corporate bond investments on the financial performance of pension funds in Kenya. The model analysis was used to test the statistical significance of the independent variable (listed corporate bonds) on the dependent variable (performance as measured by the time weighted return). In this study, the following linear regression equation was utilized to determine the influence of listed corporate bonds investments on the financial performance of pension funds in Kenya;

1 Rit= $\beta 0 + \beta 5LCBit + ej$

- 2 Rit= $\beta 0 + \beta 5LCBit + \beta 6 PR + PR (\beta 11LCBit) + ej [Baron & Kenny, 1986].$
- 3 Rit =b0+b1LCBit+e6

Where:

Rit is TWRR for each firm i and year t

TWRR is Time Weighted Rate of Return

LCB is Listed Corporate Bonds

PR is Portfolio rebalancing

 β i, α i, λ i, ai, bi and ci (i=0,1...,6) are the associated regression coefficients.

Ej is the error term (j=1,2...,6

Diagnostic Tests such as Breusch-Pagan Lagrange Multiplier (LM); Multicollinearity; Normality Tests; Heteroscedasticity; Durbin-Watson (Autocorrelation) Test; Stationarity Test, Panel Unit Root Test and Hausman Test were conducted to ensure that the coefficients of the estimates are consistent and relied upon in making economic inferences.

IV. Findings and Discussions

H0₁: Investments in Listed corporate bonds do not affect the financial performance of pension funds in Kenya. Table 4.1: Descriptive Statistics for Listed Corporate Bonds

Year	Mean	MIN	MAX	Standard Deviation	Skewness	Kurtosis
2016	48449734.8	0	8625382000	444254142	17.379	327.499
2017	39451752.3	0	8995873000	435906102	19.388	392.822
2018	43617281.5	0	9889022293	471298048	19.684	406.071
2019	46183080.4	0	8211919000	412057881	18.543	362.759
2020	24465691.5	0	7140397038	321973008	21.526	472.376
2021	588420.8	0	219634000	10313304	20.104	418.109

The summary statistics for listed corporate bonds is given in Table 4.1. As indicated, there is a sharp decline of the average values across the years.

Tuble 1.2. Regression Results for Enstea corporate Donas.							
Variable	Estimate	Std. Error	t-value	Pr(> t)			
Listed Corporate Bonds	-2.7177	0.2805657	-9.6865	0.0000			
Total Sum of Squares: 33688							
Residual Sum of Squares: 30633							
R-Squared: 0.090671							
Adj. R-Squared: 0.08971878							
F-statistic: 93.8286 on 1 and 941 DF, p-value=0.0000							

Table 4.2: Regression Results for Listed Corporate Bonds

As shown in Table 4.2, results on the effects of Listed Corporate Bonds investments on the performance shows that the coefficient had a negative and significant impact on performance of firms, p value 0.000 smaller than 0.05 level of significance. This shows that Listed Corporate Bonds investments had an impact on the performance of firms. The findings are consistent with Miriti (2014) who avers that a unit increase in commercial paper and corporate bonds will lead to 0.221 units decrease in profitability of the pension schemes. The findings also agree with Kiplagat (2014) who posits that there is a weak and negative correlation between ROI and corporate bond investments. The findings however contradict Mwenda (2014) whose study concluded that there is a high positive correlation between investment in commercial papers and listed corporate bonds and the financial performance of pension fund. The findings also agreed with Muia (2015) who states that an increase in the investments in fixed income assets negatively impacted on the financial performance of pension schemes. The findings however contradict Mungai (2017) and Mokaya et al. (2020) who state that private bonds had a greater contribution to return on investment than quoted equity by 0.583 and that the weight of corporate bonds significantly affected performance of Unit Trust Scheme funds respectively.

Table 4.3: Moderating Effect of the Portfolio Rebalancing on the Relationship between Listed Corporate Bonds Investments and Financial Performance of Pension Funds in Kenya- Without the Moderator.

Variable	Estimate	Std. Error	t-value	Pr(> t)	
Listed Corporate Bonds	-5.0525	2.364849	-2.1365	0.0164	
Total Sum of Squares: 33688					
Residual Sum of Squares: 18199					
R-Squared: 0.45977					
Adj. R-Squared: 0.31736					
F-statistic: 159.489 on 5 and 937 DF, p-value=0.0000					

Table 4.3 gives the moderating effect of portfolio rebalancing on the relationship between listed corporate bonds investments and financial performance of pension funds in Kenya. As shown, listed corporate bonds investments had a negative and a significant influence on the financial performance of pension funds, p value 0.000 < 0.05.

 Table 4.4: Regression Results on the Influence of Listed Corporate Bonds on the Financial Performance of Pension Funds in Kenya (with the Moderating Variable).

