Zamara Consulting Actuaries Schemes Survey

December 2022

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Introduction

We are pleased to present our 68th Investment Performance Survey for the period ending 31 December 2022.

This Survey covers 423 schemes with a total of K Shs 1.03 trillion of assets under management.

We acknowledge and thank each of the participating Fund Managers for providing the necessary asset and performance data in a timely manner.

Fund Manager	Number of Participating Schemes	Value of Assets Under Management (KShs m)
African Alliance Kenya Investment Bank Limited	7	
Apollo Asset Managers	1	
British American Asset Managers	19	
CIC Asset Managers	12	
Co-op Trust Investments	60	
Cytonn Asset Managers	3	
GenAfrica Asset Managers	96	
ICEA Lion Asset Management Limited	57	
NCBA Investment Bank Limited	3	
Old Mutual Investment Group Limited	88	
Sanlam Investments East Africa Limited	77	
Subtotal	**423**	**1,028,868**

Some schemes did not qualify to be included in the Survey. This was due to one or more of the following reasons:

- Incomplete data.
- Data received did not pass sense checks.
- Responses to queries were not received as at the date of issuing this report.

Market Commentary Q4 2022

General Economic Review: The Kenyan Economy recorded a 4.7% growth in the third quarter of 2022 compared to 5.2% in the previous quarter. The decelerated growth was mainly attributable to the adverse macroeconomic conditions and unfavorable weather conditions. Business conditions in the private sector recorded moderate growth towards the end of the year with the Stanbic Bank Purchasing Managers' Index at 51.6 compared to 53.7 at the end of the previous year. Business conditions were subdued during the year as firms saw costs increase due to inflationary pressures and continued worries about global economic conditions.

Inflation: Overall inflation rate averaged at 7.6% at the end of 2022 in comparison to 6.1% in 2021. This was above the Central Bank's range of 2.5% - 7.5%. The relatively high inflation can be attributed to increase in prices of fuel and food prices.

Currency Market: The Kenya Shilling depreciated by 8.3% during the year against the U.S. Dollar to close at K Shs 123.4 from K Shs 113.1 in 2021. The depreciation is due to rising dollar demand from importers and interest rate hikes in the United States of America.

Index	Q4	1 yr	3 yr[3]	5yr[3]
NASI	(0.7%)	(23.4%)	(8.5%)	(5.7%)
Zamara Kenya Equity Index	2.6%	(6.3%)	(2.9%)	1.5%
NSE 25 Share Index	1.0%	(16.3%)	(8.6%)	(6.1%)
S&P Kenya Sovereign Bond Index	2.5%	7.8%	10.7%	12.1%
91 Day Tbill	2.2%	8.2%	7.3%	7.3%
Inflation CPI K Shs	1.8%	9.1%	6.0%	5.6%
USD/K Shs[1]	(2.1%)	(8.3%)	(6.3%)	(3.5%)
MSCI ACWI Index[2]	11.8%	(12.5%)	9.2%	7.1%
MSCI Emerging Markets[2]	11.6%	(15.4%)	1.5%	(0.3%)
MSCI World Index[2]	11.8%	(12.2%)	10.3%	8.1%

1. Negative implies Shilling depreciated, positive implies Shilling appreciated.
2. Returns are Kenya Shilling adjusted
3. For periods more than 1-year; returns are annualized
4. All values are as at 31 December 2022

Source: NSE, CBK, MSCI, KNBS

Equity Market: The equity market was on downward trajectory for the year ending 2022 with the ZKEI and NASI recording losses of 6.3% and 23.4% respectively. Equity performance was mainly driven by foreign investors exiting the markets due to interest rate hikes in developed markets and continued macroeconomic conditions.

Fixed Income: The Monetary Policy Committee increased the Central Bank Rate from 8.25% to 8.75% in November 2022. The committee cited that the hike was due to increasing inflation and depreciation of the Kenyan Shilling to the US Dollar.

The average yields on short-term government debt instruments changed marginally upwards with the 364-day, 182-day, and 91-day T-bills averaging at 9.9%, 9.0%, and 8.2% respectively during the quarter.

The S&P Kenya Sovereign Bond Index gained 2.5% over the quarter, compared to 3.2% in September 2022.

Offshore markets: Global equity markets recorded gains over the quarter as the Emerging Markets Index, the All Country World Index, and the All-World Index gained 9.2%, 9.4%, and 9.4% respectively in USD terms. The recovery in the last quarter of 2022 was due to easing inflation in developed countries and strong corporate earnings in some sectors in the US markets. Annual return remained subdued as the Emerging Markets Index, the All Country World Index, and the All-World Index lost 22.4%, 19.8%, and 19.5% respectively in USD terms. Investors remained cautious due to the current restrictive money policies adopted by global central banks..

Executive Summary and Key Highlights

Key Highlights

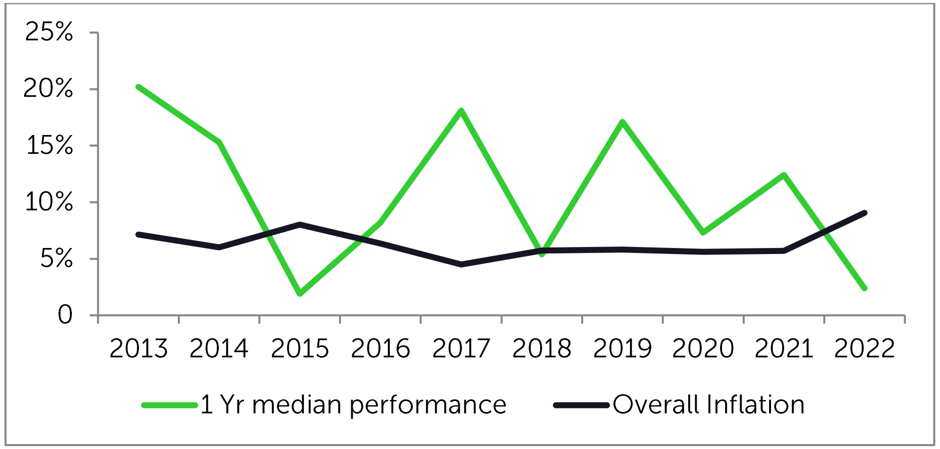
In the table below, we set out a summary of the median performance of schemes for each of the years from 31 December 2013 to 31 December 2022.

