

Investment Performance Review  
Period Ending March 31, 2022

# **Employees' Retirement System of the City of Norfolk**

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## **1st Quarter 2022 Market Environment**

## The Economy

- The global economy faced headwinds as Russia invaded Ukraine in February. Despite their small percentage of the global GDP, both Russia and Ukraine play significant roles in the global economy. Russia provides most of Europe's energy supplies and combined, both countries account for a large percentage of food supplies.
- Prior to the crisis in Ukraine, the global and US economies were already expected to grow at a slower rate in the 1st quarter. For the 4th quarter 2021, the US GDP grew at an annual rate of 6.9%. Estimates for the 1st quarter 2022 vary significantly, ranging between 0.5% and 2.0%.
- The US labor market remained a source of strength during the 1st quarter with the unemployment rate falling to 3.6% in March. The pace of job growth accelerated during the quarter with a three-month average of roughly +562,000. Importantly, the number of workers re-entering the workforce increased during the quarter with strong wage growth as the likely catalyst.
- The US Federal Reserve Bank (the Fed) began the process of normalizing interest rates by raising the Fed Funds rate by 0.25%. Additionally, the Fed signaled it was ready to begin the process of shrinking its balance sheet by not reinvesting up to \$95 billion of maturing bonds into new securities each month. This process is referred to as "quantitative tightening" and is meant to drain liquidity from the economy with the goal of slowing inflation.

## Equity (Domestic and International)

- US equities declined during the 1st quarter as concerns regarding the conflict in Ukraine and the potential for a slowing global economy acted as headwinds. Large cap value was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while small cap growth performed the worst.
- International stocks also struggled during the 1st quarter. The primary driver of performance was the conflict in Ukraine which significantly affected western Europe and emerging markets. Another contributor to poor performance was the continued strength of the US dollar, which rose against both the Euro and Yen developed market currencies and most emerging market currencies during the period. Finally, China was negatively impacted by a rise in Covid-19 infections which resulted in new restrictions in Shanghai.

## Fixed Income

- Continued concerns about rising inflation, combined with the Fed beginning to raise interest rates acted as headwinds for fixed income performance during the quarter. US interest rates moved significantly higher during the quarter with the US 10-Year Treasury bond rising 83 basis points to close at 2.34%.
- Performance across most bond market sectors was negative during the quarter, with US high yield corporate bonds and US Treasury Inflation-Protected Securities (TIPS) down the least.
- The combination of higher coupons and a shorter maturity profile relative to high quality government bonds was the primary driver of the relative outperformance of high yield bonds during the period.
- TIPS continued their strong relative performance against all other bond market sectors during the quarter. Investors' expectations of higher future US inflation remained strong as inflation remained well above the Fed's stated 2% long-term target average.

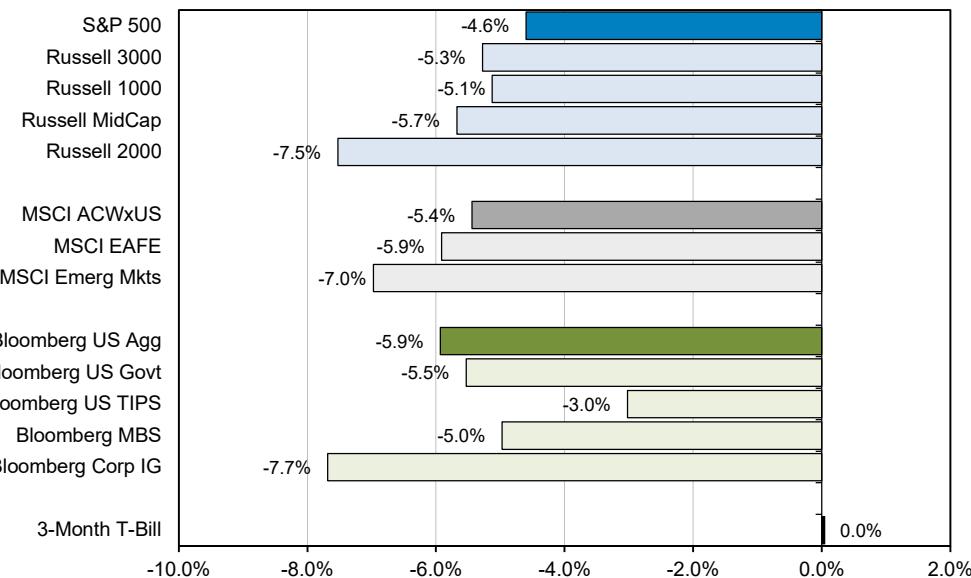
## Market Themes

- The tone of global central bank monetary policy shifted during the quarter as the Fed and the Bank of England both raised interest rates during the period. Additionally, the European Central Bank announced it would begin tightening monetary policy by slowing its bond purchases.
- The crisis in Ukraine will likely be a drag on global economic growth for the foreseeable future. Restrictions on Russian energy exports, especially to western Europe, will likely result in a material slowdown of those economies as a result of higher prices.
- US equity markets experienced their first down quarter since the onset of the pandemic in the 1st quarter of 2020. Growth-oriented stocks underperformed value stocks as investors' concerns about future economic growth increased. Historically, value stocks have outperformed growth stocks during economic slowdowns marked by recession.
- Interest rates rose across the Treasury yield curve during the quarter in anticipation of the Fed raising interest rates. As a result of their maturity profile, longer-dated bonds significantly underperformed shorter-dated bonds despite yields rising only modestly in comparison. Lower quality corporate bonds outperformed given their higher coupons and shorter maturity profiles despite concerns about widening credit spreads as economic conditions deteriorate.

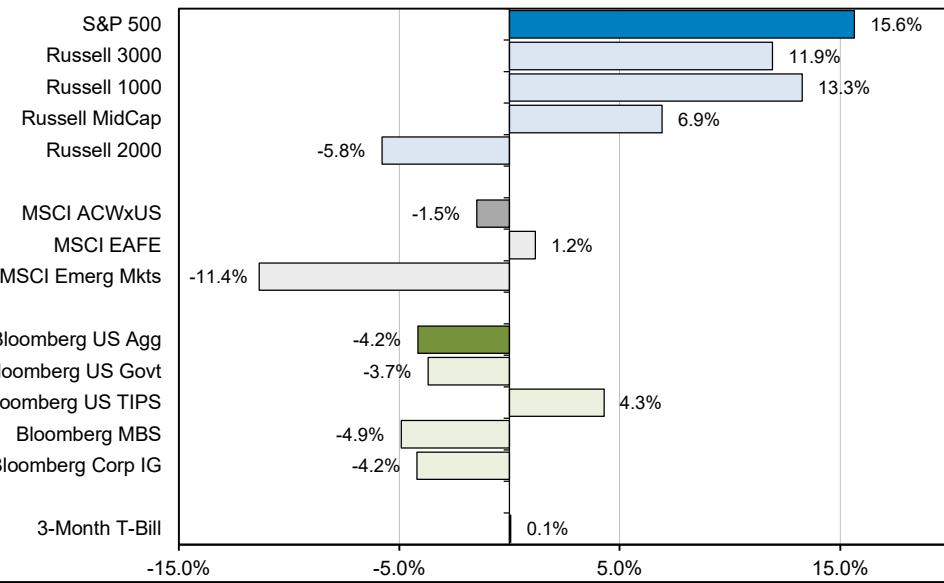


- Broad US equity markets experienced weak, negative returns during the 1st quarter of 2022. A variety of factors contributed to performance including elevated inflation, rising interest rate expectations, geopolitical events in Ukraine, and concerns related to slower economic growth. For the period, the S&P 500 large cap benchmark returned -4.6%, compared to -5.7% for mid-cap and -7.5% for small cap indices.
- Developed markets international equities also suffered negative results for the 1st quarter. Europe was negatively impacted by the crisis in Ukraine, rising energy costs, and continued rising inflation. Emerging markets were also negatively impacted by Russia's invasion of Ukraine. Emerging markets were also impacted by the rise of Covid-19 cases in China and resulting restrictions. During the period, the MSCI EAFE Index returned -5.9% while the MSCI Emerging Markets Index declined by -7.0%.
- For the quarter, performance of the bond market was broadly negative due to increasing inflation and expectations that global central banks would begin the process of raising interest rates. The Bloomberg (BB) US Aggregate Index returned -5.9%, for the period while Investment Grade Corporate bonds posted a return of -7.7%. The best performing sector on a relative basis was US TIPS which declined by -3.0%.
- Despite the recent poor performance, developed equity markets posted strong returns over the trailing 1-year period. The primary drivers of return during the period were economic growth and an accommodative monetary policy support from global central banks. The S&P 500 large cap stock index led equity market performance for the year with a return of 15.6%. The outlier was the Russell 2000 small cap index which declined by -5.8% for the year.
- Over the trailing 1-year period performance across international markets diverged with the developed market MSCI EAFE Index returning 1.2% while the MSCI Emerging Markets Index fell by -11.4%. While economic growth improved throughout the year, emerging markets were negatively impacted by geopolitical events related to Russia, Ukraine, and China.
- Bond market returns disappointed over the trailing 1-year period due to rising inflation and the expectation of multiple interest rates increases. TIPS were the lone bright spot in the bond market with the TIPS Index returning 4.3% for the year.

### Quarter Performance

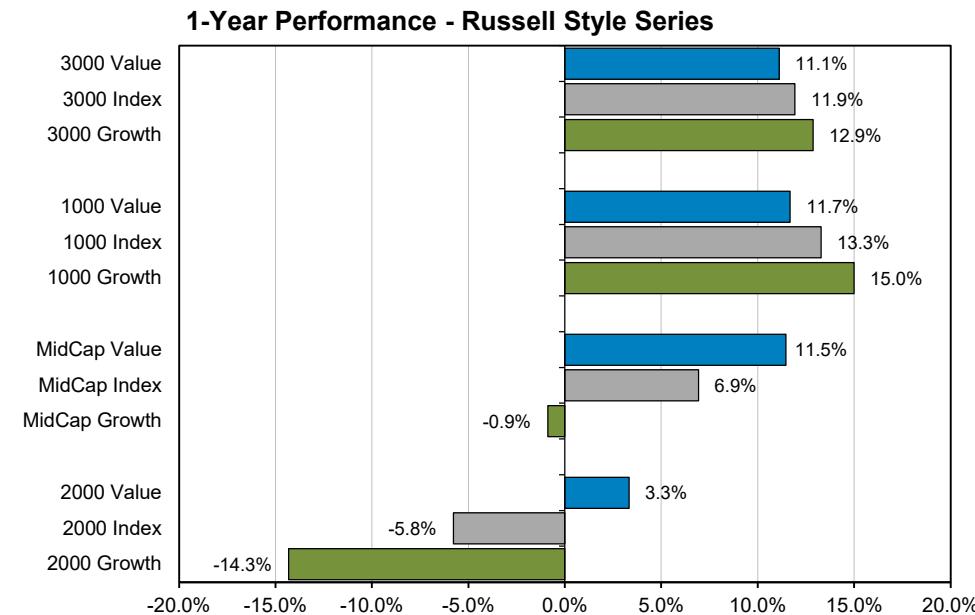
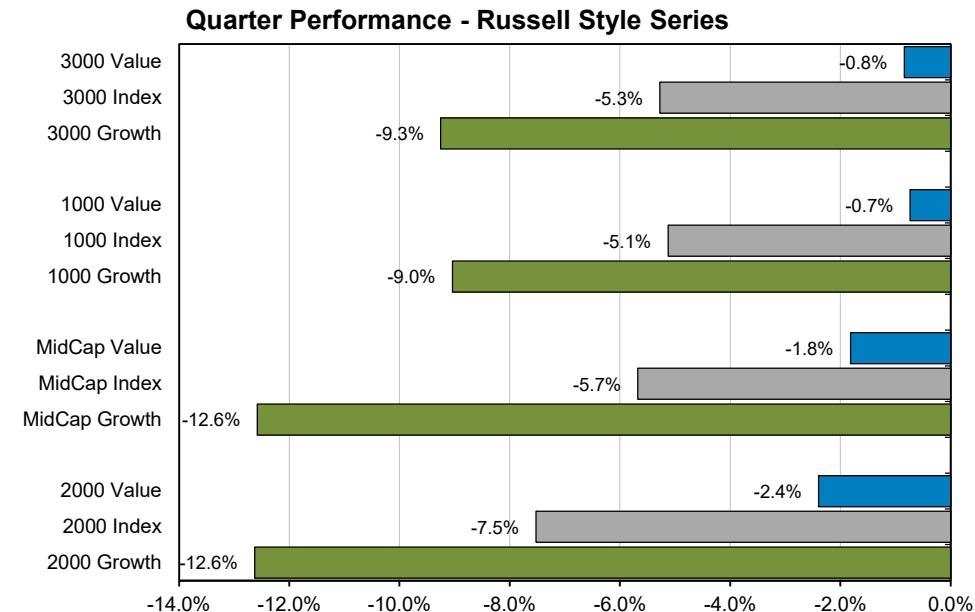


### 1-Year Performance



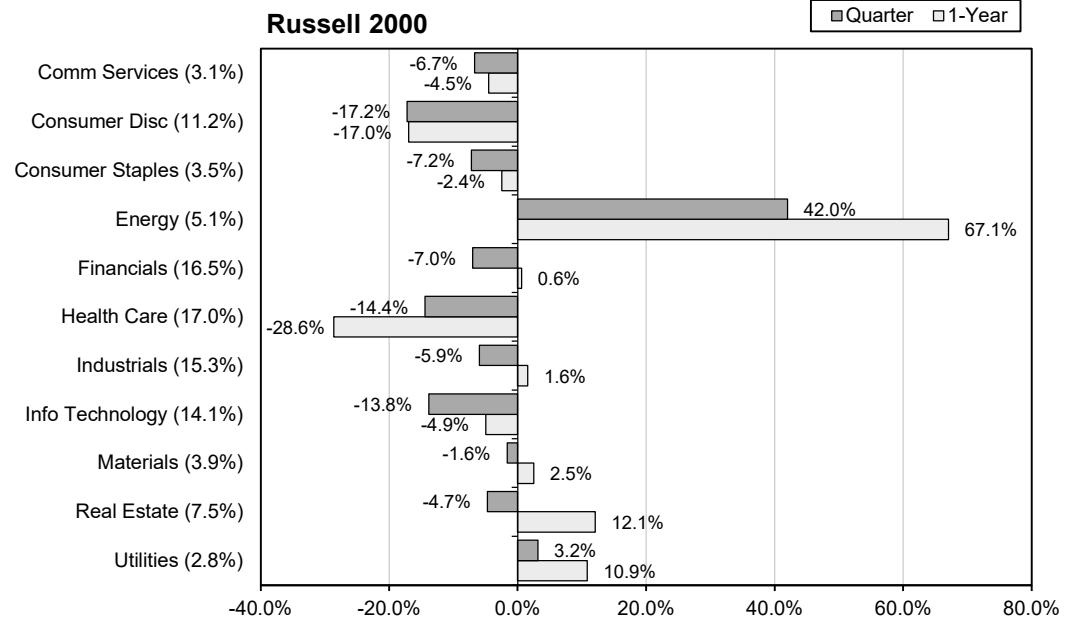
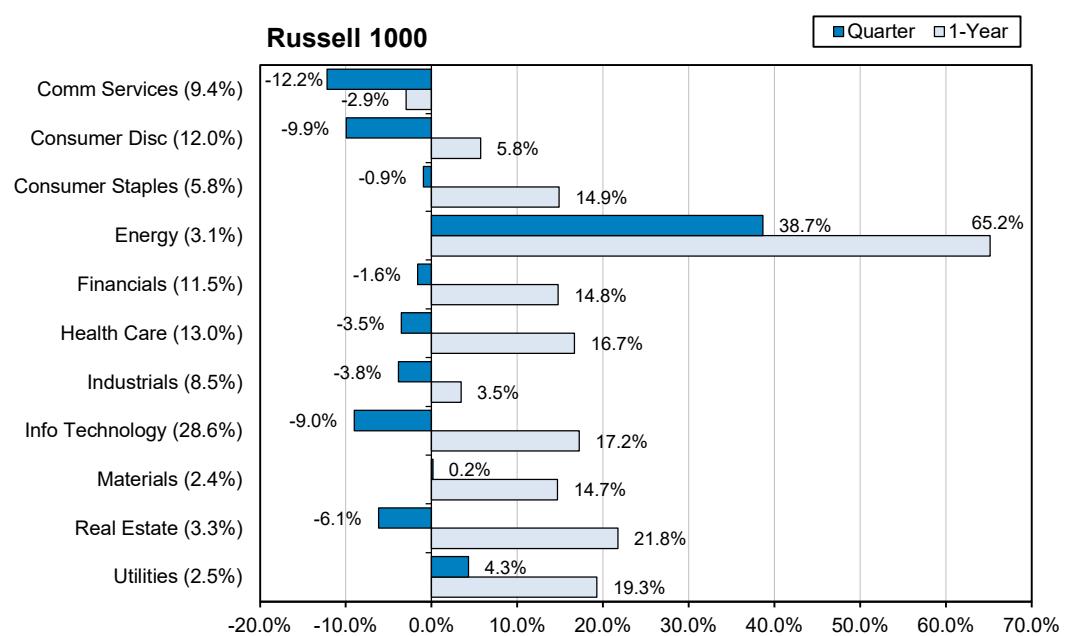
Source: Investment Metrics

- Momentum shifted during the 1st quarter as each broad US equity benchmark posted negative results across both the style and market capitalization spectrums. Large cap stocks continued their leadership, followed by mid and small cap issues. The Russell 1000 Index declined by -5.1% for the quarter while the Russell Mid Cap Index and the Russell 2000 Index fell by -5.7% and -7.5%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, Mid, Small cap value stocks all sizably outpaced their growth counterparts. For the period, the Russell 1000 Value Index was the best relative performing style index, posting a return of -0.7%. Mid cap and small cap growth stocks were the laggards during the period with both the Mid Cap Growth Index and Russell 2000 Growth Index returning a weak -12.6%.



Source: Investment Metrics

- Economic sector performance was negative across eight of the eleven large cap economic sectors for the 1st quarter. However, the three positive sectors represent less than 10% of the index. Four additional sectors outpaced the return of the broad index on a relative basis during the period.
- Energy (38.7%), utilities (4.3%), and materials (0.2%) were the best performing sectors for the quarter. Energy continued its relative outperformance during the quarter as the price of oil remained elevated. Economically sensitive sectors such as communication services (-12.2%), consumer discretionary (-9.9%), and information technology (-9.0%) significantly underperformed the broader index for the quarter.
- For the full year, eight sectors exceeded the return of the broad large cap benchmark: energy (65.2%), real estate (21.8%), utilities (19.3%), information technology (17.2%), health care (16.7%), consumer staples (14.9%), financials (14.8%), and materials (14.7%). The weakest economic sector performance in the Russell 1000 for the year was communication services, which was the lone sector to deliver negative returns (-2.9%).