Variable	Estimate	Std. Error	t-value	Pr(> t)	
Listed Corporate Bonds	1.363756	0.19758	6.9023	0.0000	
Listed Corporate Bonds: Portfolio	-3.561372	0.37730	-9.4391	0.0000	
Total Sum of Squares: 33688					
Residual Sum of Squares: 5003.9					
R-Squared: 0.85146					
Adj. R-Squared: 0.7217					
F-statistic: 502.956 on 10 and 932 DF, p-value=0.0000					

Table 3.6 shows the regression results with the moderating variable. As indicated, listed corporate bonds investments have a positive and a significant influence on the financial performance of pension funds in Kenya, p value < 0.05. Therefore, portfolio rebalancing has a moderating effect on the relationship between investment in listed corporate bonds investments and pension fund performance.

V. Conclusions and Recommendations

The study found out that Listed Corporate Bonds investments had a negative and a significant influence on the financial performance of pension funds in Kenya. This could be attributed to failure of Imperial Bank and Chase Bank which were placed under receivership with outstanding debt in corporate bonds issued to the public. The findings could also be attributed to slow growth of corporate bond market in Kenya. CMA data shows that Treasury bonds dominate the market, accounting for 99.92 per cent of the debt market, with corporate bonds at a paltry 0.08 percent (CMA, 2021). Rwanda has had two corporate bonds listed on the Rwanda Stock Exchange (RSE). The Dar es Salaam Stock Exchange has seen nine companies issue 13 corporate bonds and only nine corporate bonds have been issued in Uganda. The National Social Security Fund (NSSF) lost Ksh.666.9 million through subscriptions to the botched Imperial and Chase bank corporate bonds. The investment has been cited by Office of the Auditor General in the audit of the fund's books to June 2019 which was published on Tuesday and bears a qualified opinion. The findings shows that pension funds must do proper due diligence over corporate bond issues in the market and should proactively monitor financial performance of the issuers to protect the pensioners retirement funds. The findings are also supported by Dawes (2016) who states that while corporate bonds offer enhanced yields, they lead to increased risk levels due to rising corporate defaults and consequently short-term interruptions to income.

The study found out that Listed Corporate Bonds investments had a negative and a significant influence on the financial performance of pension funds in Kenya. This could be attributed to failure of Imperial Bank and Chase Bank which were placed under receivership with outstanding debt in corporate bonds issued to the public. The findings could also be attributed to slow growth of corporate bond market in Kenya. The study recommends that pension funds must do proper due diligence over corporate bond issues in the market and should proactively monitor financial performance of the issuers to protect the pensioners retirement funds. The government must also strengthen governance in the issuance of listed corporate bonds and review the investor protection laws in place to safeguard investor confidence and to enhance confidence of pension schemes in investing in listed corporate bonds.