Period Ending 31 December	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Number of Schemes Participating	127	314	378	384	374	415	419	421	420	423
Total Assets K Shs Bn	217.1	479.4	535.8	596.5	677.3	756.9	885.0	951.8	953.1	1,028.9
1 Yr Median performance	20.2%	15.3%	1.9%	8.2%	18.1%	5.4%	17.1%	7.3%	12.4%	2.4%
3 Yr Median performance	11.4%	20.8%	11.8%	8.4%	9.3%	10.6%	13.5%	10.0%	12.2%	7.2%
Overall 1 year Inflation[1]	7.1%	6.0%	8.0%	6.4%	4.5%	5.7%	5.8%	5.6%	5.7%	9.1%
Overall 3 year Inflation[2]	9.6%	5.4%	7.1%	6.8%	6.3%	5.5%	5.3%	5.0%	5.3%	6.0%

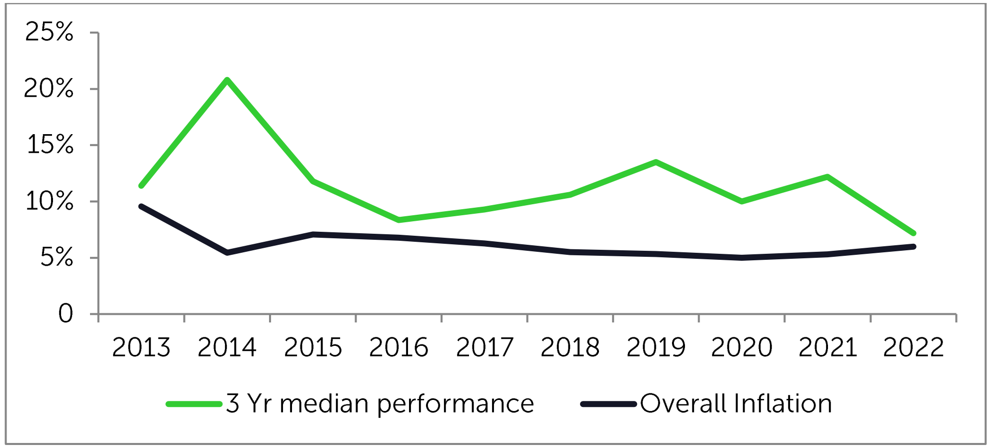
Notes:
1. Based on KNBS Statistics 2013 – 2022: www.knbs.or.ke/
2. Calculated geometric average over 3 years.

The Survey indicates that the median scheme returns underperformed inflation in 2015, 2018 and 2022, as shown in the 1-year chart below. Over 3-years, median returns outperformed inflation in all years as shown in the 3-year chart below.

1 Year



3 Years



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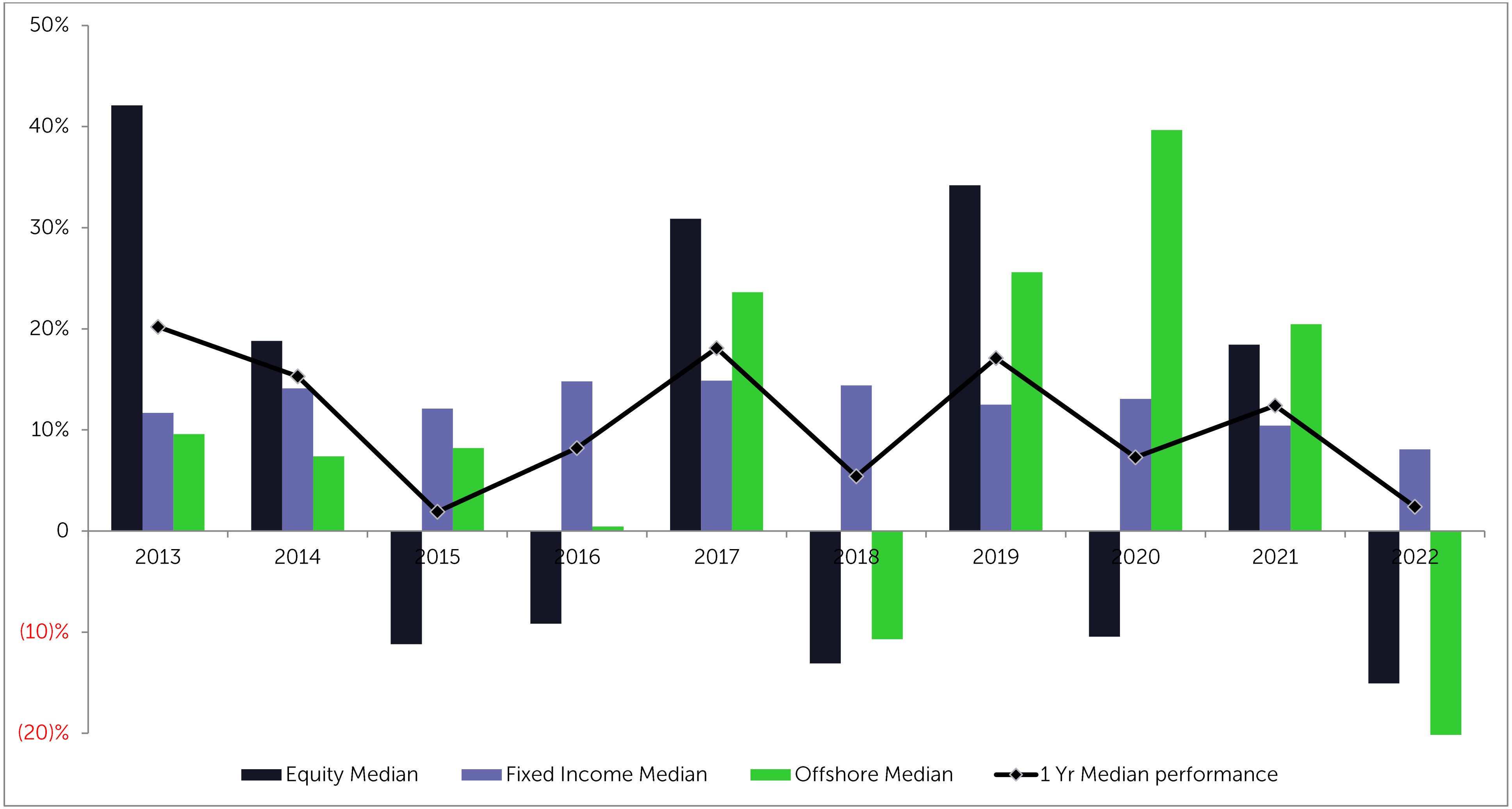
Executive Summary and Key Highlights



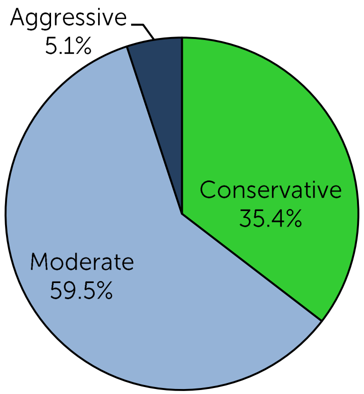
The chart above shows the median performance trend of the three asset classes (equity, fixed income and offshore) as at 31 December for each of the last 10 years.

Risk Profile of Participating Schemes

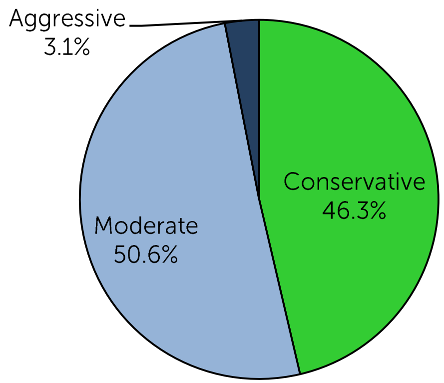
STATISTICS					
Risk Profile	**Fixed Income Allocation***	**Number of Schemes**	**Scheme Percentage %**	**Assets Under Management K Shs m***	**Asset Percentage %**
Conservative	Over 80%	196	46.3%	326,134	35.4%
Moderate	65% to 80%	214	50.6%	547,878	59.5%
Aggressive	Less than 65%	13	3.1%	46,573	5.1%
Total		**423**	**100.0%**	**920,585**	**100.0%**

*Asset allocation shown above and used to determine the above profiles excludes property

DISTRIBUTION OF PARTICIPATING SCHEMES BY ASSET SIZE



DISTRIBUTION OF PARTICIPATING SCHEMES BY NUMBER



423 Schemes qualified for inclusion in the Survey on the basis of being segregated arrangements with at least 3 months return periods.