Source: Morningstar Direct

As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of March 31, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.38%	-1.5%	43.8%	Information Technology
Microsoft Corp	5.50%	-8.1%	31.8%	Information Technology
Amazon.com Inc	3.35%	-2.2%	5.4%	Consumer Discretionary
Tesla Inc	2.12%	2.0%	61.3%	Consumer Discretionary
Alphabet Inc Class A	1.98%	-4.0%	34.9%	Communication Services
Alphabet Inc Class C	1.83%	-3.5%	35.0%	Communication Services
NVIDIA Corp	1.54%	-7.2%	104.6%	Information Technology
Berkshire Hathaway Inc Class B	1.53%	18.0%	38.1%	Financials
Meta Platforms Inc Class A	1.21%	-33.9%	-24.5%	Communication Services
UnitedHealth Group Inc	1.13%	1.9%	38.9%	Health Care

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Ovintiv Inc	0.52%	61.4%	130.9%	Energy
AMC Entertainment Hldgs Inc Class A	0.47%	-9.4%	141.3%	Communication Services
Avis Budget Group Inc	0.40%	27.0%	263.0%	Industrials
BJ's Wholesale Club Holdings Inc	0.34%	1.0%	50.7%	Consumer Staples
Chesapeake Energy Corp Ord Shrs	0.33%	37.6%	108.8%	Energy
Tenet Healthcare Corp	0.33%	5.2%	65.3%	Health Care
Tetra Tech Inc	0.33%	-2.7%	22.2%	Industrials
Antero Resources Corp	0.32%	74.5%	199.3%	Energy
Lattice Semiconductor Corp	0.30%	-20.9%	35.4%	Information Technology
EastGroup Properties Inc	0.30%	-10.3%	44.8%	Real Estate

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Occidental Petroleum Corp	0.11%	96.2%	113.9%	Energy
New Fortress Energy Inc Class A	0.00%	77.1%	-6.0%	Energy
The Mosaic Co	0.06%	69.6%	112.2%	Materials
Halliburton Co	0.08%	66.2%	78.2%	Energy
United States Steel Corp	0.02%	58.9%	44.9%	Materials
EQT Corp	0.02%	58.6%	86.2%	Energy
APA Corp	0.04%	54.3%	133.0%	Energy
Marathon Oil Corp	0.05%	53.4%	138.6%	Energy
Baker Hughes Co Class A	0.06%	52.4%	73.5%	Energy
Alcoa Corp	0.04%	51.3%	178.0%	Materials

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
NexTier Oilfield Solutions Inc	0.06%	160.3%	148.4%	Energy
Peabody Energy Corp	0.08%	143.6%	701.6%	Energy
RPC Inc	0.03%	135.0%	97.6%	Energy
SOC Telemed Inc Ord Shrs - Class A	0.01%	133.6%	-52.5%	Health Care
Kosmos Energy Ltd	0.12%	107.8%	134.2%	Energy
Tidewater Inc	0.03%	103.0%	73.5%	Energy
Team Inc	0.00%	102.8%	-80.8%	Industrials
Golar LNG Ltd	0.09%	100.0%	142.2%	Energy
US Silica Holdings Inc	0.05%	98.5%	51.8%	Energy
Intrepid Potash Inc	0.03%	92.2%	152.3%	Materials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Vroom Inc Ordinary Shares	0.00%	-75.3%	-93.2%	Consumer Discretionary
GoHealth Inc Ordinary Shares - Class A	0.00%	-68.9%	-89.9%	Financials
TuSimple Hldgs Inc Ord Shrs - Class A	0.00%	-66.0%	N/A	Industrials
Fluence Energy Inc	0.00%	-63.1%	N/A	Industrials
Nektar Therapeutics	0.00%	-60.1%	-73.1%	Health Care
Skillz Inc Ordinary Shares - Class A	0.00%	-59.7%	-84.2%	Communication Services
Natera Inc	0.01%	-56.4%	-59.9%	Health Care
EPAM Systems Inc	0.04%	-55.6%	-25.2%	Information Technology
Trex Co Inc	0.02%	-51.6%	-28.6%	Industrials
Rivian Automotive Inc Class A	0.02%	-51.5%	N/A	Consumer Discretionary

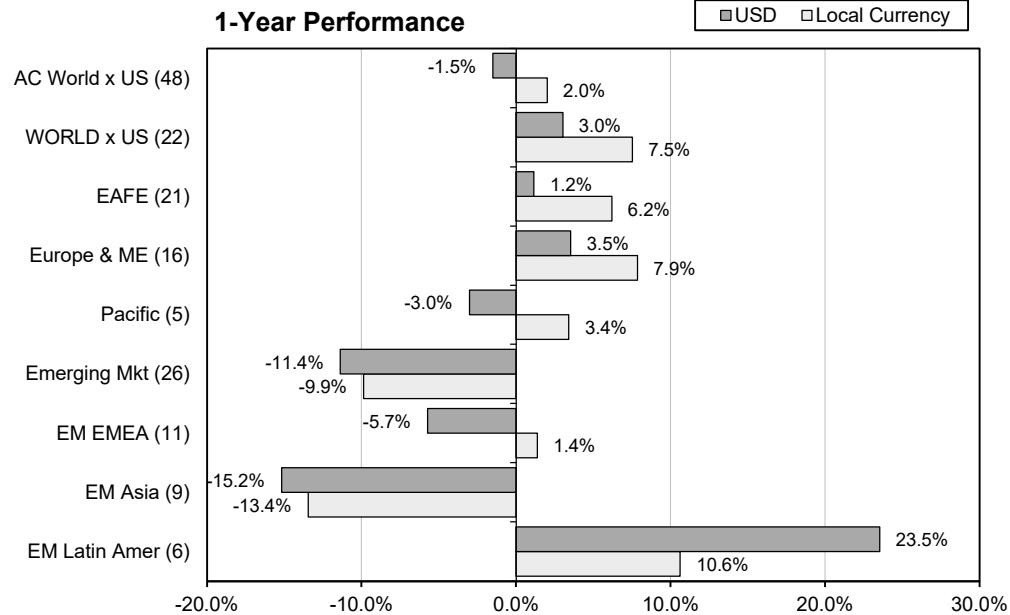
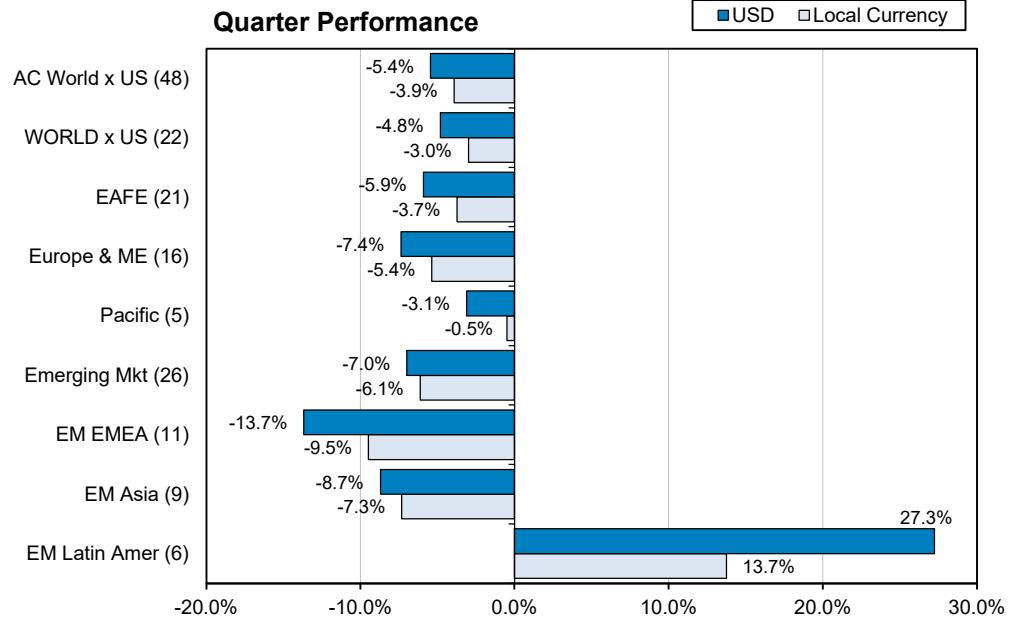
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Kodiak Sciences Inc	0.01%	-90.9%	-93.2%	Health Care
Aligos Therapeutics Inc Ord Shares	0.00%	-81.9%	-90.5%	Health Care
MEI Pharma Inc	0.00%	-77.4%	-82.4%	Health Care
Applied Therapeutics Inc	0.00%	-76.4%	-88.7%	Health Care
Annexon Inc Ordinary Shares	0.00%	-76.2%	-90.2%	Health Care
BioAtla Inc Ordinary Shares	0.00%	-74.5%	-90.2%	Health Care
Accelerate Diagnostics Inc	0.00%	-72.4%	-82.7%	Health Care
Laird Superfood Inc Ordinary Shares	0.00%	-72.3%	-90.4%	Consumer Staples
Society Pass Inc	0.00%	-71.5%	N/A	Communication Services
89bio Inc Ordinary Shares	0.00%	-71.2%	-84.1%	Health Care

Source: Morningstar Direct



**The Market Environment**  
**International and Regional Market Index Performance (Country Count)**  
**As of March 31, 2022**

- Most developed market international equity indexes tracked in the chart posted negative returns in both US dollar (USD) and local currency (LC) terms for the 1st quarter. The outlier during the period was the Latin America region. This strong performance was led by Brazil which benefited from rising commodity prices. The developed market MSCI EAFE Index returned -5.9% in USD and -3.7% in LC terms for the period, while the MSCI Emerging Markets Index declined by -7.0% in USD and -6.1% in LC terms.



Source: MSCI Global Index Monitor (Returns are Net)

**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
**As of March 31, 2022**

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.9%	-1.7%	-10.8%
Consumer Discretionary	11.5%	-13.6%	-9.6%
Consumer Staples	10.2%	-7.7%	1.7%
Energy	4.1%	17.0%	30.0%
Financials	17.7%	-1.1%	5.1%
Health Care	13.1%	-3.7%	8.9%
Industrials	15.4%	-10.7%	-3.8%
Information Technology	8.6%	-16.1%	-1.0%
Materials	8.2%	3.3%	8.4%
Real Estate	2.9%	-2.7%	-1.2%
Utilities	3.4%	-4.1%	-1.7%
<b>Total</b>	<b>100.0%</b>	<b>-5.9%</b>	<b>1.2%</b>

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.2%	-6.1%	-16.6%
Consumer Discretionary	11.1%	-14.3%	-21.2%
Consumer Staples	8.4%	-7.2%	0.2%
Energy	5.4%	6.9%	22.9%
Financials	20.6%	1.6%	9.1%
Health Care	9.4%	-5.1%	2.3%
Industrials	12.2%	-8.6%	-1.9%
Information Technology	12.2%	-15.1%	-5.4%
Materials	8.9%	5.2%	9.5%
Real Estate	2.5%	-2.8%	-8.1%
Utilities	3.2%	-2.4%	2.0%
<b>Total</b>	<b>100.0%</b>	<b>-5.4%</b>	<b>-1.5%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.1%	-11.3%	-23.6%
Consumer Discretionary	12.3%	-16.4%	-38.8%
Consumer Staples	5.8%	-7.9%	-9.9%
Energy	4.8%	-20.7%	-6.7%
Financials	22.1%	5.7%	10.7%
Health Care	3.9%	-14.0%	-27.8%
Industrials	5.4%	-2.7%	2.7%
Information Technology	21.6%	-11.2%	-6.8%
Materials	9.4%	3.2%	3.4%
Real Estate	2.1%	-1.8%	-27.6%
Utilities	2.6%	-0.2%	10.2%
<b>Total</b>	<b>100.0%</b>	<b>-7.0%</b>	<b>-11.4%</b>

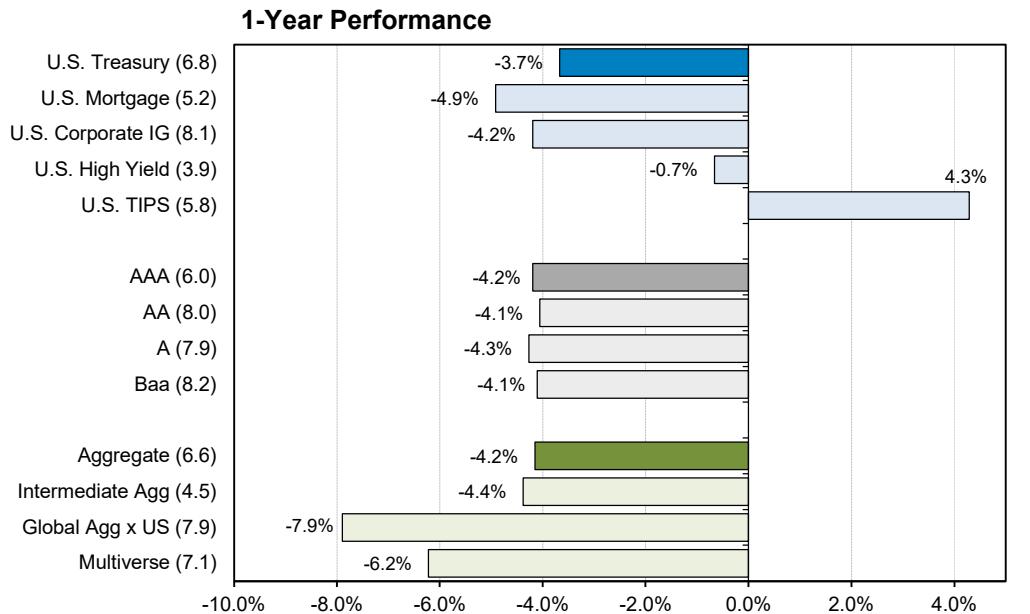
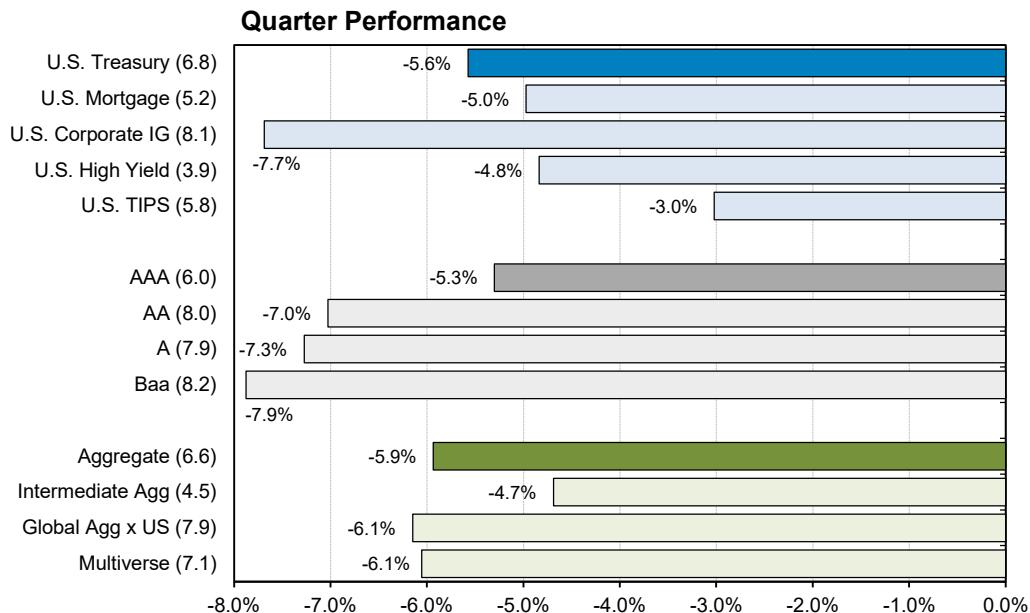
Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	22.3%	14.1%	-6.6%	-6.5%
United Kingdom	15.3%	9.6%	1.8%	13.6%
France	11.4%	7.2%	-8.7%	4.5%
Switzerland	10.4%	6.6%	-6.4%	13.9%
Germany	8.2%	5.2%	-12.9%	-12.0%
Australia	8.2%	5.1%	7.3%	13.5%
Netherlands	4.4%	2.8%	-17.4%	-5.2%
Sweden	3.6%	2.2%	-15.5%	-7.4%
Hong Kong	2.9%	1.8%	-1.8%	-12.0%
Denmark	2.7%	1.7%	-6.4%	14.9%
Italy	2.4%	1.5%	-10.1%	-2.7%
Spain	2.3%	1.5%	-4.1%	-3.7%
Singapore	1.5%	0.9%	-1.7%	-4.6%
Finland	1.0%	0.6%	-11.9%	-2.6%
Belgium	0.9%	0.6%	-4.9%	-0.3%
Norway	0.8%	0.5%	10.2%	21.1%
Israel	0.7%	0.5%	-6.9%	7.6%
Ireland	0.6%	0.4%	-20.1%	-17.7%
Portugal	0.2%	0.1%	2.3%	7.1%
Austria	0.2%	0.1%	-20.0%	3.6%
New Zealand	0.2%	0.1%	-8.7%	-15.2%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>63.1%</b>	<b>-5.9%</b>	<b>1.2%</b>
Canada			8.3%	4.6%
<b>Total Developed Countries</b>	<b>71.4%</b>	<b>4.8%</b>	<b>3.0%</b>	
China		8.6%	-14.2%	-32.5%
Taiwan		4.6%	-6.6%	6.3%
India		3.7%	-1.9%	17.9%
Korea		3.6%	-9.6%	-18.5%
Brazil		1.7%	35.9%	24.7%
Saudi Arabia		1.2%	17.3%	38.7%
South Africa		1.2%	20.3%	11.1%
Mexico		0.7%	8.6%	27.7%
Thailand		0.5%	4.2%	-1.6%
Indonesia		0.5%	9.6%	21.0%
Malaysia		0.4%	2.0%	1.5%
United Arab Emirates		0.4%	21.2%	58.1%
Qatar		0.3%	19.5%	34.4%
Kuwait		0.2%	19.4%	45.7%
Philippines		0.2%	2.2%	9.9%
Poland		0.2%	-9.8%	5.8%
Chile		0.2%	29.5%	-8.3%
Peru		0.1%	34.9%	20.9%
Turkey		0.1%	12.9%	1.6%
Colombia		0.1%	33.8%	39.3%
Greece		0.1%	1.1%	7.6%
Hungary		0.1%	-19.4%	-10.0%
Czech Republic		0.0%	3.1%	51.5%
Egypt		0.0%	-23.4%	-14.3%
<b>Total Emerging Countries</b>	<b>28.6%</b>	<b>-7.0%</b>	<b>-11.4%</b>	
<b>Total ACWIxUS Countries</b>	<b>100.0%</b>	<b>-5.4%</b>	<b>-1.5%</b>	

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

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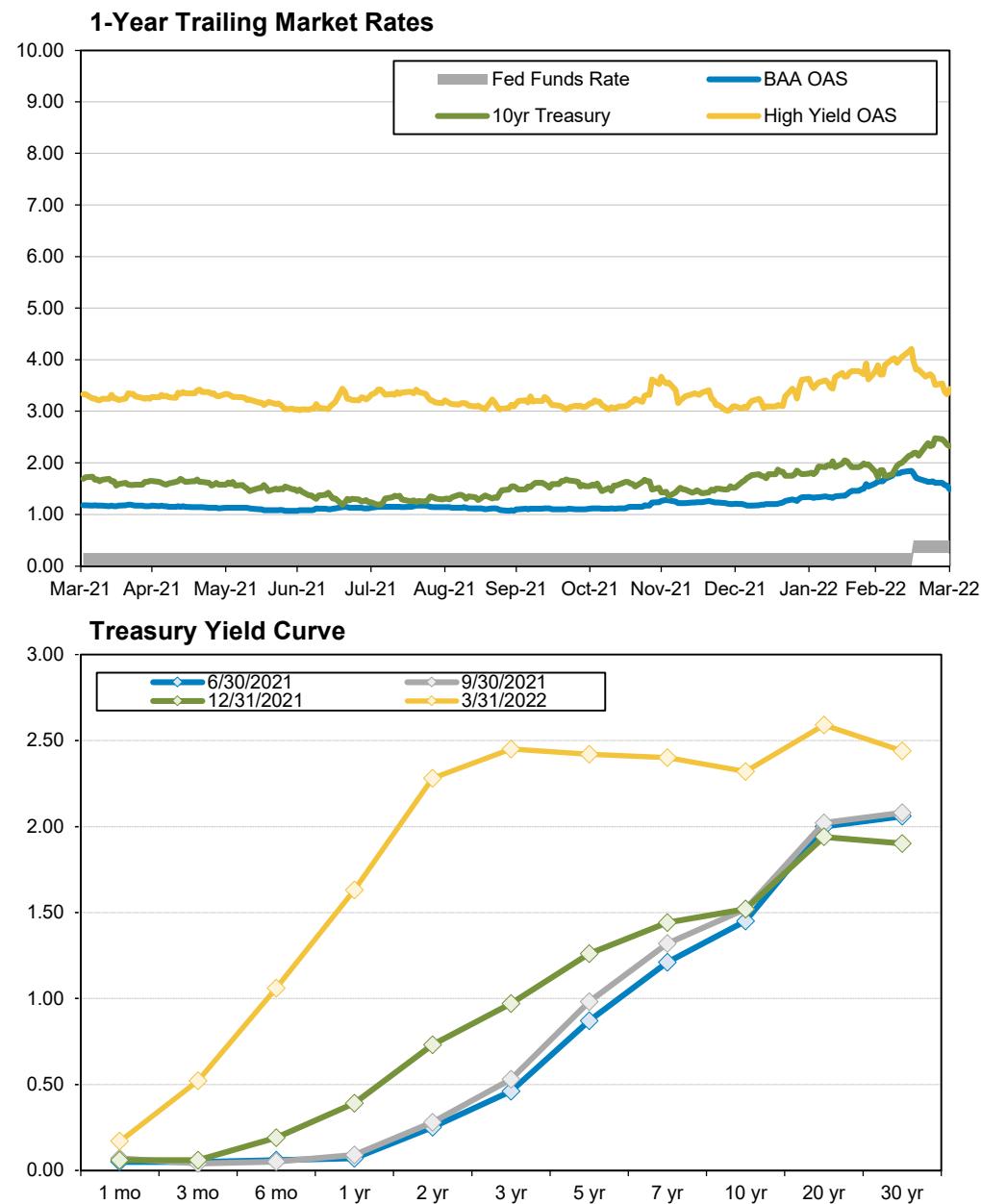


- Fixed income market results were broadly negative during the 1st quarter. Investors' concerns about rising inflation, combined with expectations of higher US interest rates, detracted from performance. US Treasury yields were higher across the maturity curve but remained below their long-term averages.
- The return for the BB US Aggregate Bond Index, the bellwether investment grade benchmark, was down -5.9% for the period.
- Performance across the investment grade index's segments was also negative during the period with the US Corporate Investment Grade bonds returning -7.7% and the US Mortgage index component posting a return of -5.0%.
- US TIPS posted the quarter's strongest relative bond performance with a return of -3.0%. High yield bonds outperformed their investment grade counterparts, but still declined by -4.8%.
- Outside of domestic markets, the BB Global Aggregate ex US Index posted a return of -6.1% for the quarter. Like international stocks, global bond index performance was negatively impacted by the strengthening USD, which acted as a drag on domestic index returns.