References

- [1]. Achieng, E.O (2013). The Relationship between Asset Allocation and Financial Performance of Pension Funds in Kenya.
- [2]. AlexanderBeath (2014). Asset Allocation and Fund Performance of Defined Benefit Pension Funds in the United States between 1998-2011. CEM Benchmarking.
- [3]. Alvi, M. (2016). A manual for selecting sampling techniques in research.
- [4]. Bikker, J. A., & De Dreu, J. (2009). Operating costs of pension funds: the impact of scale, governance, and plan design. *Journal of Pension Economics & Finance*, 8(1), 63-89.
- [5]. Bikker, J., Broeders, D., Hollanders, D., & Ponds, E. (2012). Pension Funds' Asset Allocation and Participant Age: A Test of the Life Cycle Model. Journal of Risk and Insurance, 79(3), 595-618. https://doi.org/10.1111/j.1539-6975.2011.01435.x
 [6]. Binu B Peniel (2016) Research Design
- [7]. Bohnert, A. (2015). The impact of guarantees on the performance of pension saving schemes: insights from the literature. Risks, 3(4), 515-542.
- [8]. Çelik, S., Demirtaş, G., & Isaksson, M. (2020). Corporate bond market trends, emerging risks and monetary policy. Organization for Economic Co-operation and Development, OECD Capital Market Series, Paris. Retrieved August.
- [9]. Chaudhari, K., Raje, M., & Singh, C. (2014). Corporate bond markets in India: a study and policy recommendations. IIM Bangalore Research Paper, (450).
- [10]. Das, K., Ericsson, M. & Kalimipalli, G. (2013). Market Liquidity and Trading activity. Journal of Finance, 56(5), 1-30
- [11]. Dominic. O. (2016). Railway Scheme sits on 30 billion as thousandsof retirees live in misery. The Standard, 2016 https://www.standardmedia.co.ke/business/article/2000223418.
- [12]. Dopierała, Łukasz, and Magdalena Mosionek-Schweda. 2021. Pension Fund Management, Investment Performance, and Herding in the Context of Regulatory Changes: New Evidence from the Polish Pension System. Risks 9: 6. <u>https://doi.org/10.3390/risks9010006</u>
- [13]. Felician, B. (2013). Evaluation of Asset Allocation Strategies used by Tanzanians' Pension Funds and determinants of their choices (Doctoral dissertation, The Open University of Tanzania).
- [14]. Fraser, S. P., & Jennings, W. W. (2010). Examining the use of investment policy statements. The Journal of Wealth Management, 13(2), 10-22.
- [15]. Gakure SW & Gekara M (2015) Analysis of the financial performance of registered individual retirement schemes in Kenya. IJCBSS-International Journal of Current Business and Social Sciences
- [16]. Hervé, N. E. (2019). Why African Companies Are Absent on the Bond Market? An Explanation through Companies Listed on the BRVM. Modern Economy, 10(1), 209-226.
- [17]. Maina, S. N., & Kimutai, G. (2018). Macro-economic variables and performance of corporate bonds at the Nairobi Securities Exchange, Kenya. International Academic Journal of Economics and Finance, 3(2), 410-426.
- [18]. Mokaya, H., Chogi, R., & Nyamute, W. (2020). Effects of Asset Allocation on Financial Performance of Unit Trust Schemes in Kenya. Journal of Finance and Investment Analysis, 9(4), 1-1.
- [19]. Muia, F. M. (2015). The effect of asset allocation on the financial performance of pension funds in Kenya (Doctoral dissertation, University of Nairobi).
- [20]. Muia, Faith.(2015). The Effect of Asset Allocation on the Financial Performance of Pension Funds in Kenya. unpublished MBA project, University of Nairobi.
- [21]. Mungai (2017). The effect of alternative Investments on the Financial Performance of Pension Funds in Kenya; A Master's Thesis, School of Business. University of Nairobi.
- [22]. Mutula, A. K., & Kagiri, A. (2018). Determinants Influencing Pension Fund Investment Performance in Kenya. International Journal of Finance, 3(1), 14-36.
- [23]. Mwachanya M. (2015). Impact of Asset Allocation on Financial Performance of Pension Funds in Kenya
- [24]. Nancy N. (2012). The determinants of the financial performance of money market funds in Kenya
- [25]. Ndung'u, M. N. (2016). The Effect of Asset Allocation On The Financial Performance Of Pension Schemes In Kenya (Doctoral dissertation, University of Nairobi).
- [26]. Ngabirano, M. K. (2016). Determinants of corporate bond performance in Kenya (Doctoral dissertation, United States International University-Africa).

- [27]. Ngugi, R., & Agoti, J. (2007). Microstructure Elements of the Bonds Market in Kenya. Kenya Institute for Public Policy Research and Analysis.
- [28]. Njeru, S. E., Dominic, N. M., & Fredrick, K. (2015). Evaluation of financial performance on portfolio holdings held by pension funds in Kenya. European Scientific Journal, 11(16).
- [29]. OECD (2021), Pension Funds in Figures
- [30]. OECD. (2009). Pension Fund Governance, Investment Strategies, and their Role in Corporate Governance. OECD Publishing.
- [31]. OECD. (2009). Pensions at a Glance. Retirement Income Systems in OECD Countries. OECD Publishing.
- [32]. Oluoch, M. A. (2013). The determinants of performance of pension funds in Kenya. An MBA project submitted to the University of Nairobi.
- [33]. Omair, A. (2015). Selecting the appropriate study design for your research: Descriptive study designs. Journal of Health Specialties, 3(3), 153.
- [34]. Ornelas, J. R. H., & de Almeida Silva Jr, A. F. (2015). Testing the liquidity preference hypothesis using survey forecasts. Emerging Markets Review, 23, 173-185.
- [35]. Owinyo, J. A. (2017). Assessment of determinants on the financial performance of retirement benefit schemes in Kenya (Doctoral dissertation, Strathmore University).
- [36]. Retirement Benefits funds: The case for Kenya. RBA 2007.
- [37]. Tendulkar, R., & Hancock, G. (2014). Corporate bond markets: A global perspective. International Organization of Securities Commissions Research Department, IOSCO. (Staff working paper series SWP4/2014), Madrid, Spain.
- [38]. Valkanov, R., & Zhang, H. Uncertainty and the Risk-Return Tradeoff.
- [39]. Wanyama, D. W. (2017). Effect of stock market development on the growth of corporate bond market in Kenya. International Journal of Finance, 2(2), 16-46.
- [40]. Wolski, R. (2017). Risk and Return in the Real Estate, Bond and Stock Markets. Real Estate Management and Valuation, 25(3), 15-22.