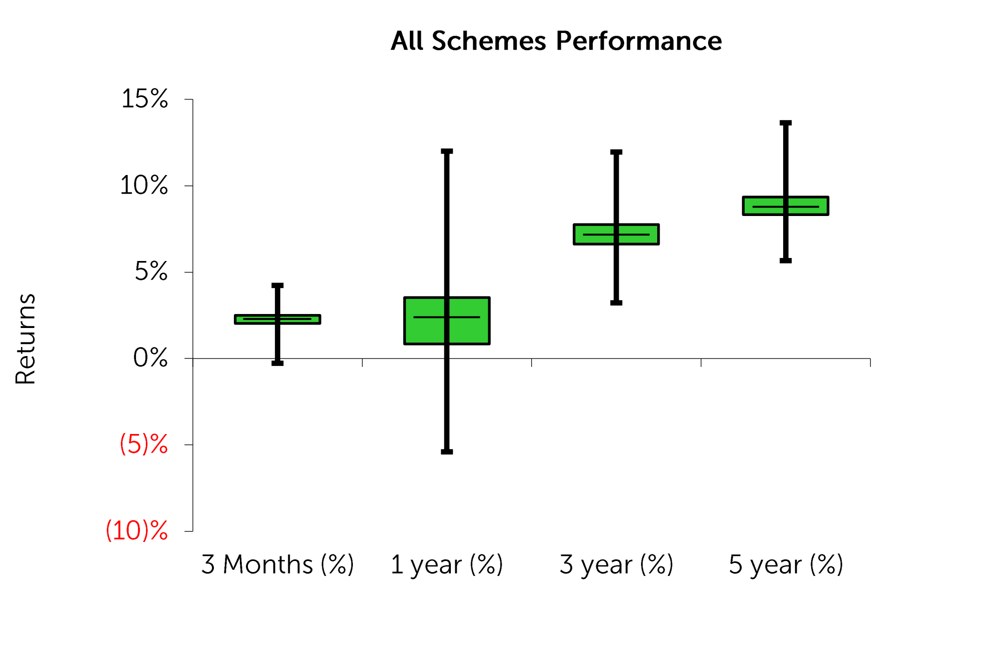
The survey is dominated by moderate schemes; they comprise 50.6% of participating schemes and manage 59.5% of assets in this survey.

Conservative schemes make up 46.3% of number of participating schemes with 35.4% of assets under management. Aggressive schemes comprised of 3.1% of the participating schemes with 5.1% of the assets.

Analysis and Distribution of Returns for the Period

	3 Month	1 year	3 year*	5 year*
25th Percentile	2.0%	0.8%	6.6%	8.3%
Median	2.3%	2.4%	7.2%	8.8%
75th Percentile	2.5%	3.5%	7.7%	9.3%
Range of Returns	4.5%	17.4%	8.7%	8.0%
Average	2.3%	2.4%	7.3%	8.8%
Weighted Average	2.3%	1.8%	7.0%	8.6%

*Annualised return



Over the quarter ended 31 December 2022, the median return of the participating schemes was 2.3%, compared to 3.0% in September 2022. The decline in performance has been attributed to the reduced performance from the equity asset class.

Over the 1-year period to 31 December 2022, the median return of the participating schemes was 2.4% compared to 12.4% over a similar period in 2021. Performance in 2022 was negatively impacted by inflationary pressures and ongoing geopolitical tensions.

Over the 3-year period to 31 December 2022, the median return of the participating schemes was an annualised 7.2%.

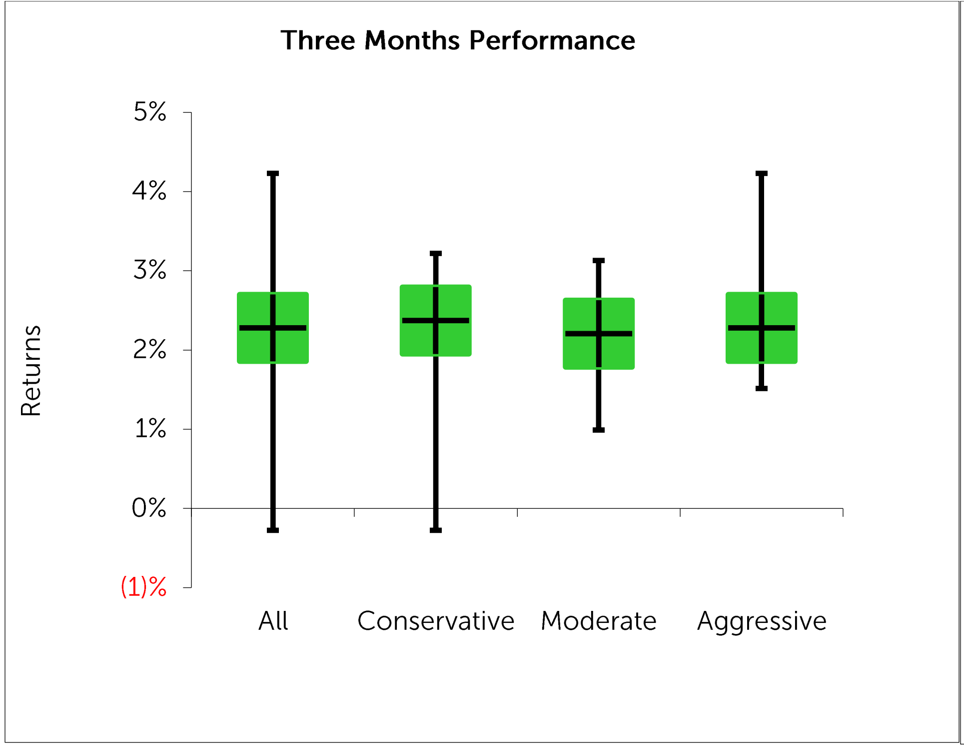
Over the 5-year period to 31 December 2022, the median return of the participating schemes was an annualised 8.8%.