Source: Bloomberg

- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 1st quarter this year, the Fed raised its target rate range from 0.25% to 0.50%. During its recent March meeting, the Federal Open Market Committee (FOMC) stated it intends to begin removing liquidity from the market by also allowing bonds held on its balance sheet to mature without reinvesting those proceeds. Importantly, the FOMC also stated that it will react to data and could potentially raise rates at a faster pace if inflation does not subside.
- The yield on the US 10-year Treasury (green line) ended the period higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields higher. After reaching a high of 2.47% during the latter part of March 2022, interest rates traded lower for the remainder of the quarter. The yield on the US 10-year Treasury was 2.34% on March 31st.
- The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.18% to 1.49%. High Yield OAS was largely unchanged during the year as spreads rose from 3.33% to 3.43%. High Yield spreads briefly exceeded 4.00% following the onset of the crisis in Ukraine, but quickly retreated.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates rose dramatically during the 1st quarter of 2022 in anticipation that the FOMC would begin raising rates to combat rising inflation. Longer-term rates were modestly higher, albeit less dramatically than either short- or intermediate-term interest rates. While not shown in the chart, 10-Year rates briefly traded below the 2-Year rates. Historically, a persistent inversion of these two key rates has been an indication of a future recession within 6- to 24-months. As of the end of the quarter, the spread between 2-Year and 10-Year rates was positive. However, 10-Year rates were trading lower than the intermediate 3- and 5-year rates.



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

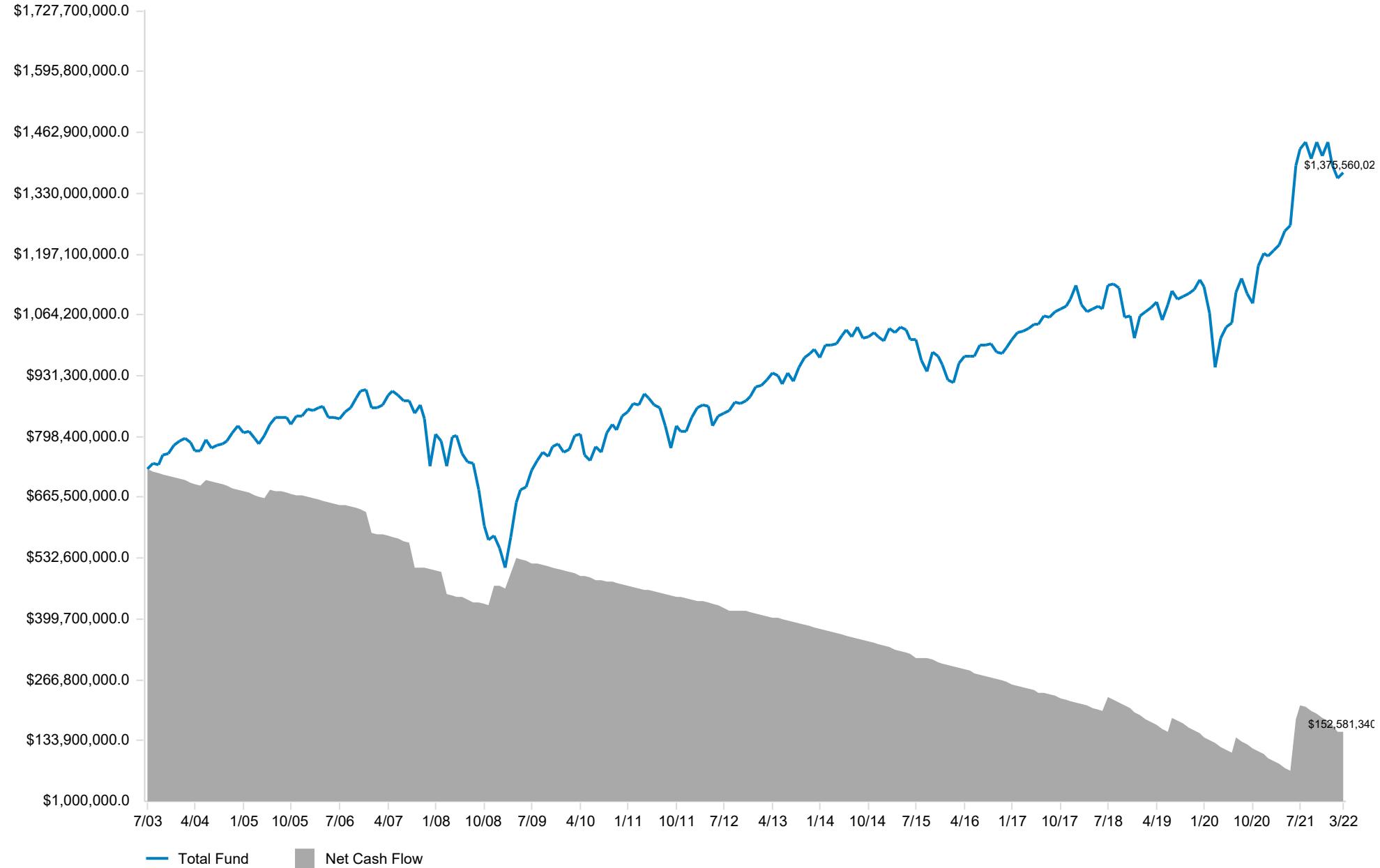
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Annual Asset Class Performance																
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	
Best ↑	Bloomberg Barc US Agg 5.2 %	MSCI Emerging Mkts (Net) 78.5 %	Russell 2000 Growth 29.1 %	NCREIF ODCE (EW) (Net) 15.0 %	MSCI Emerging Mkts (Net) 18.2 %	Russell 2000 Growth 43.3 %	S&P 500 13.7 %	NCREIF ODCE (EW) (Net) 14.2 %	Russell 2000 Value 31.7 %	MSCI Emerging Mkts (Net) 37.3 %	NCREIF ODCE (EW) (Net) 7.3 %	Russell 1000 Growth 36.4 %	Russell 1000 Growth 38.5 %	S&P 500 28.7 %	NCREIF ODCE (EW) (Net) 7.8 %	
	Bloomberg Barc Global Agg Ex USD 4.4 %	Bloomberg Barc US Corp High Yield 58.2 %	Russell 2000 Value 24.5 %	Bloomberg Barc US Agg 7.8 %	Russell 2000 Value 18.1 %	Russell 2000 Value 34.5 %	Russell 1000 Value 13.5 %	Russell 1000 Growth 5.7 %	Russell 1000 Value 17.3 %	Russell 1000 Growth 30.2 %	Bloomberg Barc US Agg 0.0 %	S&P 500 31.5 %	Russell 2000 Growth 34.6 %	Russell 2000 Value 28.3 %	Russell 1000 Value -0.7 %	
	NCREIF ODCE (EW) (Net) -11.1 %	Russell 1000 Growth 37.2 %	MSCI Emerging Mkts (Net) 18.9 %	Bloomberg Barc US Corp High Yield 5.0 %	Russell 1000 Value 17.5 %	Russell 1000 Growth 33.5 %	Russell 1000 Growth 13.1 %	S&P 500 1.4 %	Bloomberg Barc US Corp High Yield 17.1 %	MSCI EAFE (Net) 25.0 %	Russell 1000 Growth -1.5 %	Russell 2000 Growth 28.5 %	S&P 500 18.4 %	Russell 1000 Growth 27.6 %	Russell 2000 Value -2.4 %	
	Strategic Policy -23.5 %	Russell 2000 Growth 34.5 %	Russell 1000 Growth 16.7 %	Bloomberg Barc Global Agg Ex USD 4.4 %	MSCI EAFE (Net) 17.3 %	Russell 1000 Value 32.5 %	NCREIF ODCE (EW) (Net) 11.4 %	Bloomberg Barc US Agg 0.5 %	S&P 500 12.0 %	Russell 2000 Growth 22.2 %	Bloomberg Barc US Corp High Yield -2.1 %	Russell 1000 Value 26.5 %	MSCI Emerging Mkts (Net) 18.3 %	Russell 1000 Value 25.2 %	Strategic Policy -2.9 %	
	Bloomberg Barc US Corp High Yield -26.2 %	MSCI EAFE (Net) 31.8 %	Russell 1000 Value 15.5 %	Russell 1000 Growth 2.6 %	S&P 500 16.0 %	S&P 500 32.4 %	Strategic Policy 6.2 %	MSCI EAFE (Net) -0.8 %	Russell 2000 Growth 11.3 %	S&P 500 21.8 %	Bloomberg Barc Global Agg Ex USD -2.1 %	Russell 2000 Value 22.4 %	Strategic Policy 10.8 %	NCREIF ODCE (EW) (Net) 21.9 %	S&P 500 -4.6 %	
	Russell 2000 Value -28.9 %	S&P 500 26.5 %	Bloomberg Barc US Corp High Yield 15.1 %	S&P 500 2.1 %	Bloomberg Barc US Corp High Yield 15.8 %	MSCI EAFE (Net) 22.8 %	Bloomberg Barc US Agg 6.0 %	Russell 2000 Growth -1.4 %	MSCI Emerging Mkts (Net) 11.2 %	Strategic Policy 13.8 %	S&P 500 -4.4 %	MSCI EAFE (Net) 22.0 %	Bloomberg Barc Global Agg Ex USD 10.1 %	Strategic Policy 13.8 %	Bloomberg Barc US Corp High Yield -4.8 %	
	Russell 1000 Value -36.8 %	Russell 2000 Value 20.6 %	NCREIF ODCE (EW) (Net) 15.1 %	Strategic Policy 0.7 %	Russell 1000 Growth 15.3 %	Strategic Policy 14.6 %	Russell 2000 Growth 5.6 %	Strategic Policy -1.9 %	NCREIF ODCE (EW) (Net) 8.4 %	Russell 1000 Value 13.7 %	Strategic Policy -5.8 %	MSCI Emerging Mkts (Net) 18.4 %	MSCI EAFE (Net) 7.8 %	MSCI EAFE (Net) 11.3 %	MSCI EAFE (Net) -5.9 %	
	S&P 500 -37.0 %	Strategic Policy 20.4 %	S&P 500 15.1 %	Russell 1000 Value 0.4 %	Russell 2000 Growth 14.6 %	NCREIF ODCE (EW) (Net) 12.4 %	Russell 2000 Value 4.2 %	Russell 1000 Value -3.8 %	Strategic Policy 7.9 %	Bloomberg Barc Global Agg Ex USD 10.5 %	Russell 1000 Value -8.3 %	Strategic Policy 17.9 %	Bloomberg Barc US Agg 7.5 %	Bloomberg Barc US Corp High Yield 5.3 %	Bloomberg Barc US Agg -5.9 %	
	Russell 1000 Growth -38.4 %	Russell 1000 Value 19.7 %	Strategic Policy 12.0 %	Russell 2000 Growth -2.9 %	Strategic Policy 12.1 %	Bloomberg Barc US Corp High Yield 7.4 %	Bloomberg Barc US Corp High Yield 2.5 %	Bloomberg Barc US Corp High Yield -4.5 %	Russell 1000 Growth 7.1 %	Russell 2000 Value 7.8 %	Russell 2000 Growth -9.3 %	Bloomberg Barc US Corp High Yield 14.3 %	Bloomberg Barc US Corp High Yield 7.1 %	Russell 2000 Growth 2.8 %	Bloomberg Barc Global Agg Ex USD -6.1 %	
	Russell 2000 Growth -38.5 %	Bloomberg Barc Global Agg Ex USD 7.5 %	MSCI EAFE (Net) 7.8 %	Russell 2000 Value -5.5 %	NCREIF ODCE (EW) (Net) 9.9 %	Bloomberg Barc US Agg -2.0 %	MSCI Emerging Mkts (Net) -2.2 %	Bloomberg Barc Global Agg Ex USD -6.0 %	Bloomberg Barc US Agg 2.6 %	Bloomberg Barc US Corp High Yield 7.5 %	Russell 2000 Value -12.9 %	Bloomberg Barc US Agg 8.7 %	Russell 2000 Value 4.6 %	Bloomberg Barc US Agg -1.5 %	MSCI Emerging Mkts (Net) -7.0 %	
Worst ↓	MSCI EAFE (Net) -43.4 %	Bloomberg Barc US Agg 5.9 %	Bloomberg Barc US Agg 6.5 %	MSCI EAFE (Net) -12.1 %	Bloomberg Barc US Agg 4.2 %	MSCI Emerging Mkts (Net) -2.6 %	Bloomberg Barc Global Agg Ex USD -3.1 %	Russell 2000 Value -7.5 %	Bloomberg Barc Global Agg Ex USD 1.5 %	NCREIF ODCE (EW) (Net) 6.9 %	MSCI EAFE (Net) -13.8 %	NCREIF ODCE (EW) (Net) 5.2 %	Russell 1000 Value 2.8 %	MSCI Emerging Mkts (Net) -2.5 %	Russell 1000 Growth -9.0 %	
	MSCI Emerging Mkts (Net) -53.3 %	NCREIF ODCE (EW) (Net) -31.3 %	Bloomberg Barc Global Agg Ex USD 4.9 %	MSCI Emerging Mkts (Net) -18.4 %	Bloomberg Barc Global Agg Ex USD 4.1 %	Bloomberg Barc Global Agg Ex USD -3.1 %	MSCI EAFE (Net) -4.9 %	MSCI Emerging Mkts (Net) -14.9 %	MSCI EAFE (Net) 1.0 %	Bloomberg Barc US Agg 3.5 %	MSCI Emerging Mkts (Net) -14.6 %	Bloomberg Barc Global Agg Ex USD 5.1 %	NCREIF ODCE (EW) (Net) 0.8 %	Bloomberg Barc Global Agg Ex USD -7.1 %	Russell 2000 Growth -12.6 %	



## **Total Fund**

**Schedule of Investable Assets**



— Total Fund

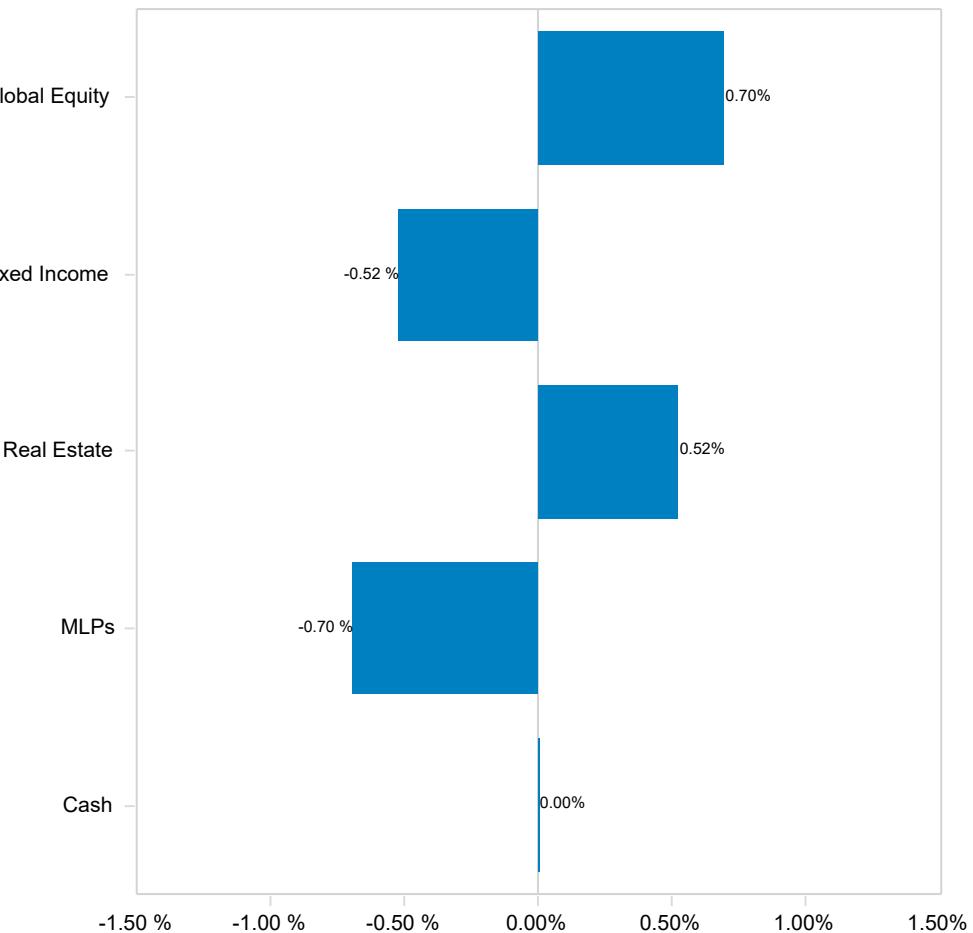
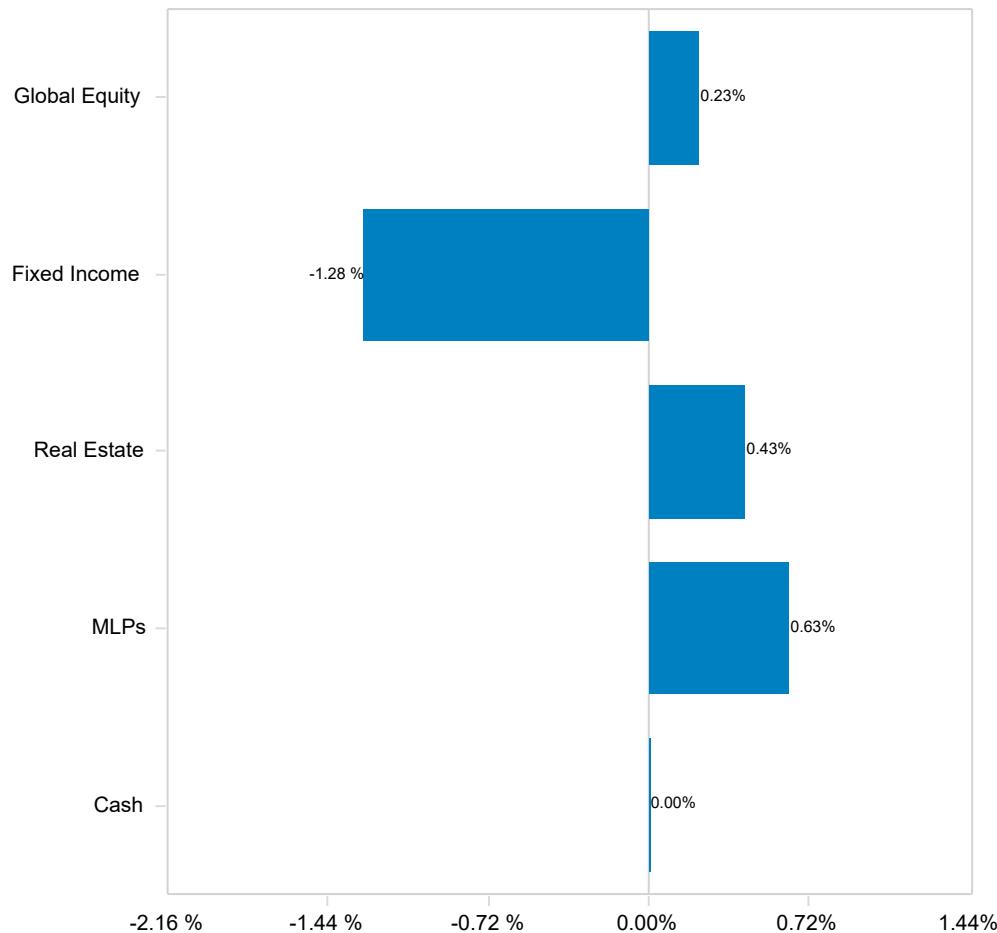
■ Net Cash Flow