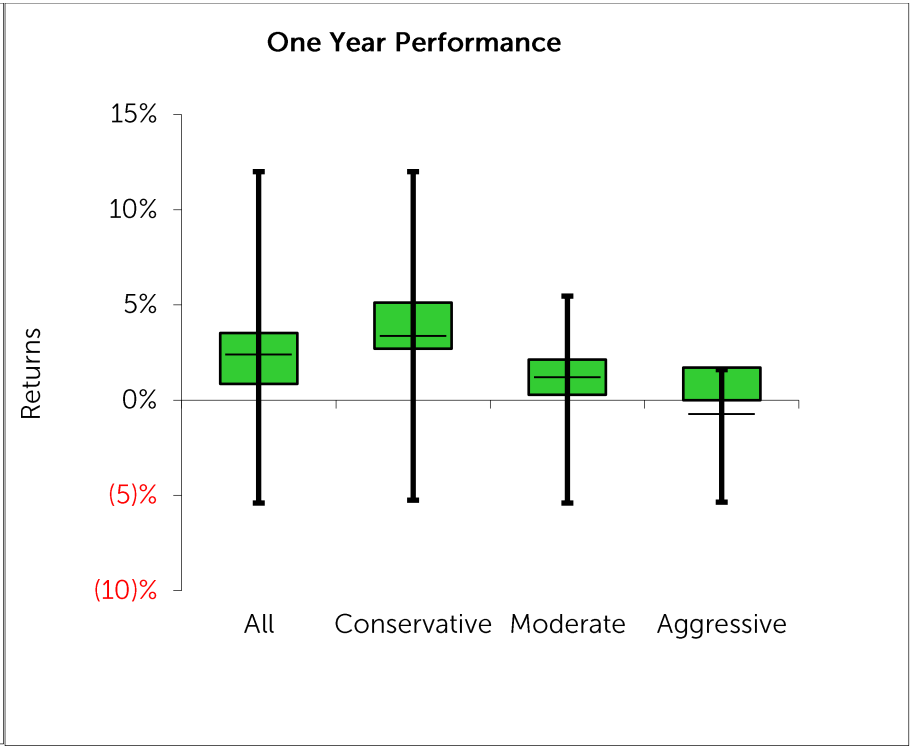
The box plots on the next page show our analysis of the median and range of returns of the participating schemes categorized by risk profile: conservative, moderate and aggressive schemes.

Analysis and Distribution of Returns

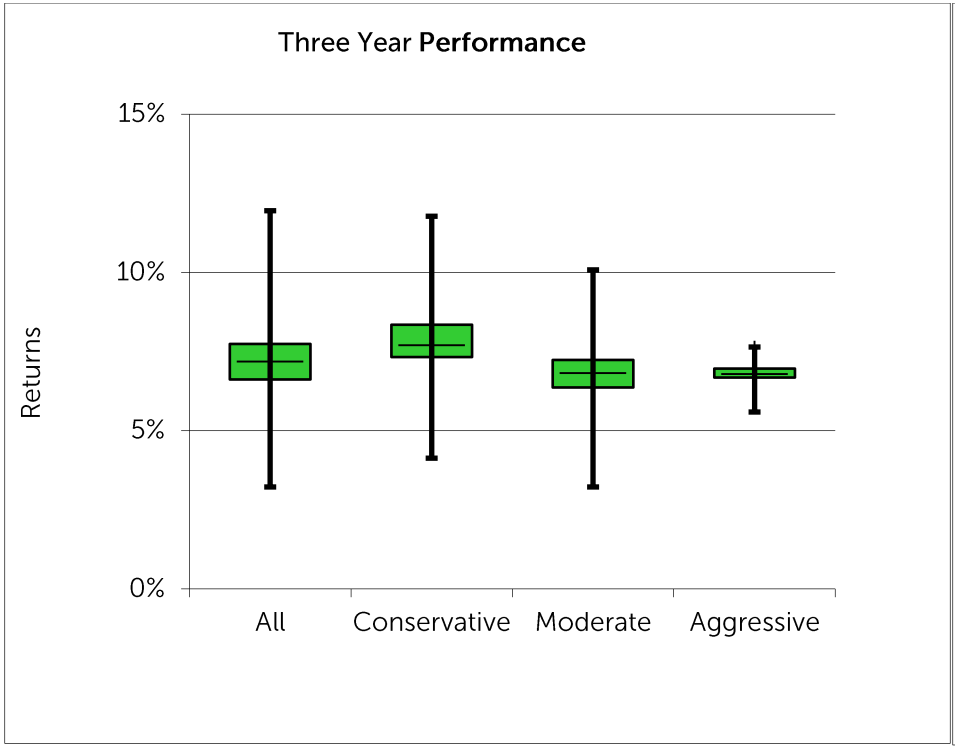
	Return Distribution											
	Conservative Schemes				Moderate Schemes				Aggressive Schemes			
	3 Month	1 year	3 year*	5 year*	3 Month)	1 year	3 year*	5 year*	3 Month	1 year	3 year*	5 year*
25th Percentile	2.2%	2.7%	7.3%	8.5%	1.9%	0.3%	6.4%	8.2%	1.8%	(1.5)%	6.7%	7.8%
Median	2.4%	3.4%	7.7%	9.3%	2.2%	1.2%	6.8%	8.6%	1.9%	(0.7)%	6.8%	8.4%
75th Percentile	2.6%	5.1%	8.3%	9.7%	2.4%	2.1%	7.2%	9.0%	2.5%	1.3%	7.0%	8.8%
Range of Returns	3.5%	17.3%	7.6%	6.7%	2.1%	10.9%	6.9%	4.8%	3.7%	7.0%	3.6%	3.5%
Average	2.4%	3.9%	7.9%	9.3%	2.2%	1.2%	6.8%	8.6%	2.2%	(0.6)%	6.7%	8.1%
Weighted Average	2.3%	3.5%	7.9%	9.5%	2.1%	1.0%	6.6%	8.4%	3.1%	0.0%	6.7%	8.0%

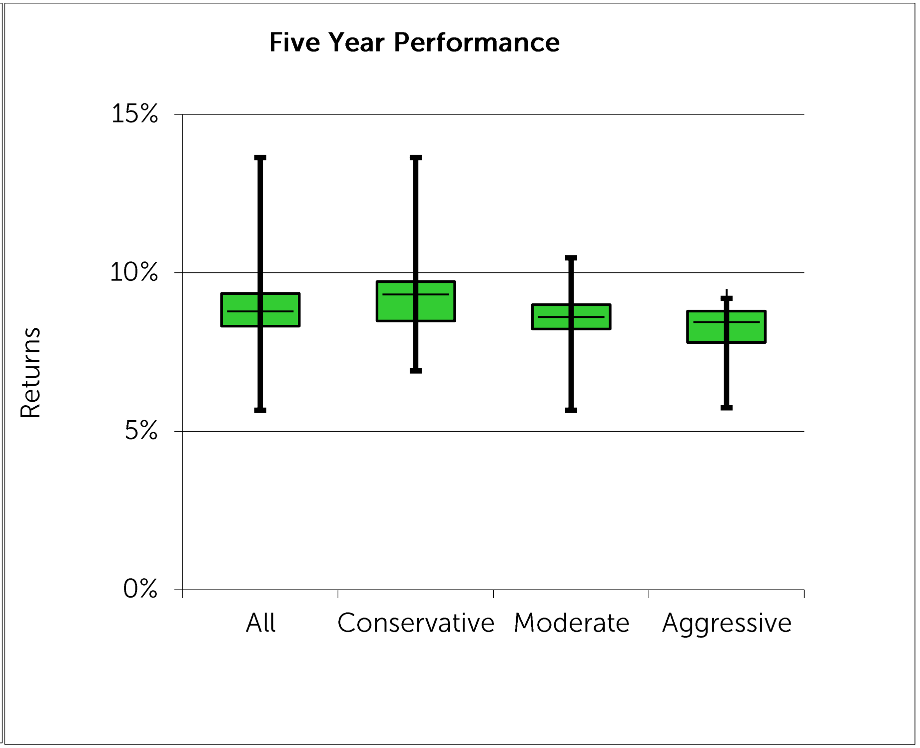
*Annualised return





Analysis and Distribution of Returns





Conservative schemes posted the highest median returns over all periods (3 months, 1 year, 3 year and 5 year), aided by a higher allocation towards Fixed Income that had stable performance over these periods.

Aggressive Schemes had the lowest median return over all periods (3 months, 1 year, 3 year and 5 year), on the background of lower performance from the equity class over these periods. Aggressive schemes have a higher allocation towards equity asset class.

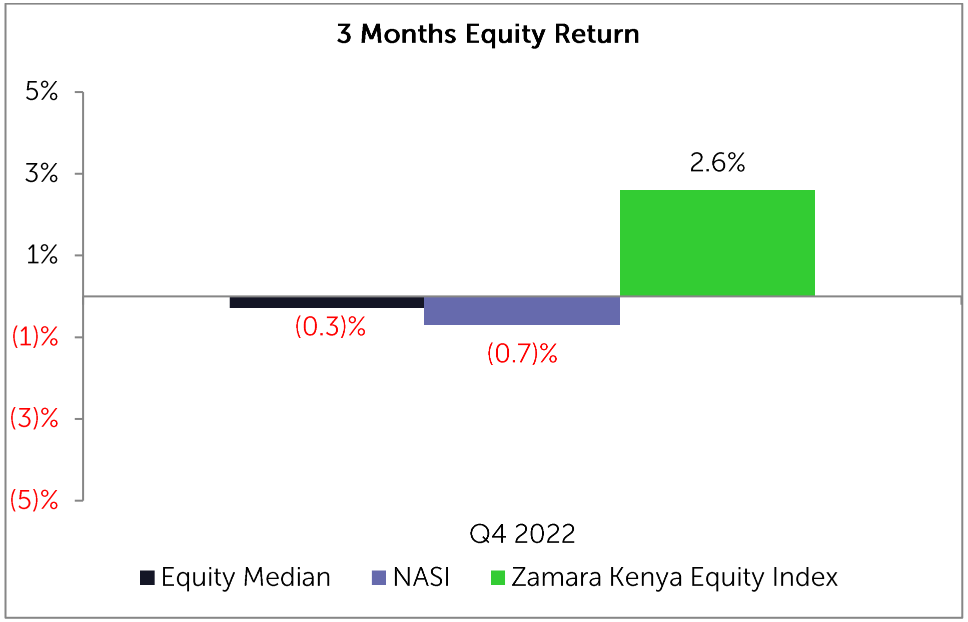
Asset Class Returns for 3 Months Ending 31 December 2022

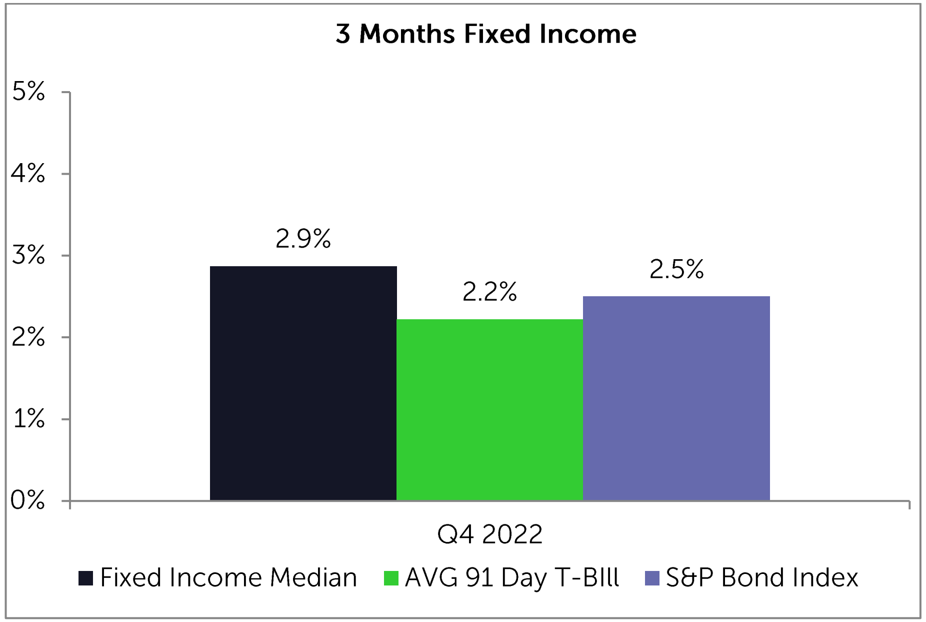
	Equity	Fixed Income	Offshore
25th Percentile	(0.9)%	2.7%	2.4%
Median	(0.3)%	2.9%	4.3%
75th Percentile	0.4%	3.0%	8.9%
Range of Returns	12.9%	3.4%	17.5%
Average	(0.2)%	2.8%	6.0%
Weighted Average	(0.2)%	2.9%	7.6%

Equity: The equity median return underperformed Zamara Kenya Equity Index, while outperforming NASI.

Fixed Income: The fixed income median return outperformed the average 91 Day Treasury Bill and the S&P Bond Index.

Offshore: The offshore median return outperformed MSCI Emerging, MSCI ACWI indices and the MSCI world Index.





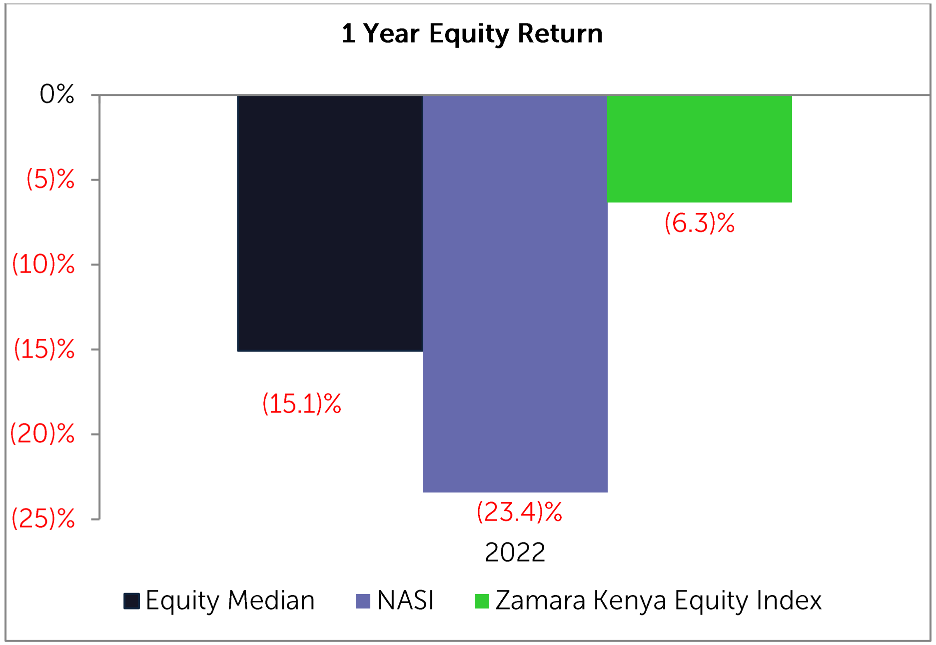
Asset Class Returns for 1 Year Ending 31 December 2022