# Employees' Retirement System of the City of Norfolk

## Asset Allocation vs. Target Allocation

As of March 31, 2022



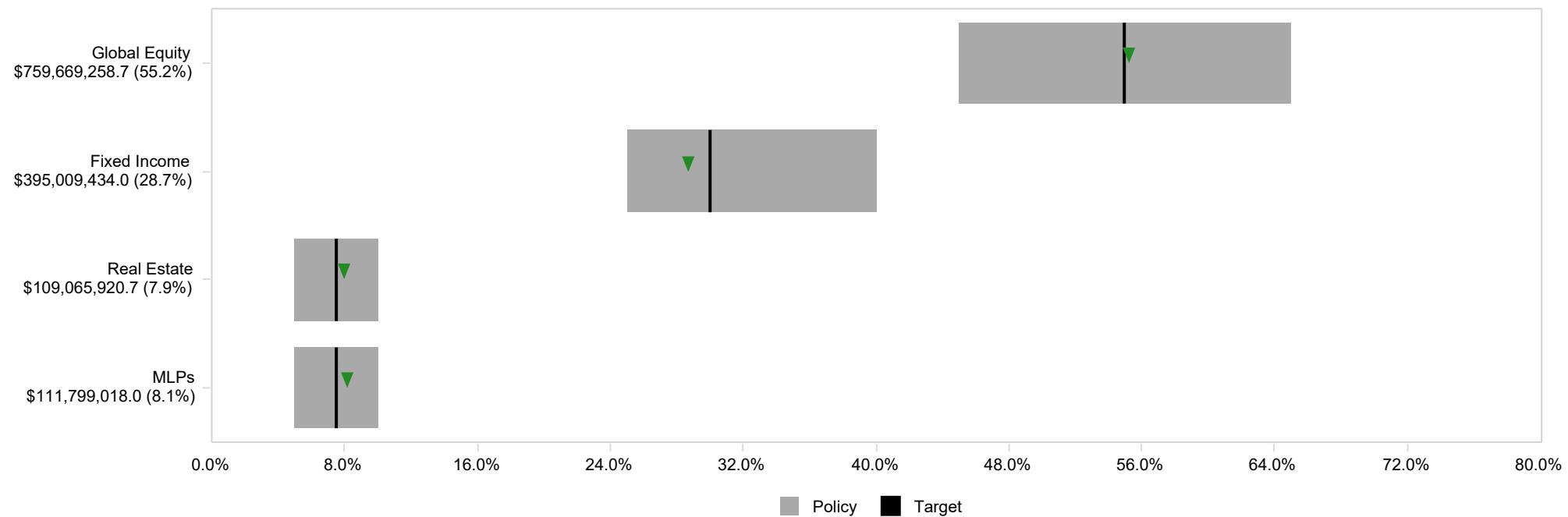
March 31, 2022

December 31, 2021

	Market Value \$	Allocation (%)	Target (%)		Market Value \$	Allocation (%)	Target (%)
Global Equity	759,669,259	55.2	55.0	Global Equity	802,843,392	55.7	55.0
Fixed Income	395,009,434	28.7	30.0	Fixed Income	424,934,237	29.5	30.0
Real Estate	109,065,921	7.9	7.5	Real Estate	115,605,758	8.0	7.5
MLPs	111,799,018	8.1	7.5	MLPs	98,085,692	6.8	7.5
Cash	16,391	0.0	0.0	Cash	4,899	0.0	0.0
<b>Total Fund</b>	<b>1,375,560,022</b>	<b>100.0</b>	<b>100.0</b>	<b>Total Fund</b>	<b>1,441,473,978</b>	<b>100.0</b>	<b>100.0</b>



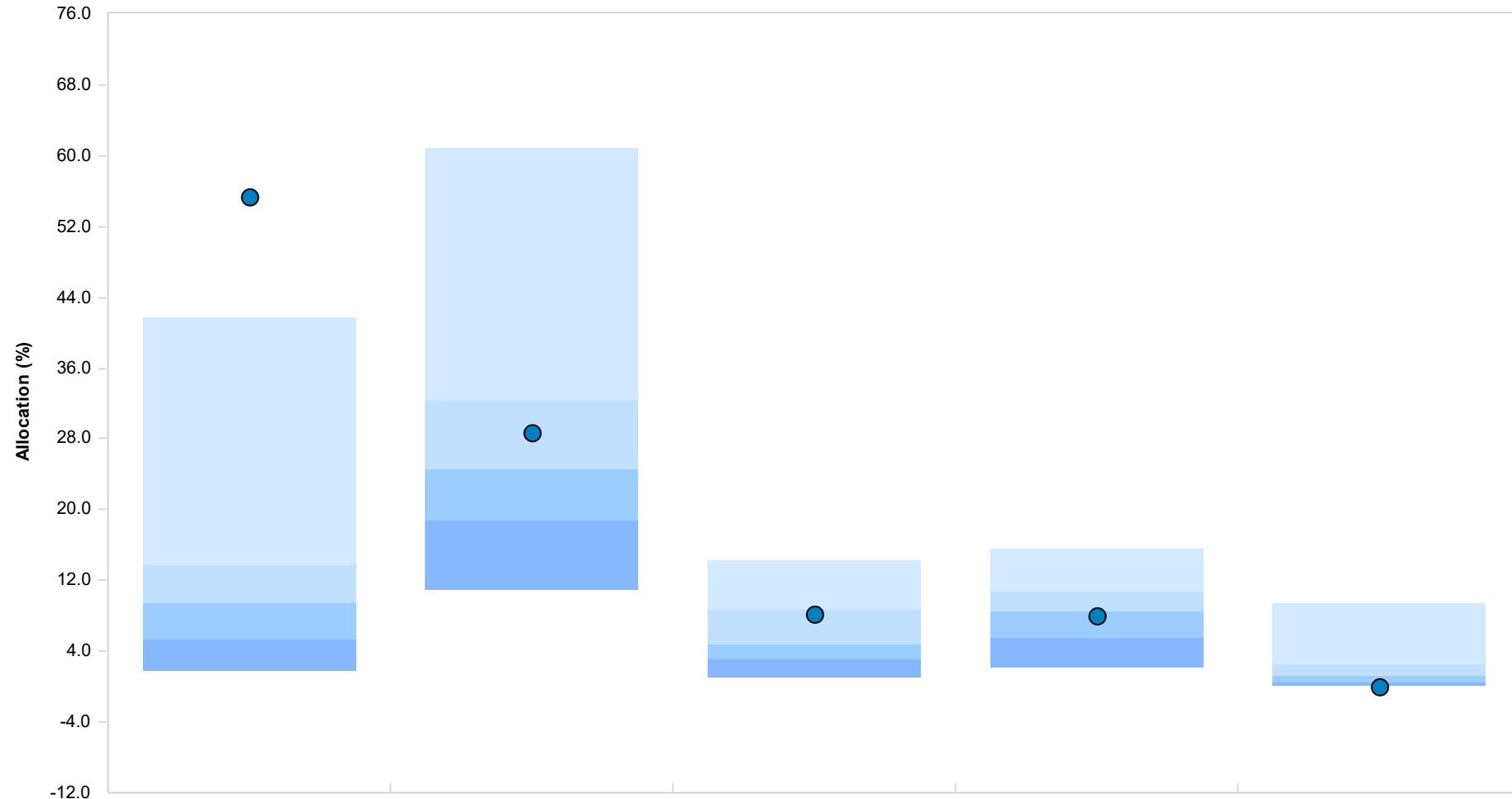
## Executive Summary



## Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Rebal. (\$000)
<b>Total Fund</b>	<b>1,375,560,022</b>	<b>100.0</b>	<b>100.0</b>			
Global Equity	759,669,259	55.2	55.0	45.0	65.0	-3,111,246
SSgA MSCI ACWI IMI Index Fund	759,669,259	55.2				
Fixed Income	395,009,434	28.7	30.0	25.0	40.0	17,658,573
PIMCO Total Return	195,392,645	14.2				
SSgA Bond Market Index	199,616,789	14.5				
Real Assets	220,864,939	16.1	15.0			-14,530,935
Real Estate	109,065,921	7.9	7.5	5.0	10.0	-5,898,919
JP Morgan Asset Management Strategic Property Fund	55,360,356	4.0				
UBS Trumbull Property Fund	34,532,528	2.5				
Vanguard Real Estate Index (VGSNX)	19,173,036	1.4				
MLPs	111,799,018	8.1	7.5	5.0	10.0	-8,632,016
Harvest MLP	52,026,540	3.8				
Tortoise Capital Advisors	59,772,478	4.3				
Cash	16,391	0.0				

## Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund

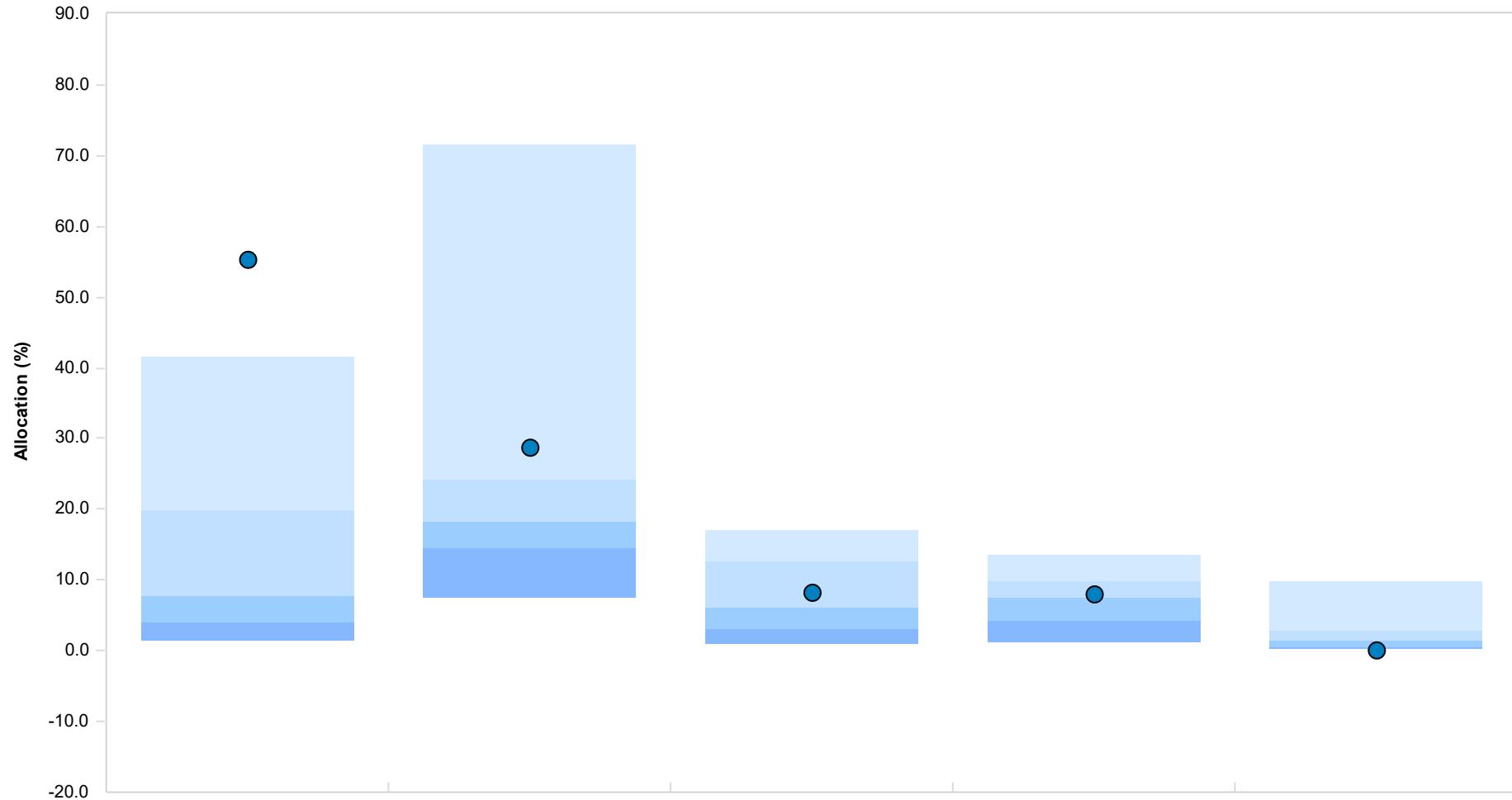


	Global Equity	US Fixed	Real Assets/Commod	Total Real Estate	Cash & Equivalents
Total Fund Composite*	55.23 (1)	28.72 (36)	8.13 (26)	7.93 (55)	0.00 (100)
5th Percentile	41.63	60.90	14.28	15.62	9.44
1st Quartile	13.71	32.38	8.63	10.81	2.56
Median	9.40	24.52	4.73	8.56	1.15
3rd Quartile	5.25	18.74	3.06	5.58	0.55
95th Percentile	1.78	10.88	0.99	2.21	0.09
Population	37	413	55	282	348

Parentheses contain percentile rankings.



## Plan Sponsor TF Asset Allocation vs. All Public Plans &gt; \$1B-Total Fund

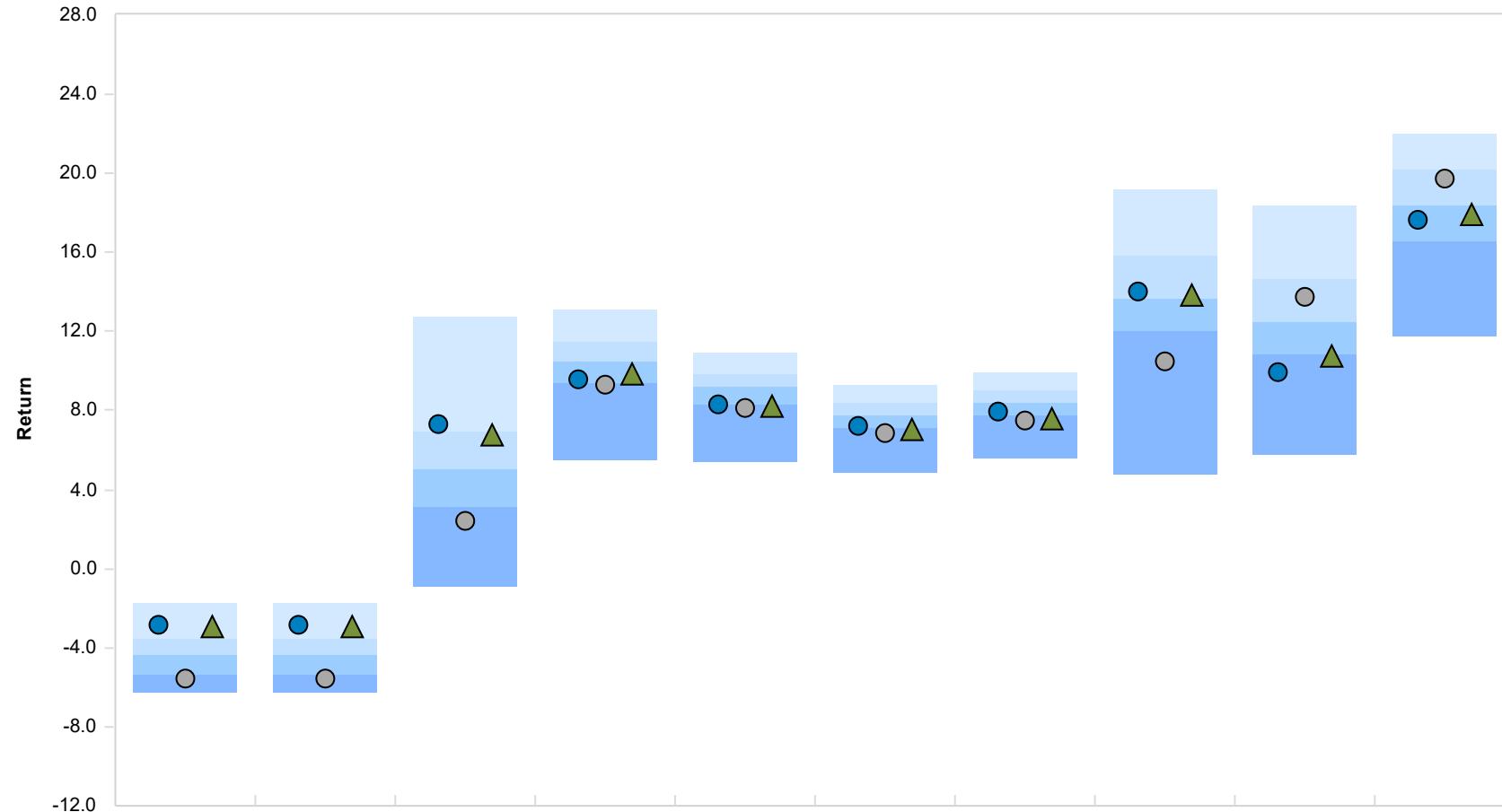


	Global Equity	US Fixed	Real Assets/Commod	Total Real Estate	Cash & Equivalents
Total Fund Composite*	55.23 (1)	28.72 (16)	8.13 (45)	7.93 (46)	0.00 (100)
5th Percentile	41.55	71.61	16.94	13.63	9.82
1st Quartile	19.79	24.36	12.67	9.72	2.91
Median	7.74	18.30	6.04	7.59	1.53
3rd Quartile	4.10	14.41	3.00	4.14	0.62
95th Percentile	1.43	7.49	0.94	1.30	0.19
Population	10	77	10	67	59

Parentheses contain percentile rankings.



## Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund

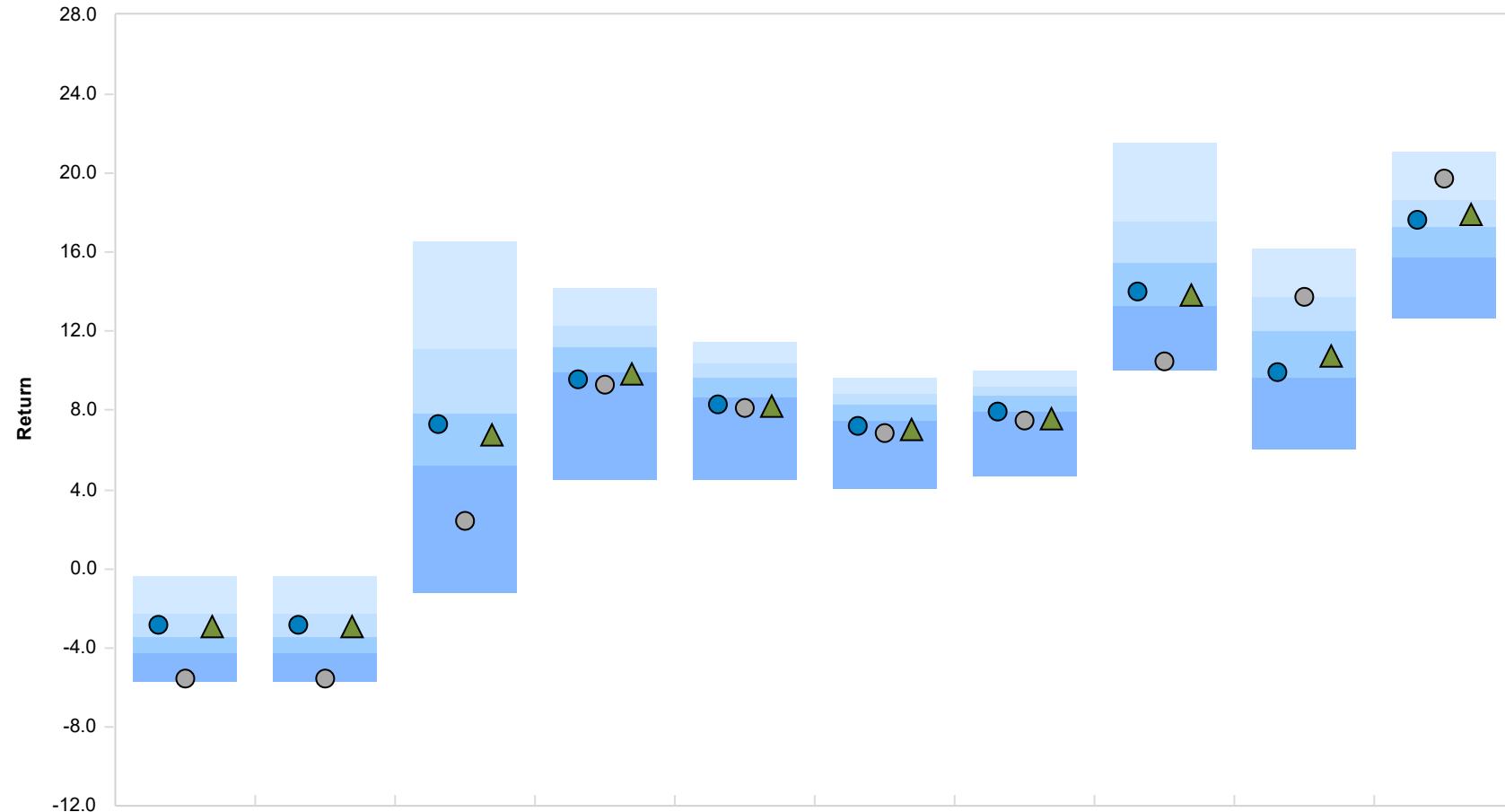


	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
● Total Fund Composite	-2.88 (16)	-2.88 (16)	7.32 (23)	9.62 (73)	8.29 (77)	7.23 (74)	7.99 (68)	14.05 (45)	9.92 (81)	17.67 (60)
● Fund Policy (62.5% ACWI/37.5% Agg)	-5.60 (81)	-5.60 (81)	2.39 (81)	9.32 (77)	8.13 (81)	6.91 (83)	7.46 (81)	10.53 (87)	13.76 (35)	19.72 (31)
▲ Fund Strategic Index	-2.93 (17)	-2.93 (17)	6.80 (27)	9.84 (67)	8.20 (80)	7.04 (78)	7.60 (78)	13.85 (49)	10.81 (76)	17.92 (57)
5th Percentile	-1.71	-1.71	12.72	13.10	10.98	9.28	9.94	19.22	18.39	22.01
1st Quartile	-3.54	-3.54	6.97	11.51	9.88	8.40	9.00	15.81	14.65	20.16
Median	-4.42	-4.42	5.07	10.47	9.21	7.82	8.45	13.66	12.51	18.42
3rd Quartile	-5.39	-5.39	3.16	9.44	8.35	7.16	7.73	12.02	10.83	16.56
95th Percentile	-6.26	-6.26	-0.98	5.53	5.41	4.85	5.56	4.82	5.80	11.73
Population	301	301	299	293	283	272	250	622	699	731

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



## Plan Sponsor Peer Group Analysis vs. All Public Plans &gt; \$1B-Total Fund

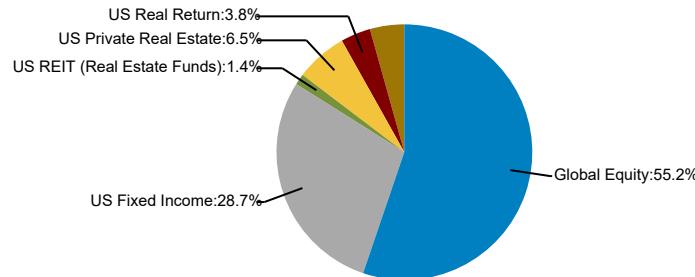


	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
● Total Fund Composite	-2.88 (40)	-2.88 (40)	7.32 (57)	9.62 (85)	8.29 (87)	7.23 (86)	7.99 (76)	14.05 (66)	9.92 (73)	17.67 (41)
● Fund Policy (62.5% ACWI/37.5% Agg)	-5.60 (92)	-5.60 (92)	2.39 (92)	9.32 (86)	8.13 (90)	6.91 (91)	7.46 (88)	10.53 (95)	13.76 (27)	19.72 (16)
▲ Fund Strategic Index	-2.93 (41)	-2.93 (41)	6.80 (61)	9.84 (79)	8.20 (90)	7.04 (90)	7.60 (86)	13.85 (68)	10.81 (66)	17.92 (37)
5th Percentile	-0.42	-0.42	16.56	14.25	11.53	9.71	10.03	21.60	16.25	21.11
1st Quartile	-2.27	-2.27	11.15	12.29	10.43	8.89	9.26	17.53	13.79	18.67
Median	-3.45	-3.45	7.82	11.22	9.68	8.32	8.77	15.48	12.05	17.29
3rd Quartile	-4.31	-4.31	5.26	9.97	8.64	7.52	8.00	13.27	9.70	15.74
95th Percentile	-5.71	-5.71	-1.22	4.52	4.50	4.10	4.66	10.04	6.04	12.63
Population	86	86	85	85	84	84	83	202	232	227

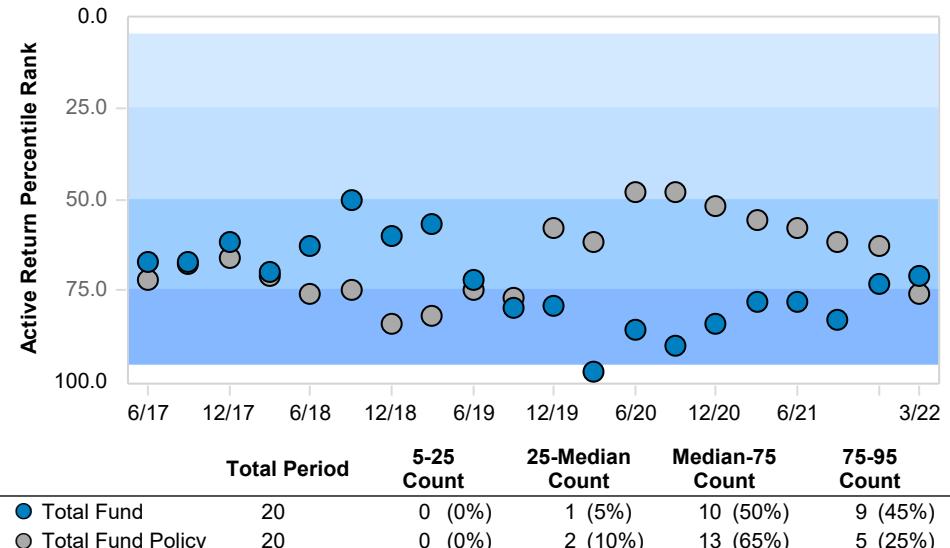
Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



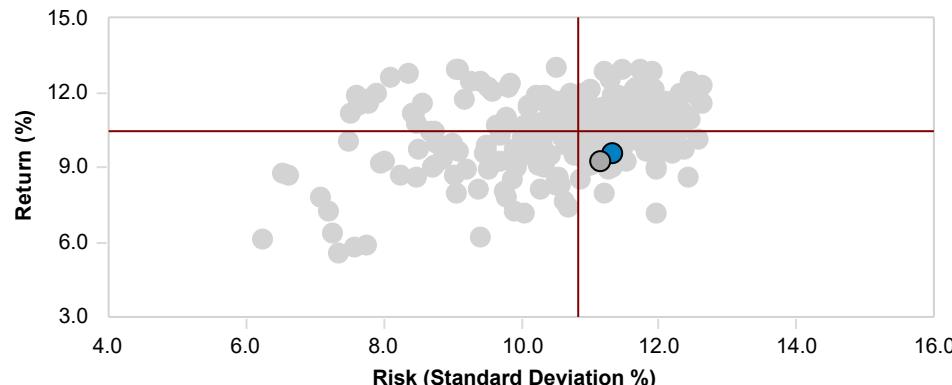
## Asset Allocation By Asset Class



## Rolling Percentile Ranking vs. All Public Plans-Total Fund

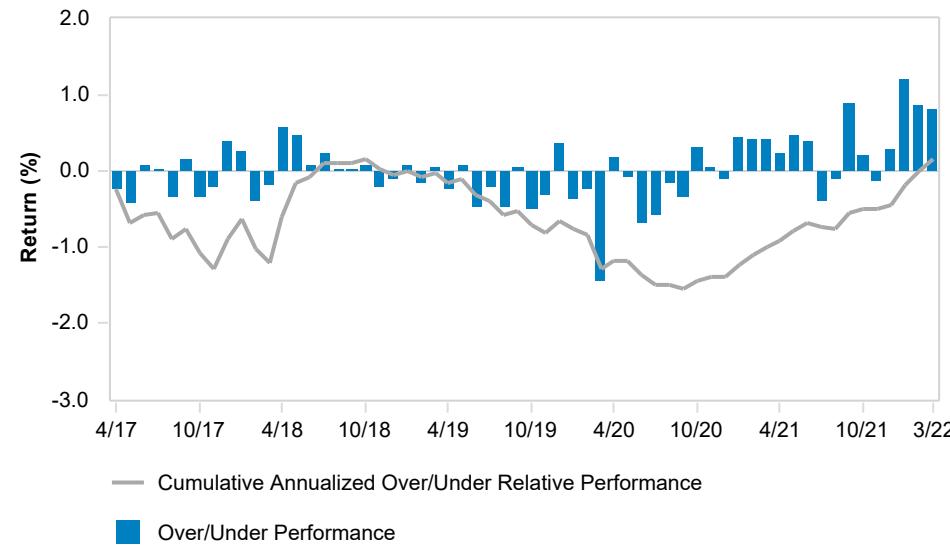


## Risk vs. Return (April 1, 2019 - March 31, 2022)



● Total Fund  
 ● Total Fund Policy  
 — Median

## Relative Performance vs. Total Fund Policy



— Cumulative Annualized Over/Under Relative Performance  
 ■ Over/Under Performance

Employees' Retirement System of the City of Norfolk  
 Asset Allocation & Performance (gross of fees)  
 As of March 31, 2022

**Asset Allocation & Performance**

	Market Value \$	%	Performance(%)								
			3 Month	CYTD	1 Year	2 YR	3 Year	5 Year	Since Inception	Inception Date	
<b>Total Fund</b>	<b>1,375,560,022</b>	<b>100.0</b>	<b>-2.88 (16)</b>	<b>-2.88 (16)</b>	<b>7.32 (23)</b>	<b>19.75 (42)</b>	<b>9.62 (73)</b>	<b>8.29 (77)</b>	<b>8.35 (69)</b>	<b>Oct-1990</b>	
Total Fund Policy			-5.60	-5.60	2.39	17.03	9.32	8.13	8.19		
Excess Return			2.72	2.72	4.93	2.72	0.30	0.16	0.16		
Total Fund Strategy Index			-2.93	-2.93	6.80	21.10	9.84	8.20	8.25		
Excess Return			0.05	0.05	0.52	-1.35	-0.22	0.09	0.10		
Global Equity	759,669,259	55.2	-5.37 (36)	-5.37 (36)	6.63 (34)	30.14 (30)	14.09 (35)	11.91 (37)	9.58 (38)	Oct-1990	
Global Equity Policy			-5.47	-5.47	6.30	29.42	13.49	11.37	9.63		
Excess Return			0.10	0.10	0.33	0.72	0.60	0.54	-0.05		
Fixed Income	395,009,434	28.7	-6.02 (76)	-6.02 (76)	-3.95 (72)	-1.17 (85)	1.91 (83)	2.43 (80)	5.74 (77)	Oct-1990	
Blmbg. U.S. Aggregate Index			-5.93	-5.93	-4.15	-1.75	1.69	2.14	5.49		
Excess Return			-0.09	-0.09	0.20	0.58	0.22	0.29	0.25		
Real Estate	109,065,921	7.9	3.97 (100)	3.97 (100)	21.57 (100)	9.97 (100)	7.12 (100)	6.92 (100)	9.61 (100)	Apr-2011	
NCREIF Fund Index-ODCE (Net)			7.17	7.17	27.29	13.65	10.31	8.91	10.25		
Excess Return			-3.20	-3.20	-5.72	-3.68	-3.19	-1.99	-0.64		
MLPs	111,799,018	8.1	23.96 (16)	23.96 (16)	49.61 (17)	58.61 (49)	5.99 (32)	2.80 (30)	3.78 (30)	Mar-2013	
Alerian MLP Index			18.81	18.81	36.56	66.55	2.70	-0.07	-0.31		
Excess Return			5.15	5.15	13.05	-7.94	3.29	2.87	4.09		
Cash	16,391	0.0									



## Employees' Retirement System of the City of Norfolk

## Asset Allocation &amp; Performance (gross of fees)

As of March 31, 2022

## Asset Allocation &amp; Performance

	Market Value \$	Performance(%)								Inception Date
		3 Month	CYTD	1 Year	2 Year	3 Year	5 Year	Since Inception		
<b>Global Equity</b>										
SSgA MSCI ACWI IMI Index Fund	759,669,259	-5.37 (36)	-5.37 (36)	6.63 (34)	29.98 (31)	14.00 (36)	11.85 (37)	12.39 (34)	May-2016	
<b>MSCI AC World IMI (Net)</b>		<b>-5.47</b>	<b>-5.47</b>	<b>6.30</b>	<b>29.42</b>	<b>13.49</b>	<b>11.37</b>	<b>11.91</b>		
<b>Excess Return</b>		<b>0.10</b>	<b>0.10</b>	<b>0.33</b>	<b>0.56</b>	<b>0.51</b>	<b>0.48</b>	<b>0.48</b>		
<b>Fixed Income</b>										
PIMCO Total Return	195,392,645	-6.14 (87)	-6.14 (87)	-3.80 (44)	-0.74 (67)	2.04 (69)	2.66 (51)	6.12 (10)	Jan-1991	
<b>Blmbg. U.S. Aggregate Index</b>		<b>-5.93</b>	<b>-5.93</b>	<b>-4.15</b>	<b>-1.75</b>	<b>1.69</b>	<b>2.14</b>	<b>5.36</b>		
<b>Excess Return</b>		<b>-0.21</b>	<b>-0.21</b>	<b>0.35</b>	<b>1.01</b>	<b>0.35</b>	<b>0.52</b>	<b>0.76</b>		
SSgA Bond Market Index	199,616,789	-5.91 (70)	-5.91 (70)	-4.13 (77)	-1.66 (84)	1.74 (85)	2.18 (88)	3.25 (91)	Jan-2009	
<b>Blmbg. U.S. Aggregate Index</b>		<b>-5.93</b>	<b>-5.93</b>	<b>-4.15</b>	<b>-1.75</b>	<b>1.69</b>	<b>2.14</b>	<b>3.23</b>		
<b>Excess Return</b>		<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.09</b>	<b>0.05</b>	<b>0.04</b>	<b>0.02</b>		
<b>Real Estate</b>										
JP Morgan Asset Management Strategic Property Fund	55,360,356	6.75 (42)	6.75 (42)	27.07 (67)	13.68 (73)	10.91 (73)	9.26 (88)	11.17 (71)	Apr-2011	
<b>NCREIF Fund Index-ODCE (VW) (Net)</b>		<b>7.17</b>	<b>7.17</b>	<b>27.29</b>	<b>13.65</b>	<b>10.31</b>	<b>8.91</b>	<b>10.25</b>		
<b>Excess Return</b>		<b>-0.42</b>	<b>-0.42</b>	<b>-0.22</b>	<b>0.03</b>	<b>0.60</b>	<b>0.35</b>	<b>0.92</b>		
UBS Trumbull Property Fund	34,532,528	7.38 (28)	7.38 (28)	23.24 (100)	9.32 (100)	5.29 (100)	5.72 (100)	7.88 (-)	Dec-2011	
<b>NCREIF Fund Index-ODCE (VW) (Net)</b>		<b>7.17</b>	<b>7.17</b>	<b>27.29</b>	<b>13.65</b>	<b>10.31</b>	<b>8.91</b>	<b>10.14</b>		
<b>Excess Return</b>		<b>0.21</b>	<b>0.21</b>	<b>-4.05</b>	<b>-4.33</b>	<b>-5.02</b>	<b>-3.19</b>	<b>-2.26</b>		
Vanguard Real Estate Index (VGSNX)	19,173,036	-5.47 (58)	-5.47 (58)	-	-	-	-	9.46 (-)	Jul-2021	
<b>Vanguard Spliced REIT Index</b>		<b>-5.95</b>	<b>-5.95</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.86</b>		
<b>Excess Return</b>		<b>0.48</b>	<b>0.48</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.60</b>		
<b>MLPs</b>										
Harvest MLP	52,026,540	24.89 (1)	24.89 (1)	51.39 (9)	62.60 (34)	8.24 (17)	4.08 (12)	4.40 (20)	Mar-2013	
<b>Alerian MLP Index</b>		<b>18.81</b>	<b>18.81</b>	<b>36.56</b>	<b>66.55</b>	<b>2.70</b>	<b>-0.07</b>	<b>-0.31</b>		
<b>Excess Return</b>		<b>6.08</b>	<b>6.08</b>	<b>14.83</b>	<b>-3.95</b>	<b>5.54</b>	<b>4.15</b>	<b>4.71</b>		
Tortoise Capital Advisors	59,772,478	23.20 (38)	23.20 (38)	47.60 (25)	55.08 (61)	3.98 (54)	1.66 (44)	2.66 (51)	Apr-2013	
<b>Alerian MLP Index</b>		<b>18.81</b>	<b>18.81</b>	<b>36.56</b>	<b>66.55</b>	<b>2.70</b>	<b>-0.07</b>	<b>-0.89</b>		
<b>Excess Return</b>		<b>4.39</b>	<b>4.39</b>	<b>11.04</b>	<b>-11.47</b>	<b>1.28</b>	<b>1.73</b>	<b>3.55</b>		



Employees' Retirement System of the City of Norfolk  
Asset Allocation & Performance (net of fees)  
As of March 31, 2022

**Asset Allocation & Performance**

	Market Value \$	%	Performance(%)								
			3 Month	CYTD	FYTD	1 Year	2 YR	3 Year	5 Year	Since Inception	Inception Date
<b>Total Fund</b>	<b>1,375,560,022</b>	<b>100.0</b>	<b>-2.92</b>	<b>-2.92</b>	<b>0.84</b>	<b>7.19</b>	<b>19.60</b>	<b>9.46</b>	<b>8.12</b>	<b>8.16</b>	Oct-1990
Total Fund Policy			-5.60	-5.60	-2.63	2.39	17.03	9.32	8.13	8.19	
Excess Return			2.68	2.68	3.47	4.80	2.57	0.14	-0.01	-0.03	
Total Fund Strategy Index			-2.93	-2.93	0.47	6.80	21.10	9.84	8.20	8.25	
Excess Return			0.01	0.01	0.37	0.39	-1.50	-0.38	-0.08	-0.09	
Global Equity	759,669,259	55.2	-5.38	-5.38	-0.61	6.59	30.09	14.05	11.87	9.42	Oct-1990
Global Equity Policy			-5.47	-5.47	-0.82	6.30	29.42	13.49	11.37	9.63	
Excess Return			0.09	0.09	0.21	0.29	0.67	0.56	0.50	-0.21	
Fixed Income	395,009,434	28.7	-6.03	-6.03	-5.86	-4.02	-1.25	1.81	2.31	5.55	Oct-1990
Blmbg. U.S. Aggregate Index			-5.93	-5.93	-5.87	-4.15	-1.75	1.69	2.14	5.49	
Excess Return			-0.10	-0.10	0.01	0.13	0.50	0.12	0.17	0.06	
Real Estate	109,065,921	7.9	3.67	3.67	17.24	20.36	8.93	6.12	5.96	8.60	Apr-2011
NCREIF Fund Index-ODCE (Net)			7.17	7.17	22.77	27.29	13.65	10.31	8.91	10.25	
Excess Return			-3.50	-3.50	-5.53	-6.93	-4.72	-4.19	-2.95	-1.65	
MLPs	111,799,018	8.1	23.86	23.86	24.93	49.38	58.16	5.56	2.24	3.17	Mar-2013
Alerian MLP Index			18.81	18.81	12.64	36.56	66.55	2.70	-0.07	-0.31	
Excess Return			5.05	5.05	12.29	12.82	-8.39	2.86	2.31	3.48	
Cash	16,391	0.0									



## Employees' Retirement System of the City of Norfolk

## Asset Allocation &amp; Performance (net of fees)

As of March 31, 2022

## Asset Allocation &amp; Performance

	Market Value \$	%	Performance(%)									
			3 Month	CYTD	FYTD	1 Year	2 Year	3 Year	5 Year	Since Inception	Inception Date	
<b>Global Equity</b>												
SSgA MSCI ACWI IMI Index Fund	759,669,259	55.2	-5.38	-5.38	-0.61	6.59	29.94	13.96	11.82	12.36	May-2016	
<b>MSCI AC World IMI (Net)</b>			<b>-5.47</b>	<b>-5.47</b>	<b>-0.82</b>	<b>6.30</b>	<b>29.42</b>	<b>13.49</b>	<b>11.37</b>	<b>11.91</b>		
<b>Excess Return</b>			<b>0.09</b>	<b>0.09</b>	<b>0.21</b>	<b>0.29</b>	<b>0.52</b>	<b>0.47</b>	<b>0.45</b>	<b>0.45</b>		
<b>Fixed Income</b>												
PIMCO Total Return	195,392,645	14.2	-6.14	-6.14	-5.84	-3.91	-0.87	1.88	2.46	5.87	Jan-1991	
<b>Blmbg. U.S. Aggregate Index</b>			<b>-5.93</b>	<b>-5.93</b>	<b>-5.87</b>	<b>-4.15</b>	<b>-1.75</b>	<b>1.69</b>	<b>2.14</b>	<b>5.36</b>		
<b>Excess Return</b>			<b>-0.21</b>	<b>-0.21</b>	<b>0.03</b>	<b>0.24</b>	<b>0.88</b>	<b>0.19</b>	<b>0.32</b>	<b>0.51</b>		
SSgA Bond Market Index	199,616,789	14.5	-5.92	-5.92	-5.88	-4.14	-1.68	1.72	2.16	3.24	Jan-2009	
<b>Blmbg. U.S. Aggregate Index</b>			<b>-5.93</b>	<b>-5.93</b>	<b>-5.87</b>	<b>-4.15</b>	<b>-1.75</b>	<b>1.69</b>	<b>2.14</b>	<b>3.23</b>		
<b>Excess Return</b>			<b>0.01</b>	<b>0.01</b>	<b>-0.01</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>		
<b>Real Estate</b>												
JP Morgan Asset Management Strategic Property Fund	55,360,356	4.0	6.27	6.27	22.06	25.31	12.48	9.76	8.21	10.14	Apr-2011	
<b>NCREIF Fund Index-ODCE (VW) (Net)</b>			<b>7.17</b>	<b>7.17</b>	<b>22.77</b>	<b>27.29</b>	<b>13.65</b>	<b>10.31</b>	<b>8.91</b>	<b>10.25</b>		
<b>Excess Return</b>			<b>-0.90</b>	<b>-0.90</b>	<b>-0.71</b>	<b>-1.98</b>	<b>-1.17</b>	<b>-0.55</b>	<b>-0.70</b>	<b>-0.11</b>		
UBS Trumbull Property Fund	34,532,528	2.5	7.14	7.14	19.03	22.18	8.26	4.30	4.78	6.82	Dec-2011	
<b>NCREIF Fund Index-ODCE (VW) (Net)</b>			<b>7.17</b>	<b>7.17</b>	<b>22.77</b>	<b>27.29</b>	<b>13.65</b>	<b>10.31</b>	<b>8.91</b>	<b>10.14</b>		
<b>Excess Return</b>			<b>-0.03</b>	<b>-0.03</b>	<b>-3.74</b>	<b>-5.11</b>	<b>-5.39</b>	<b>-6.01</b>	<b>-4.13</b>	<b>-3.32</b>		
Vanguard Real Estate Index (VGSNX)	19,173,036	1.4	-5.49	-5.49	9.37	N/A	N/A	N/A	N/A	9.37	Jul-2021	
<b>Vanguard Spliced REIT Index</b>			<b>-5.95</b>	<b>-5.95</b>	<b>8.86</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>8.86</b>		
<b>Excess Return</b>			<b>0.46</b>	<b>0.46</b>	<b>0.51</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>0.51</b>		
<b>MLPs</b>												
Harvest MLP	52,026,540	3.8	24.89	24.89	27.88	51.39	62.40	7.95	3.59	3.83	Mar-2013	
<b>Alerian MLP Index</b>			<b>18.81</b>	<b>18.81</b>	<b>12.64</b>	<b>36.56</b>	<b>66.55</b>	<b>2.70</b>	<b>-0.07</b>	<b>-0.31</b>		
<b>Excess Return</b>			<b>6.08</b>	<b>6.08</b>	<b>15.24</b>	<b>14.83</b>	<b>-4.15</b>	<b>5.25</b>	<b>3.66</b>	<b>4.14</b>		
Tortoise Capital Advisors	59,772,478	4.3	23.01	23.01	21.87	47.15	54.35	3.39	1.00	2.01	Apr-2013	
<b>Alerian MLP Index</b>			<b>18.81</b>	<b>18.81</b>	<b>12.64</b>	<b>36.56</b>	<b>66.55</b>	<b>2.70</b>	<b>-0.07</b>	<b>-0.89</b>		
<b>Excess Return</b>			<b>4.20</b>	<b>4.20</b>	<b>9.23</b>	<b>10.59</b>	<b>-12.20</b>	<b>0.69</b>	<b>1.07</b>	<b>2.90</b>		



Employees' Retirement System of the City of Norfolk  
Asset Allocation & Performance (net of fees)  
As of March 31, 2022

Fiscal Returns										
	Performance(%)									
	Jul-2020 To Jun-2021	Jul-2019 To Jun-2020	Jul-2018 To Jun-2019	Jul-2017 To Jun-2018	Jul-2016 To Jun-2017	Jul-2015 To Jun-2016	Jul-2014 To Jun-2015	Jul-2013 To Jun-2014	Jul-2012 To Jun-2013	Jul-2011 To Jun-2012
<b>Total Fund</b>	<b>25.93</b>	<b>0.59</b>	<b>5.35</b>	<b>7.10</b>	<b>11.66</b>	<b>0.49</b>	<b>1.98</b>	<b>17.30</b>	<b>12.09</b>	<b>0.54</b>
Total Fund Policy	24.13	4.56	6.17	6.77	11.42	0.49	2.16	15.82	10.43	1.12
Excess Return	1.80	-3.97	-0.82	0.33	0.24	0.00	-0.18	1.48	1.66	-0.58
Total Fund Strategy Index	26.49	1.30	5.91	6.25	10.62	0.97	1.54	16.12	11.34	1.30
Excess Return	-0.56	-0.71	-0.56	0.85	1.04	-0.48	0.44	1.18	0.75	-0.76
Global Equity	41.90	1.61	4.97	11.60	19.46	-2.82	2.33	23.89	18.43	-3.51
Global Equity Policy	40.94	1.17	4.56	11.14	19.01	-3.37	2.20	23.86	18.37	-3.83
Excess Return	0.96	0.44	0.41	0.46	0.45	0.55	0.13	0.03	0.06	0.32
Fixed Income	0.24	8.59	7.58	0.18	0.76	5.10	2.38	4.31	-0.15	6.93
Blmbg. U.S. Aggregate Index	-0.34	8.74	7.87	-0.40	-0.31	6.00	1.86	4.37	-0.69	7.47
Excess Return	0.58	-0.15	-0.29	0.58	1.07	-0.90	0.52	-0.06	0.54	-0.54
Real Estate	3.74	-0.28	1.90	6.82	5.89	9.79	11.93	11.24	11.02	10.94
NCREIF Fund Index-ODCE (Net)	7.09	1.33	5.46	7.47	6.90	10.80	13.39	11.74	11.08	11.30
Excess Return	-3.35	-1.61	-3.56	-0.65	-1.01	-1.01	-1.46	-0.50	-0.06	-0.36
MLPs	52.25	-37.78	1.24	-0.49	2.94	-17.50	-11.33	35.63	-	-
Alerian MLP Index	63.98	-41.43	3.09	-4.58	0.40	-13.11	-19.81	21.57	-	-
Excess Return	-11.73	3.65	-1.85	4.09	2.54	-4.39	8.48	14.06	-	-
Cash										



## Employees' Retirement System of the City of Norfolk

## Financial Reconciliation

1 Quarter Ending March 31, 2022

Financial Reconciliation									
	Market Value 01/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 03/31/2022	
<b>Total Fund</b>	<b>1,441,473,978</b>	-	<b>89,659</b>	<b>-23,900,000</b>	<b>-507,778</b>	<b>3,111,424</b>	<b>-44,707,261</b>	<b>1,375,560,022</b>	
<b>Global Equity</b>	<b>802,843,392</b>	-	-	-	<b>-82,854</b>	-	<b>-43,091,280</b>	<b>759,669,259</b>	
SSgA MSCI ACWI IMI Index Fund	802,843,392	-	-	-	-82,854	-	-43,091,280	759,669,259	
<b>Fixed Income</b>	<b>424,934,237</b>	<b>-4,530,000</b>	-	-	<b>-10,618</b>	<b>792,533</b>	<b>-26,176,718</b>	<b>395,009,434</b>	
PIMCO Total Return	212,759,090	-4,530,000	-	-	-	792,533	-13,628,978	195,392,645	
SSgA Bond Market Index	212,175,147	-	-	-	-10,618	-	-12,547,740	199,616,789	
<b>Real Estate</b>	<b>115,605,758</b>	<b>-10,289,284</b>	-	-	<b>-324,647</b>	<b>746,320</b>	<b>3,327,774</b>	<b>109,065,921</b>	
JP Morgan Asset Management Strategic Property Fund	52,095,003	-5	-	-	-246,013	425,650	3,085,722	55,360,356	
UBS Trumbull Property Fund	35,519,186	-3,289,279	-	-	-74,989	218,275	2,159,335	34,532,528	
Vanguard Real Estate Index (VGSNX)	27,991,569	-7,000,000	-	-	-3,645	102,395	-1,917,283	19,173,036	
<b>MLPs</b>	<b>98,085,692</b>	<b>-9,070,000</b>	<b>89,659</b>	-	<b>-89,659</b>	<b>1,550,394</b>	<b>21,232,931</b>	<b>111,799,018</b>	
Harvest MLP	49,568,773	-9,070,000	-	-	-	757,283	10,770,484	52,026,540	
Tortoise Capital Advisors	48,516,920	-	89,659	-	-89,659	793,111	10,462,448	59,772,478	
Cash	4,899	23,889,284	-	-23,900,000	-	22,177	31	16,391	



## Employees' Retirement System of the City of Norfolk

## Financial Reconciliation

July 1, 2021 To March 31, 2022

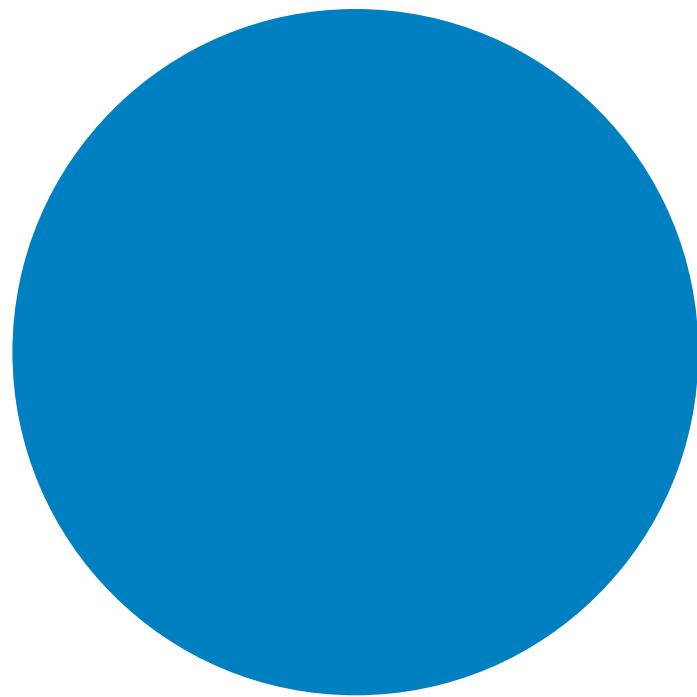
Financial Reconciliation									
	Market Value 07/01/2021	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 03/31/2022	
<b>Total Fund</b>	<b>1,390,335,588</b>	-	31,354,898	-58,249,000	-1,354,644	10,299,970	3,173,210	<b>1,375,560,022</b>	
<b>Global Equity</b>	<b>779,940,629</b>	<b>-15,898,000</b>	-	-	<b>-241,129</b>	-	<b>-4,132,240</b>	<b>759,669,259</b>	
SSgA MSCI ACWI IMI Index Fund	779,940,629	-15,898,000	-	-	-241,129	-	-4,132,240	759,669,259	
<b>Fixed Income</b>	<b>428,086,879</b>	<b>-8,589,000</b>	<b>97,289</b>	-	<b>-127,808</b>	<b>2,982,461</b>	<b>-27,440,387</b>	<b>395,009,434</b>	
PIMCO Total Return	215,989,678	-8,589,000	97,289	-	-97,289	2,982,461	-14,990,494	195,392,645	
SSgA Bond Market Index	212,097,201	-	-	-	-30,519	-	-12,449,893	199,616,789	
<b>Real Estate</b>	<b>81,594,793</b>	<b>10,355,134</b>	-	-	<b>-821,166</b>	<b>2,431,284</b>	<b>15,505,876</b>	<b>109,065,921</b>	
JP Morgan Asset Management Strategic Property Fund	45,356,339	-11	-	-	-581,028	1,141,238	9,443,819	55,360,356	
UBS Trumbull Property Fund	36,238,454	-7,644,854	-	-	-225,910	777,106	5,387,732	34,532,528	
Vanguard Real Estate Index (VGSNX)	-	18,000,000	-	-	-14,229	512,940	674,325	19,173,036	
<b>MLPs</b>	<b>100,706,225</b>	<b>-13,010,000</b>	<b>164,540</b>	-	<b>-164,540</b>	<b>4,861,093</b>	<b>19,241,699</b>	<b>111,799,018</b>	
Harvest MLP	51,807,422	-13,010,000	-	-	-	2,476,143	10,752,975	52,026,540	
Tortoise Capital Advisors	48,898,803	-	164,540	-	-164,540	2,384,951	8,488,724	59,772,478	
Cash	7,062	27,141,866	31,093,069	-58,249,000	-	25,132	-1,737	16,391	



## **Global Equity**

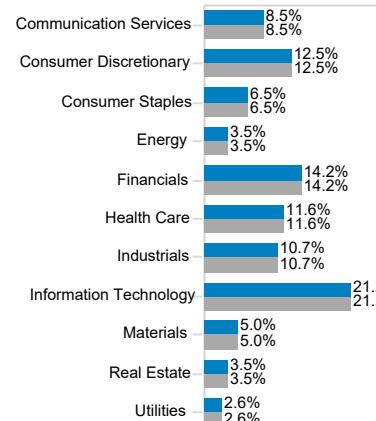
## Manager Allocation

March 31, 2022 : \$759,669,259

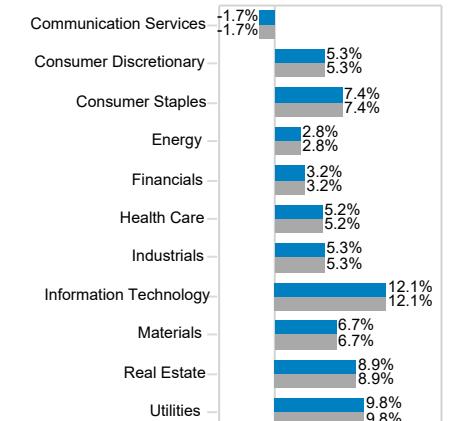


## Sector Allocation - Holdings Based

## Allocation



## Performance



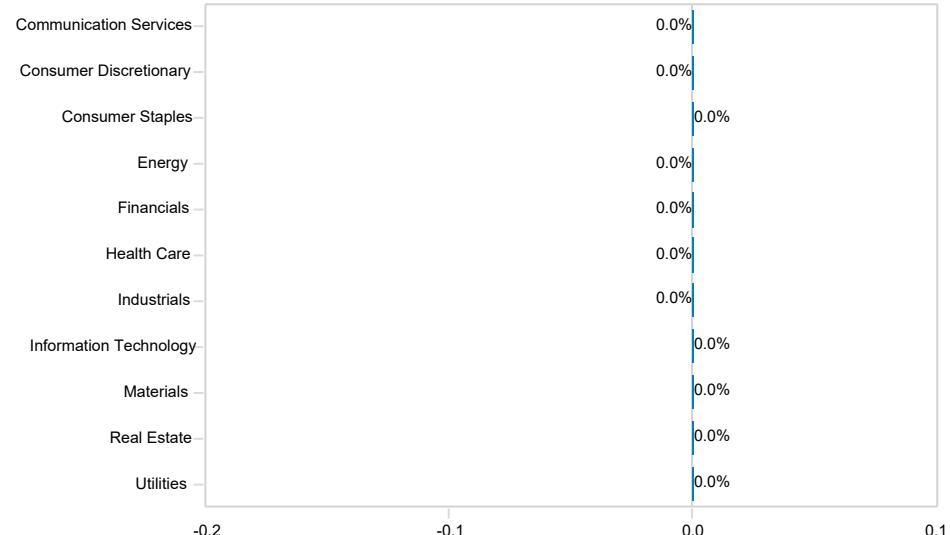
## Global Equity

## MSCI AC World IMI (Net)

## Global Equity

## MSCI AC World IMI (Net)

## Total Attribution



## Market Value

## Allocation

759,669,259

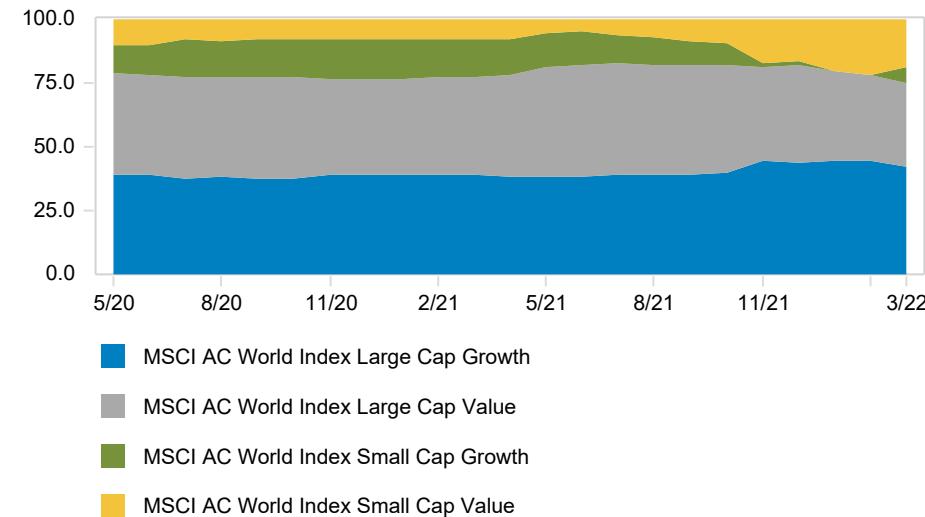
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■ SSgA MSCI ACWI IMI Index Fund