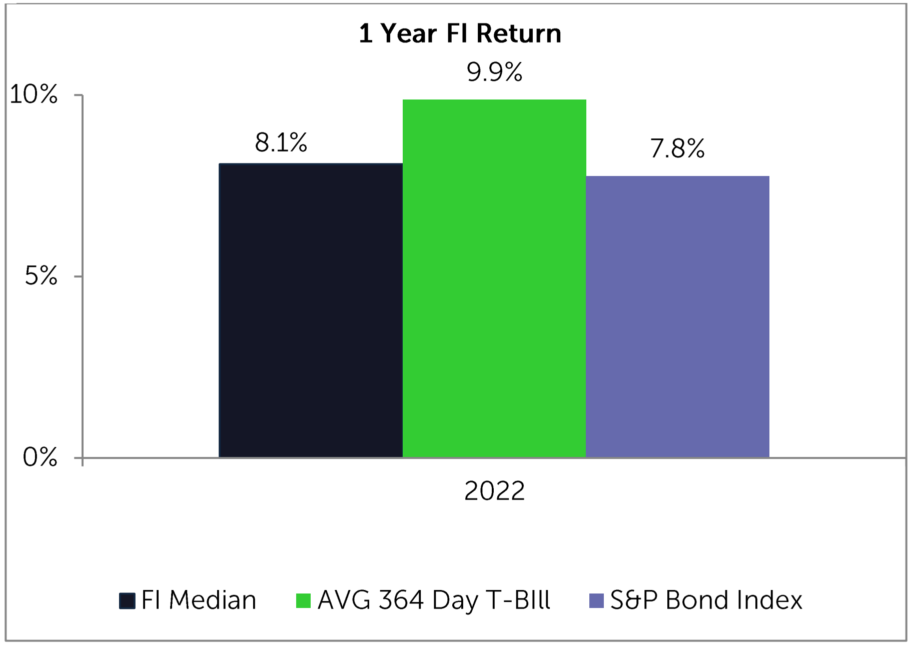
	Equity	Fixed Income	Offshore
25th Percentile	(16.6)%	7.8%	(30.8)%
Median	(15.1)%	8.1%	(27.9)%
75th Percentile	(13.4)%	8.5%	(19.0)%
Range of Returns	35.8%	10.0%	44.5%
Average	(14.8)%	8.2%	(24.0)%
Weighted Average	(14.0)%	8.1%	(21.3)%

Equity: The equity median return outperformed NASI, while underperforming the Zamara Kenya Equity Index.

Fixed Income: The fixed income median return underperformed the average 364 Day Treasury Bill, while outperforming the S&P Bond index.

Offshore: The offshore median return underperformed MSCI ACWI index while outperforming the MSCI world and MSCI Emerging Indices.





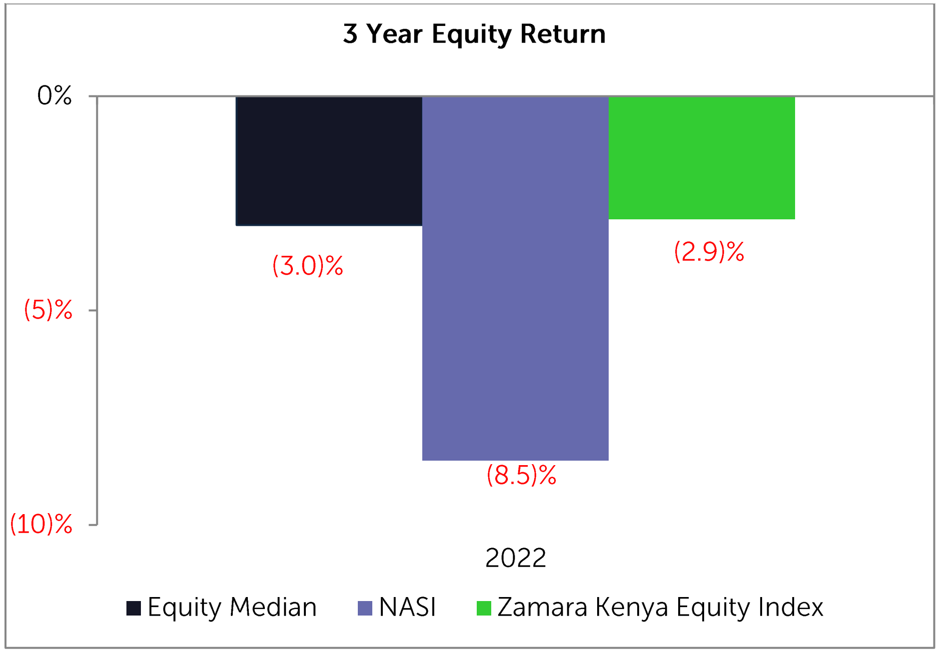
Asset Class Returns for 3 Years Ending 31 December 2022

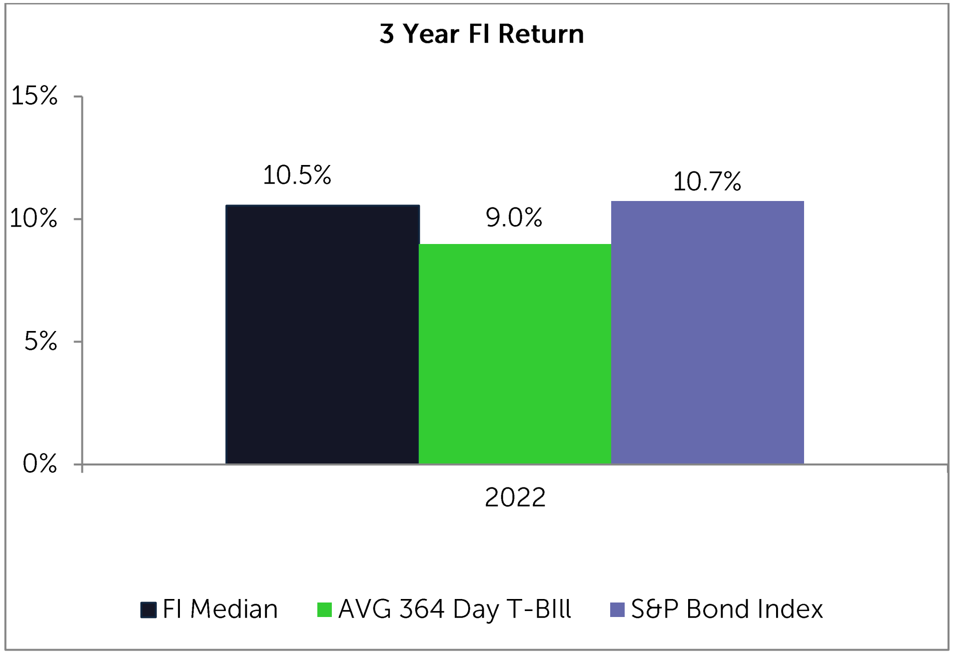
	Equity	Fixed Income	Offshore
25th Percentile	(3.7)%	10.3%	4.1%
Median	(3.0)%	10.5%	7.6%
75th Percentile	(1.7)%	10.8%	10.9%
Range of Returns	22.6%	10.4%	32.1%
Average	(2.1)%	10.5%	6.8%
Weighted Average	(1.4)%	10.6%	8.0%

Equity: The equity median return outperformed the NASI while underperforming the Zamara Kenya Equity Index.