## Style Analysis - Returns Based

## Style History(12 Months)



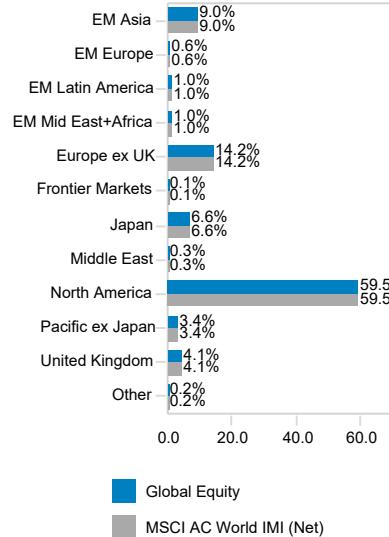
## 3 Year Style Analysis

## Style Map(12 Months)

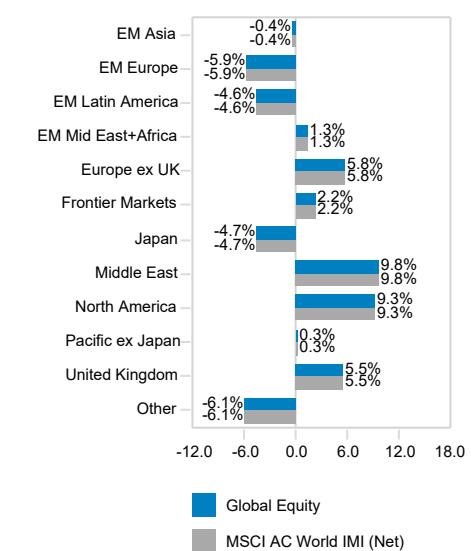


## Region Allocation - Holdings Based

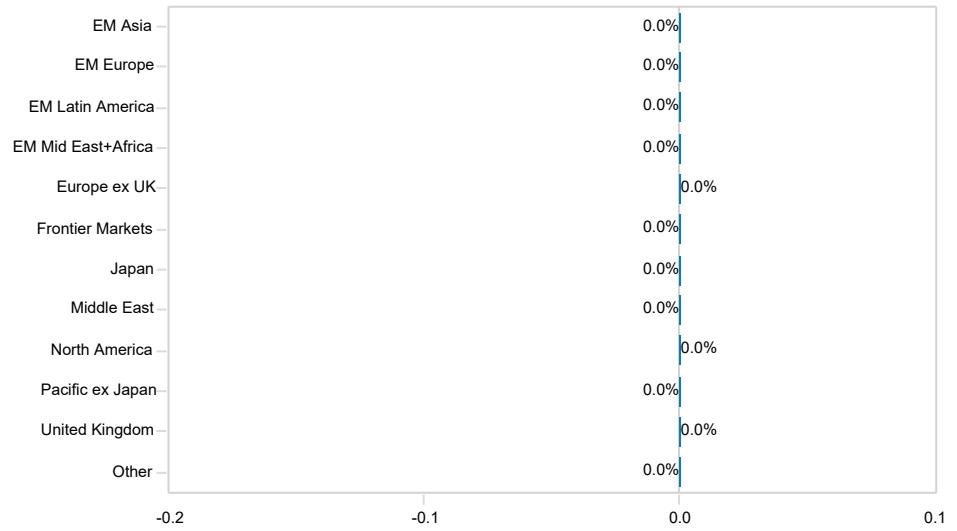
## Allocation



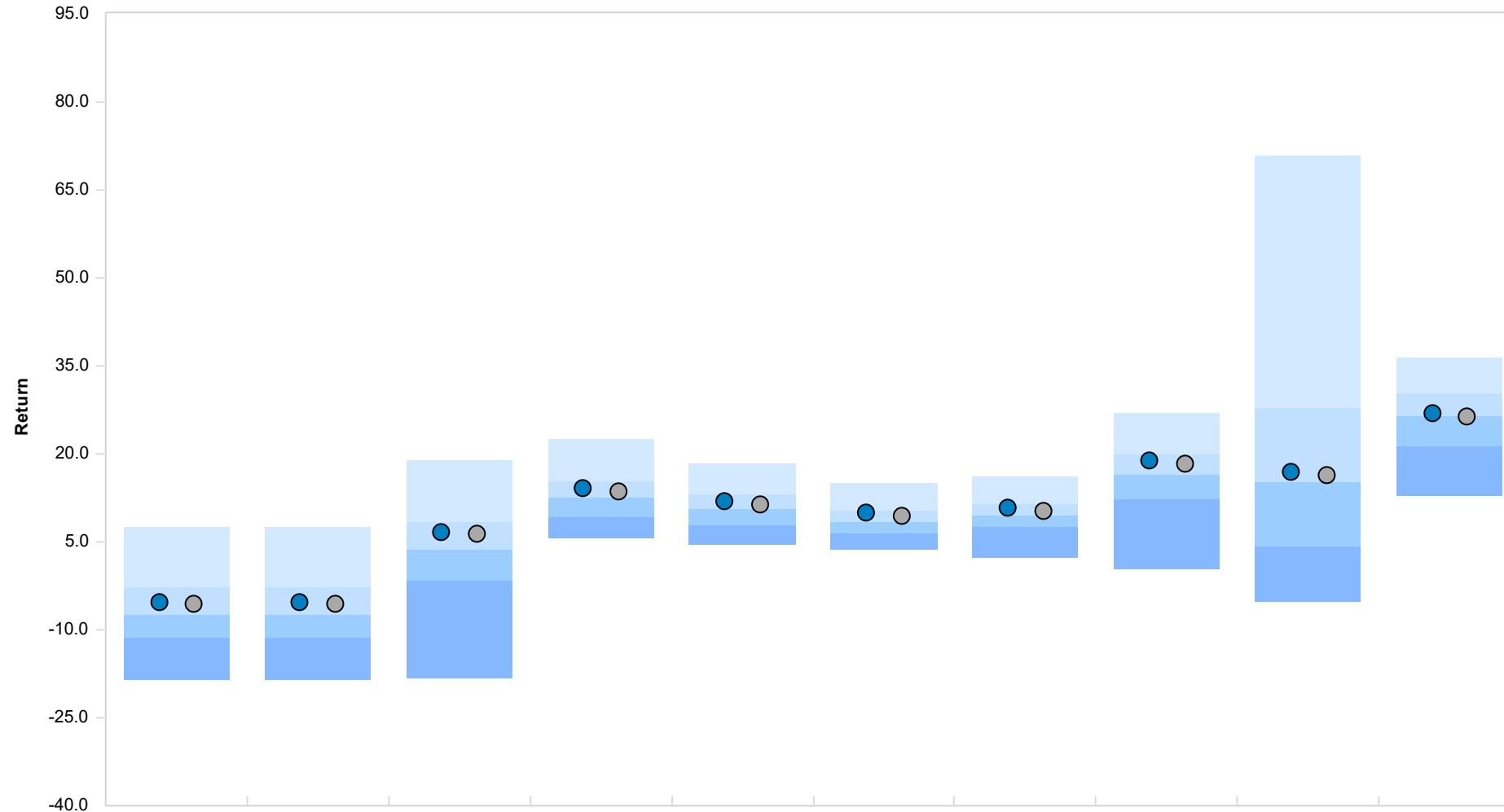
## Performance



## Total Attribution



**Peer Group Analysis**



	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
Global Equity	-5.37 (36)	-5.37 (36)	6.63 (34)	14.09 (35)	11.91 (37)	10.09 (27)	10.82 (31)	18.95 (31)	16.88 (44)	26.92 (47)
Global Equity Policy	-5.47 (37)	-5.47 (37)	6.30 (36)	13.49 (39)	11.37 (43)	9.57 (34)	10.41 (37)	18.22 (37)	16.25 (45)	26.35 (51)
5th Percentile	7.58	7.58	18.79	22.47	18.29	14.87	16.20	26.93	70.83	36.33
1st Quartile	-2.69	-2.69	8.32	15.18	12.97	10.19	11.26	19.99	27.78	30.20
Median	-7.59	-7.59	3.70	12.45	10.63	8.35	9.47	16.50	15.23	26.41
3rd Quartile	-11.51	-11.51	-1.61	9.19	7.83	6.33	7.45	12.23	4.12	21.28
95th Percentile	-18.70	-18.70	-18.35	5.58	4.35	3.49	2.33	0.26	-5.23	12.64

Parentheses contain percentile rankings.  
 Calculation based on monthly periodicity.



Strategy Review  
SSgA MSCI ACWI IMI Index Fund | MSCI AC World IMI (Net)  
As of March 31, 2022

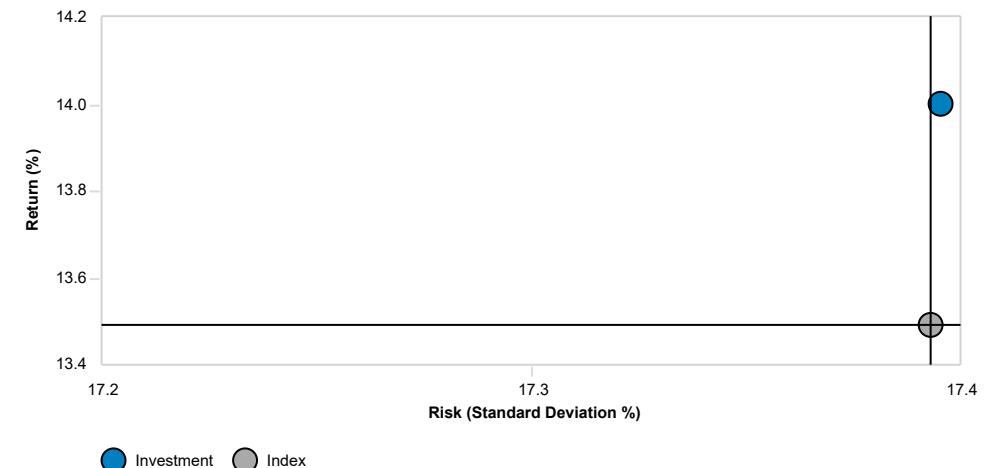
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.00	17.40	0.79	100.90	8	99.04	4
Index	13.49	17.39	0.77	100.00	8	100.00	4

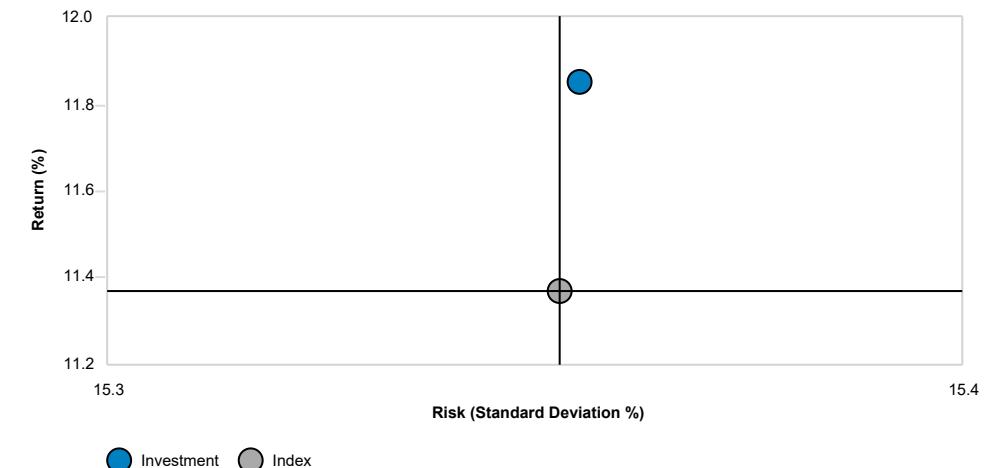
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.85	15.36	0.73	101.15	14	99.12	6
Index	11.37	15.35	0.70	100.00	14	100.00	6

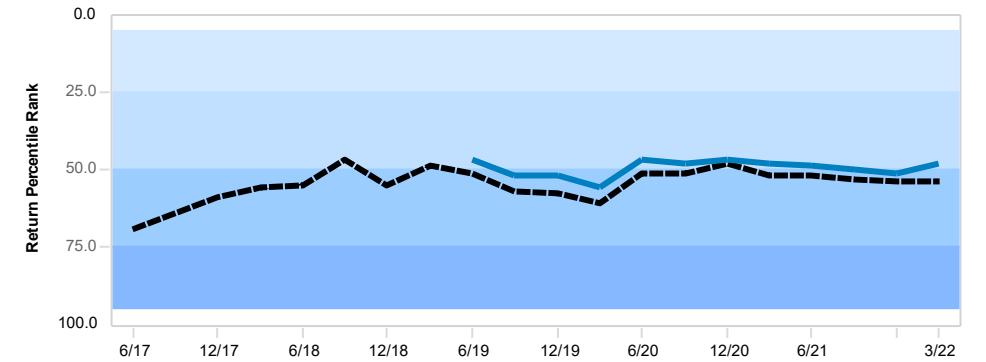
**Risk and Return 3 Years**



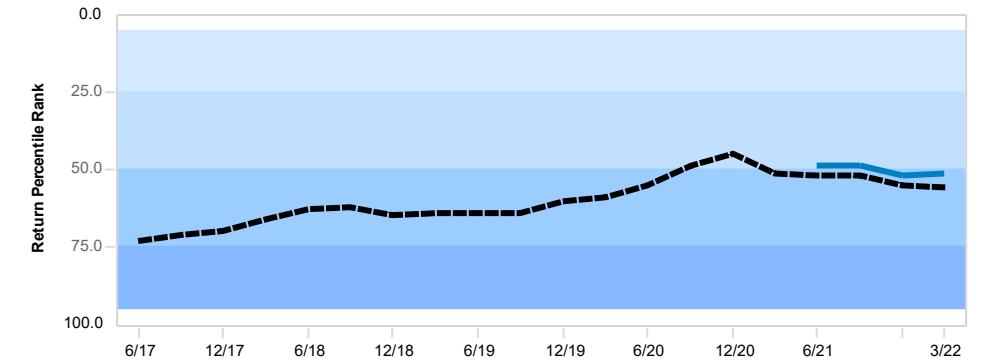
**Risk and Return 5 Years**



**3 Year Rolling Percentile Rank IM Global Equity (SA+CF)**



**5 Year Rolling Percentile Rank IM Global Equity (SA+CF)**

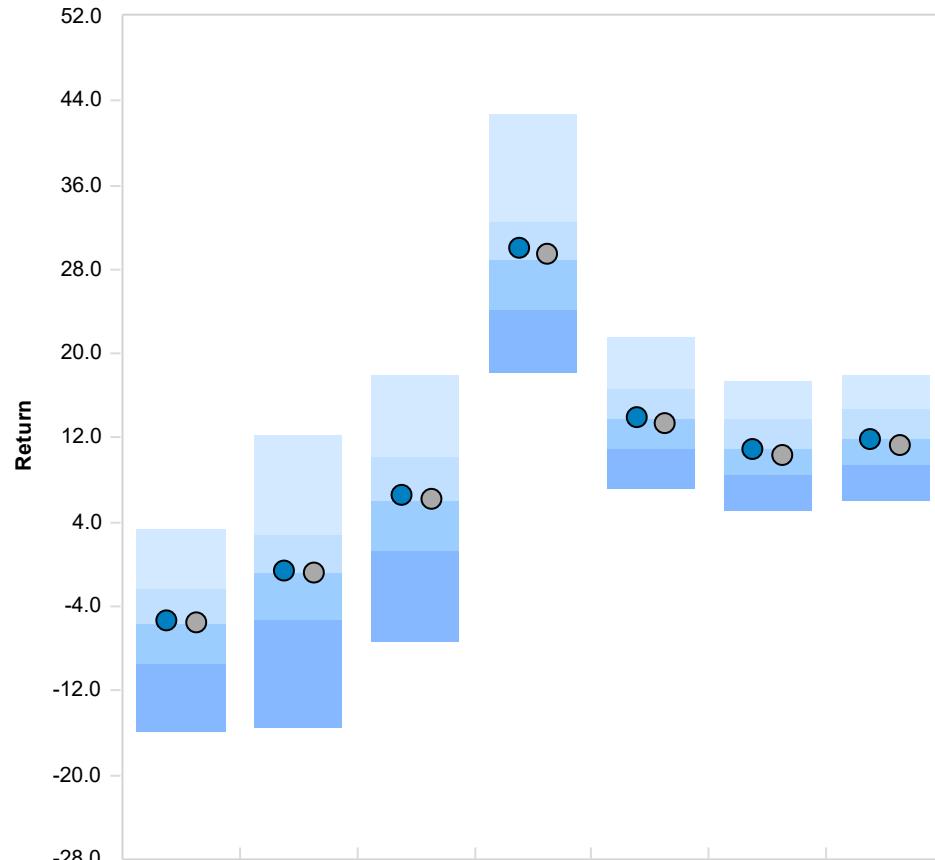


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	0 (0%)	8 (67%)	4 (33%)	0 (0%)
Index	20	0 (0%)	3 (15%)	17 (85%)	0 (0%)

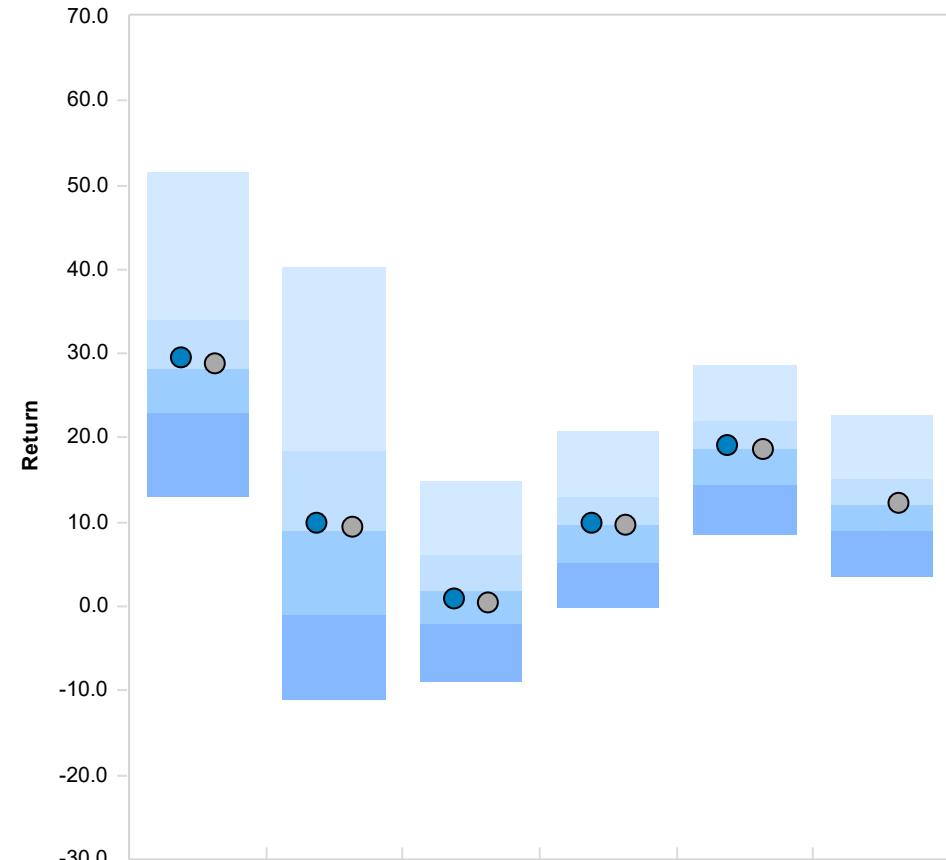
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	4	0 (0%)	2 (50%)	2 (50%)	0 (0%)
Index	20	0 (0%)	2 (10%)	18 (90%)	0 (0%)



Peer Group Analysis - IM Global Equity (SA+CF)



Peer Group Analysis - IM Global Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	-5.37 (48)	-0.58 (49)	6.63 (47)	29.98 (44)	14.00 (48)	10.95 (51)	11.85 (51)
Index	-5.47 (49)	-0.82 (52)	6.30 (49)	29.42 (48)	13.49 (54)	10.47 (58)	11.37 (56)
Median	-5.70	-0.73	5.98	28.93	13.72	11.02	11.87

	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016
Investment	29.54 (42)	10.04 (48)	0.93 (57)	10.07 (46)	19.24 (47)	N/A
Index	28.92 (44)	9.57 (50)	0.48 (62)	9.63 (51)	18.73 (51)	12.25 (50)
Median	28.06	9.09	1.96	9.64	18.74	12.15