Fixed Income: The fixed income median return outperformed the average 364 Day Treasury Bill but underperformed the S&P Bond Index.

Offshore: The offshore median return out-performed MSCI Emerging, MSCI world and MSCI ACWI Indices.





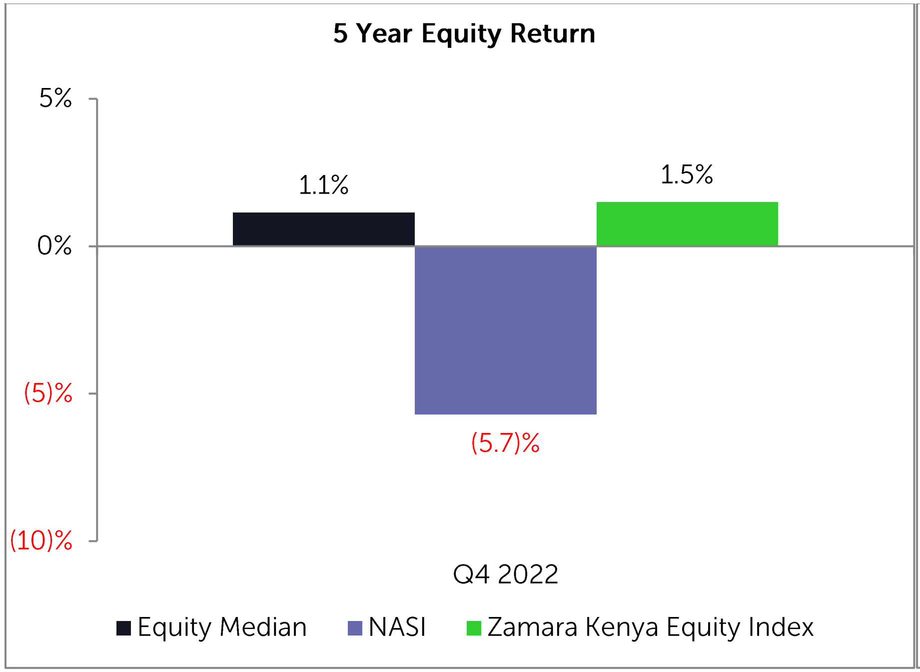
Asset Class Returns for 5 Years Ending 31 December 2022

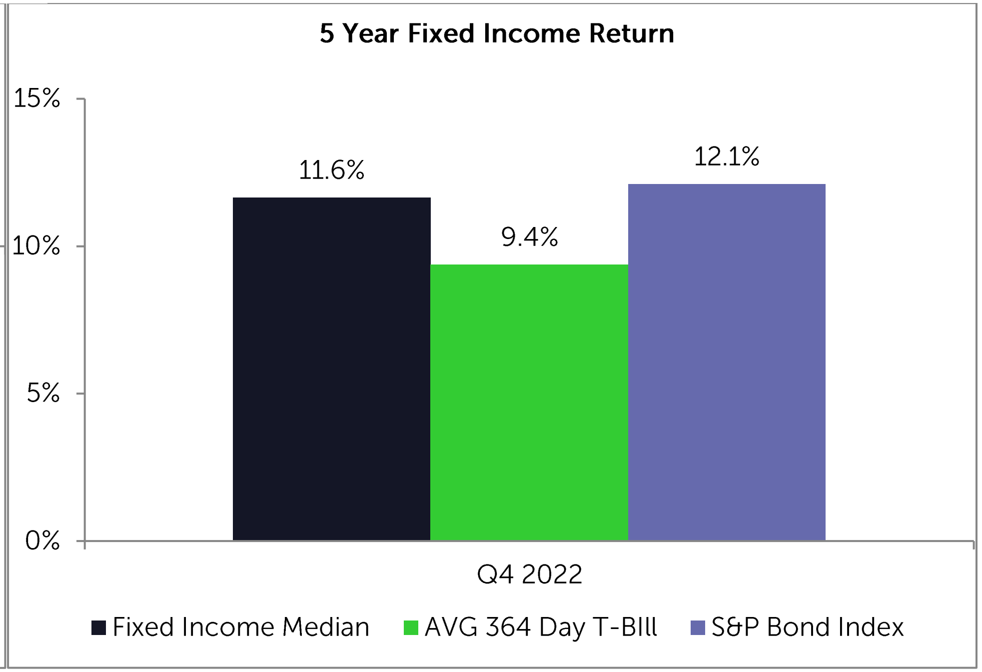
	Equity	Fixed Income	Offshore
25th Percentile	0.2%	11.3%	4.6%
Median	1.1%	11.6%	7.5%
75th Percentile	2.0%	12.0%	9.1%
Range of Returns	12.6%	4.5%	20.4%
Average	1.0%	11.7%	6.6%
Weighted Average	1.0%	11.7%	7.3%

Equity: The equity median return outperformed the NASI while underperforming the Zamara Kenya Equity Index.

Fixed Income: The fixed income median return outperformed the average 364 Day Treasury Bill but underperformed the S&P Bond Index.

Offshore: The offshore median return out-performed MSCI Emerging, MSCI ACWI and MSCI World indices.





Analysis of Asset Allocation for the Period Ending 31 December 2022

Asset Class Allocation																
	All Schemes				Conservative Schemes				Moderate Schemes				Aggressive Schemes			
	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore
Average	18.1%	75.6%	5.2%	1.1%	12.7%	83.1%	3.9%	0.3%	22.3%	70.5%	5.7%	1.5%	30.1%	47.1%	19.0%	3.8%
Weighted Average	18.8%	69.4%	10.5%	1.3%	12.3%	78.3%	9.1%	0.3%	21.8%	67.9%	8.8%	1.5%	26.1%	41.3%	27.2%	5.4%
Range of Allocation	52.5%	96.3%	88.2%	11.5%	19.9%	89.3%	87.2%	6.1%	27.7%	54.7%	67.8%	6.2%	44.5%	61.1%	88.2%	11.5%
Median	18.1%	75.6%	-	-	14.9%	83.5%	-	-	20.2%	68.5%	-	1.2%	29.4%	51.3%	11.7%	3.8%

For comparison, we include the asset allocation figures as shown in our September 2022 report.

Asset Class Allocation																
	All Schemes				Conservative Schemes				Moderate Schemes				Aggressive Schemes			
	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore	Equity	Fixed Income	Property	Offshore
Average	18.4%	74.1%	5.7%	1.8%	12.8%	84.0%	2.5%	0.3%	22.1%	69.4%	7.0%	1.5%	24.4%	39.7%	20.0%	15.9%
Weighted Average	19.5%	68.0%	11.2%	1.3%	12.7%	81.6%	5.3%	0.4%	20.3%	62.6%	16.0%	1.1%	21.7%	39.8%	33.6%	4.9%
Range of Allocation	77.3%	99.2%	88.3%	99.2%	20.0%	71.8%	71.8%	9.6%	27.6%	54.2%	67.2%	6.1%	77.3%	64.1%	88.3%	99.2%
Median	18.7%	77.0%	-	-	15.2%	83.6%	-	-	20.3%	68.8%	-	0.7%	24.4%	46.3%	-	3.9%

21.5% of the Schemes participating in the Survey had an allocation to property.

35.9% of the Schemes participating in the Survey had an allocation to offshore assets.

The Survey indicates that the average scheme's exposure to fixed income increased while allocation to equities and offshore decreased over the quarter.

Historical Economic Indicators

Exchange Rates	Dec-2022	Dec-2021	Dec-2020	Dec-2019	Dec-2018	Dec-2017	Dec-2016	Dec-2015	Dec-2014	Dec-2013
KES/ USD	123.3735	113.1412	109.1718	101.3365	101.8461	103.2317	102.4858	102.3114	90.5978	86.3097
Inflation										
Headline	9.10%	5.73%	5.62%	5.82%	5.71%	4.49%	6.35%	8.01%	6.02%	7.15%
Food	13.80%	9.09%	7.19%	10.02%	2.54%	4.68%	11.22%	13.26%	7.71%	10.41%
Non-food	6.20%	6.24%	3.07%	2.40%	13.47%	5.13%	0.06%	4.81%	4.45%	5.02%
Interest Rates										
Central Bank Rate	8.75%	7.00%	7.00%	8.50%	9.00%	10.00%	10.00%	11.50%	8.50%	8.50%
Interbank Rate	6.49%	4.95%	6.19%	5.46%	6.73%	6.91%	8.20%	6.87%	7.24%	12.19%
Lending Rate			12.02%	12.24%	12.51%	13.64%	13.66%	18.30%	15.99%	16.99%
Government Securities Yields										
AVG 91 Day T-Bill	8.17%	6.95%	6.85%	6.87%	7.75%	8.34%	8.62%	10.58%	8.93%	8.92%
AVG 182 Day T-Bill	8.96%	7.57%	7.50%	7.82%	9.52%	10.43%	10.91%	11.97%	9.73%	9.29%
AVG 364 Day T-Bill	9.88%	8.52%	8.55%	9.48%	10.43%	10.95%	11.70%	12.63%	10.42%	10.79%
Stock Market Indices										
NASI	(23.42)%	9.43%	(8.59)%	18.50%	(17.97)%	28.39%	(8.48)%	(10.55)%	19.20%	44.05%
ZKEI	(6.34)%	20.16%	(18.57)%	33.19%	(11.60)%	29.40%	(7.99)%	(11.08)%	23.89%	41.66%
MSCI World KES	(12.18)%	24.87%	22.52%	24.56%	(11.64)%	20.99%	5.50%	9.83%	8.04%	24.50%
MSCI ACWI KES	(12.55)%	21.66%	22.55%	23.43%	(12.37)%	22.50%	5.81%	8.12%	7.17%	20.64%
MSCI Emerging KES	(15.35)%	0.79%	22.43%	14.85%	(17.76)%	35.33%	8.76%	(6.22)%	0.11%	(4.67)%
Bond Indices										
FTSE Bond Index	_	10.26%	13.03%	14.88%	15.77%	16.50%	13.18%	8.62%	14.34%	10.28%
S&P Sovereign Bond Index	7.77%	9.82%	14.73%	13.55%	24.66%	7.78%	15.30%	5.53%	14.70%	15.87%

Zamara Consulting Actuaries Schemes Survey FAQs

What is the Z - CASS Survey?

The Z - CASS Survey is an industry first initiative of Zamara Actuaries, Administrators and Consultants Limited and analyses the returns of retirement schemes invested in segregated vehicles with both discretionary and non-discretionary mandates. Schemes invested on an insured deposit administration basis are excluded as well as schemes having incomplete performance periods or returns.

What does the Consulting Actuaries Schemes Survey mean to a trustee?

One of the benefits of having a scheme based Survey is that retirement scheme trustees are given the opportunity to compare the performance of their scheme relative to their peers within the broader retirement scheme industry. The Survey considers the returns over a rolling one (1) three (3) year and five (5) year period and trustees can gain valuable insight into how similar sized schemes performed over the same period.

The Survey further analyses the allocation across four broad asset classes: equity, fixed income, property and offshore. The asset class allocation analysis is based on a point in time, which corresponds with the Survey reporting period. The benefit of this is that trustees can gain valuable insight into how similar sized schemes are invested and how asset class allocation contributed to their specific scheme's performance. Attribution performance for property asset class was unavailable from the data provided and hence excluded from the Survey.

Important issues to be aware of

The Survey is based on individual scheme returns rather than fund manager performance. Trustees also need to be aware that the schemes in the Survey differ in terms of their risk profiles, investment mandates and fund manager reporting bases (as a consequence of the absence of a uniform reporting basis by the fund managers). These factors may have an impact on the reported performance. It should also be noted that performance should not be assessed over the short-term and past performance is not necessarily a guide to future performance.

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Glossary of Terms

Annualised
To convert an investment return into an equivalent one-year rate of return.

Asset Class Allocation
The allocation of a scheme's assets between different asset classes. i.e. equity, fixed income and interest, property and offshore investments.

Average
The mean or simple average of the schemes' performance and asset class allocation.

Discretionary Investment Mandate
This refers to the level of freedom (i.e. discretion) given to a fund manager by the trustees to invest the scheme's assets in accordance with the fund manager's best investment view. In many instances broad parameters are set by the trustees but the fund manager has complete autonomy in the investment decision making.

Inflation
Inflation is defined as a continued increase in the general level of prices and represents the cost of living index. Overall inflation includes in the 'basket' fuel and food stuffs, while underlying inflation excludes these from the 'basket'.

Median
The median is the return or weighting of the middle scheme (irrespective of size) when all the schemes' returns and asset allocations are ranked in order of performance or weighting. The median is not skewed by a wide range of returns or asset class weightings.

Non-Discretionary Investment Mandate
This refers to the degree of prescription to how the scheme's assets are invested and is the opposite of a fully discretionary mandate. The Trustees will be involved in the investment decision making and will instruct the fund manager how and in which assets to invest.

Percentile
Or quartile is one quarter of a sample. If returns of a scheme are ranked in a league table, then, for example, a second quartile ranking indicates that 25% of the schemes performed better and 50% achieved a lower return. i.e. the return in the second quarter or 25% of returns.

Performance Attribution
The composite performance broken down between the asset classes to determine how the respective classes contributed to the overall performance i.e. to which asset classes the performance was attributed.

Return
The increase in the value of an investment over a period of time, expressed as a percentage of the value of the investment at the start of the period.

Weighted Average
The mean or average of the schemes weighted according to the size of the assets under management.

Disclaimer

In preparing this Survey, we have used data supplied by the fund managers of the participating schemes. The data has been checked for reasonability where possible. While all possible care is taken in the compilation of the Survey to ensure that this document is accurate in all material respects, reliance is placed on information received from the fund managers.

Whereas the above constitutes the participating schemes per manager in the Survey, it is not representative of the total schemes under management by the various fund managers

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