Comparative Performance

	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Investment	6.18	-1.05	7.25	5.31	15.91	8.17
Index	6.10	-1.11	7.18	5.14	15.70	8.11



Portfolio Characteristics (Benchmark: MSCI AC World IMI (Net))				Top Ten Equity Holdings (Benchmark: MSCI AC World IMI (Net))			
	Portfolio	Benchmark		Portfolio (%)	Benchmark (%)	Active (%)	Qtr Rtn (%)
Wtd. Avg. Mkt. Cap (\$)	359,630,914,412	359,630,914,412	Apple Inc	3.81	3.81	0.00	-1.54
Median Mkt. Cap (\$)	2,090,340,546	2,090,340,546	Microsoft Corp	2.92	2.92	0.00	-8.14
Price/Earnings ratio	17.45	17.45	Amazon.com Inc	1.98	1.98	0.00	-2.23
Price/Book ratio	3.40	3.40	Tesla Inc	1.22	1.22	0.00	1.97
5 Yr. EPS Growth Rate (%)	18.79	18.79	Alphabet Inc	1.11	1.11	0.00	-3.99
Current Yield (%)	1.91	1.91	Alphabet Inc	1.06	1.06	0.00	-3.48
Beta (5 Years, Monthly)	1.00	1.00	NVIDIA Corporation	0.91	0.91	0.00	-7.21
Number of Stocks	9,220	9,220	Meta Platforms Inc	0.70	0.70	0.00	-33.89
			Taiwan Semiconductor ORD	0.68	0.68	0.00	-5.63
			Unitedhealth Group Inc	0.64	0.64	0.00	1.86

Distribution of Market Capitalization (%)							
>100 Bil	42.0						
75 Bil - 100 Bil	6.0						
25 Bil - 75 Bil	19.0						
15 Bil - 25 Bil	7.0						
2 Bil - 15 Bil	18.0						
0 - 2 Bil	4.0						
	0.0	6.0	12.0	18.0	24.0	30.0	36.0
	42.0	48.0	54.0				
SSgA MSCI ACWI IMI Index Fund							
MSCI AC World IMI (Net)							

Buy and Hold Sector Attribution	Allocation		Performance			Attribution	
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Total
Communication Services	7.9	7.9	-10.12	-10.12	0.00	0.00	0.00
Consumer Discretionary	12.5	12.5	-11.65	-11.65	0.00	0.00	0.00
Consumer Staples	6.5	6.5	-3.92	-3.92	0.00	0.00	0.00
Energy	3.4	3.4	25.16	25.16	0.00	0.00	0.00
Financials	13.8	13.8	-0.45	-0.45	0.00	0.00	0.00
Health Care	11.5	11.5	-4.79	-4.79	0.00	0.00	0.00
Industrials	10.7	10.7	-6.17	-6.17	0.00	0.00	0.00
Information Technology	22.3	22.3	-10.28	-10.28	0.00	0.00	0.00
Materials	5.1	5.1	3.00	3.00	0.00	0.00	0.00
Real Estate	3.6	3.6	-5.03	-5.03	0.00	0.00	0.00
Utilities	2.7	2.7	1.46	1.46	0.00	0.00	0.00
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>-5.22</b>	<b>-5.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

#### Ten Best Performers

	Portfolio (%)	Benchmark (%)
NexTier Oilfield Solutions Inc	0.00	0.00
Peabody Energy Corp	0.00	0.00
Thungela Resources Limited	0.00	0.00
RPC Inc.	0.00	0.00
Thonburi Healthcare	0.00	0.00
Rheinmetall	0.01	0.01
Alpha Metallurgical Resource Inc	0.00	0.00
Jastrzebska Spolka Weglowa SA	0.00	0.00
Kosmos Energy Ltd	0.00	0.00
HENSOLDT AG	0.00	0.00

#### Ten Worst Performers

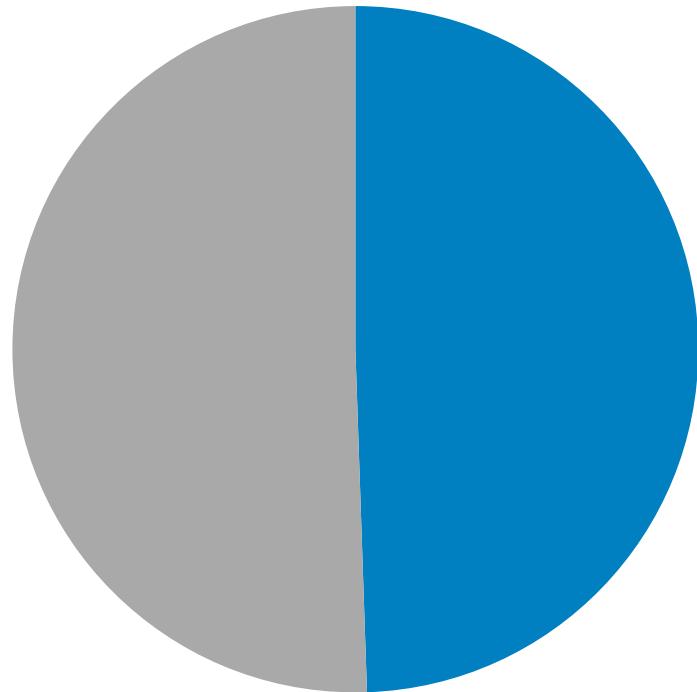
	Portfolio (%)	Benchmark (%)
Kodiak Sciences Inc	0.00	0.00
Zhenro Properties Group Limited	0.00	0.00
Aligos Therapeutics Inc	0.00	0.00
Petrozavodsk PLC	0.00	0.00
Electric Last Mile Solutions Inc	0.00	0.00
Applied Therapeutics Inc	0.00	0.00
Annexon Inc	0.00	0.00
VROOM INC	0.00	0.00
IG Design Group PLC	0.00	0.00
Bioatla Inc	0.00	0.00



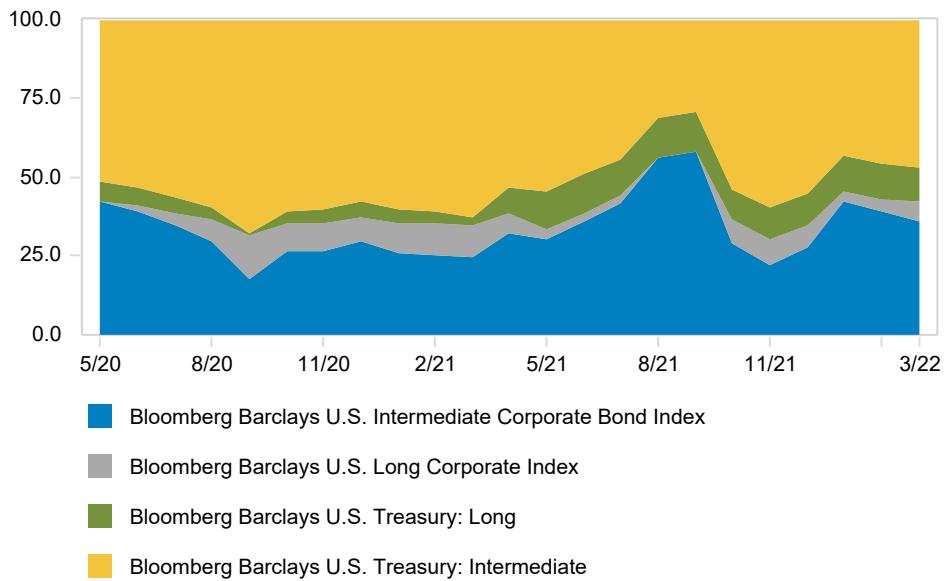
## **Fixed Income**

Manager Allocation

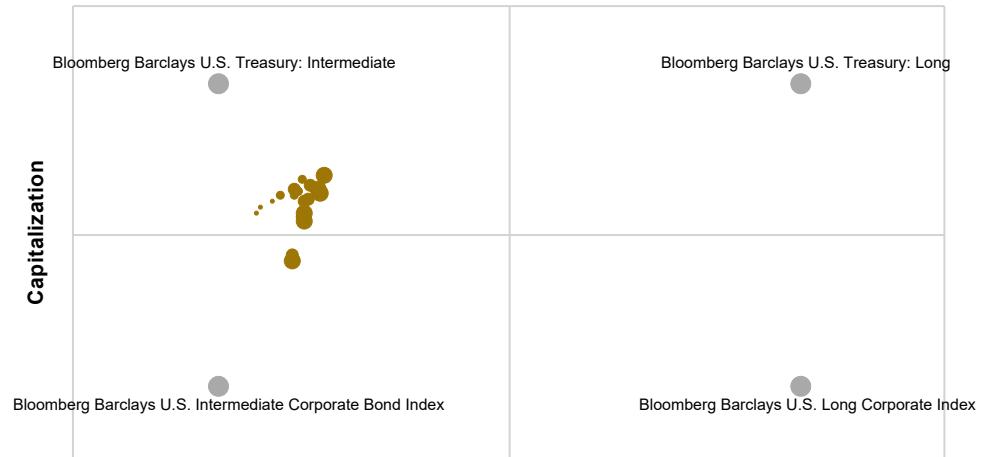
March 31, 2022 : \$395,009,434



Style Analysis - Returns Based



3 Year Style Analysis



Market Value

Allocation

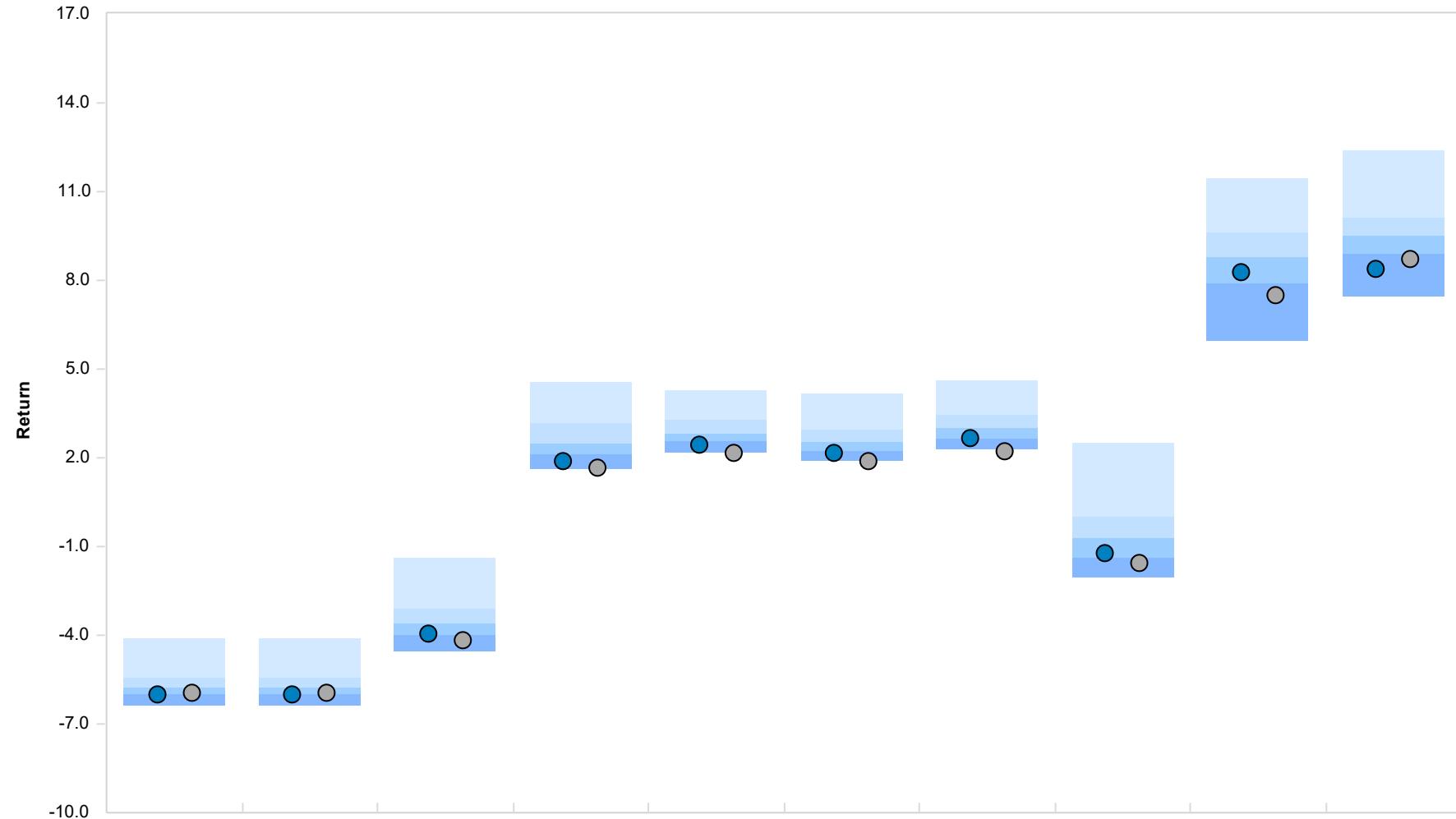
PIMCO Total Return	195,392,645	49.5
SSgA Bond Market Index	199,616,789	50.5

● Style History

Manager Style



**Peer Group Analysis**

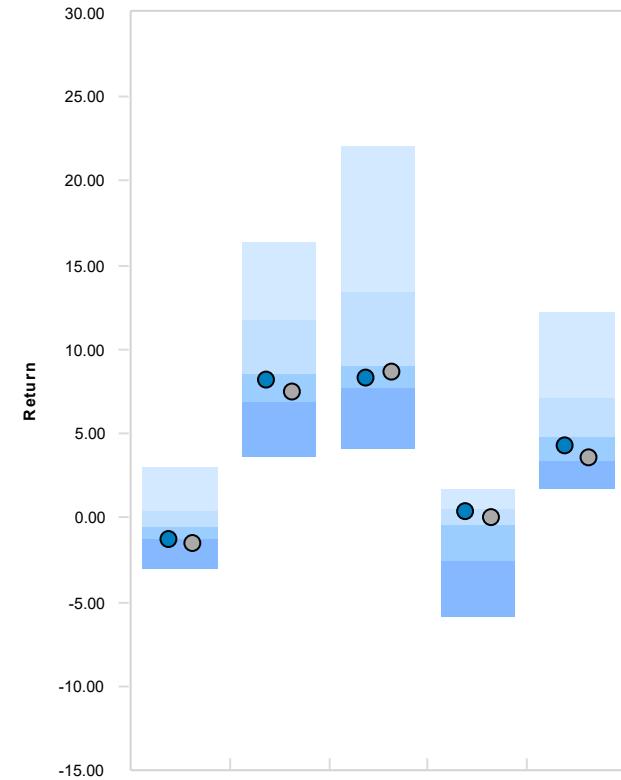
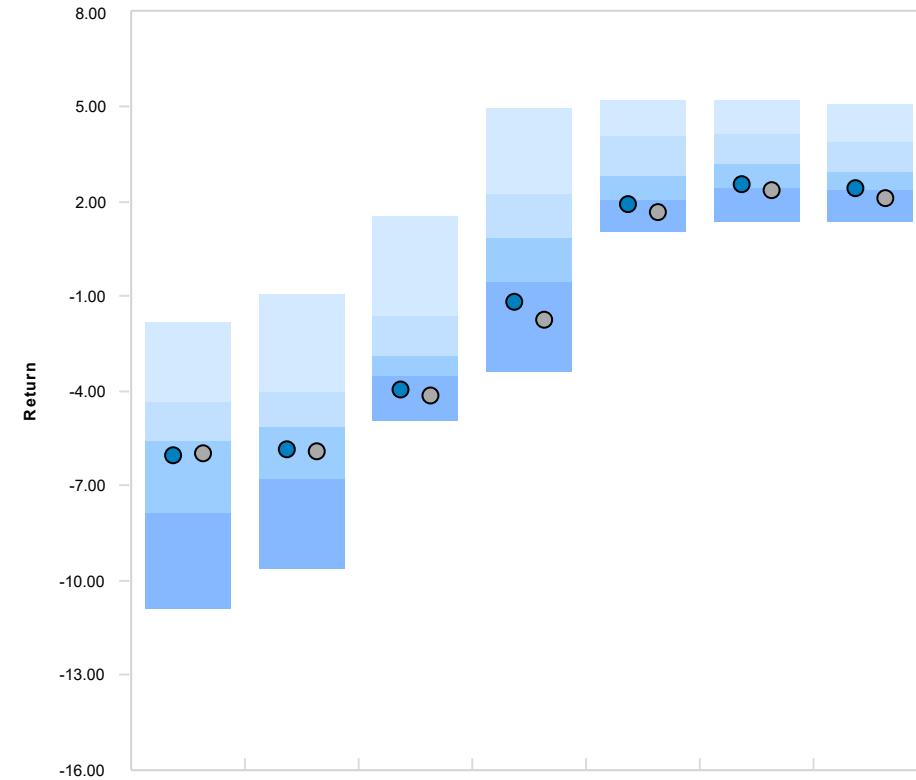


	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
Fixed Income	-6.02 (76)	-6.02 (76)	-3.95 (72)	1.91 (83)	2.43 (80)	2.17 (82)	2.65 (77)	-1.21 (68)	8.27 (66)	8.39 (89)
Blmbg. U.S. Aggregate Index	-5.93 (70)	-5.93 (70)	-4.15 (86)	1.69 (94)	2.14 (96)	1.87 (98)	2.24 (98)	-1.55 (81)	7.51 (86)	8.72 (82)
5th Percentile	-4.11	-4.11	-1.37	4.58	4.28	4.17	4.63	2.49	11.47	12.41
1st Quartile	-5.42	-5.42	-3.14	3.17	3.26	2.95	3.44	-0.01	9.62	10.12
Median	-5.78	-5.78	-3.59	2.49	2.84	2.55	3.01	-0.75	8.76	9.49
3rd Quartile	-6.02	-6.02	-4.00	2.12	2.54	2.23	2.67	-1.38	7.86	8.89
95th Percentile	-6.39	-6.39	-4.54	1.60	2.15	1.89	2.26	-2.05	5.97	7.45

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



Plan Sponsor Peer Group Analysis - All Master Trust-US Fixed Income Segment



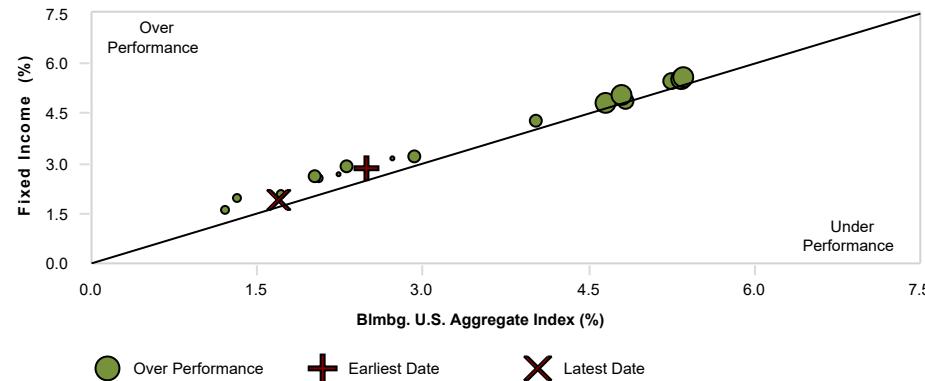
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Fixed Income	-6.02 (61)	-5.83 (65)	-3.95 (83)	-1.17 (82)	1.91 (81)	2.57 (73)	2.43 (74)
○ Blmbg. U.S. Aggregate Index	-5.93 (60)	-5.87 (65)	-4.15 (86)	-1.75 (89)	1.69 (87)	2.38 (80)	2.14 (84)
Median	-5.56	-5.16	-2.84	0.83	2.83	3.17	2.94

	2021	2020	2019	2018	2017
● Fixed Income	-1.21 (74)	8.27 (55)	8.39 (64)	0.35 (28)	4.34 (56)
○ Blmbg. U.S. Aggregate Index	-1.55 (81)	7.51 (66)	8.72 (58)	0.01 (36)	3.54 (69)
Median	-0.54	8.58	9.09	-0.39	4.78

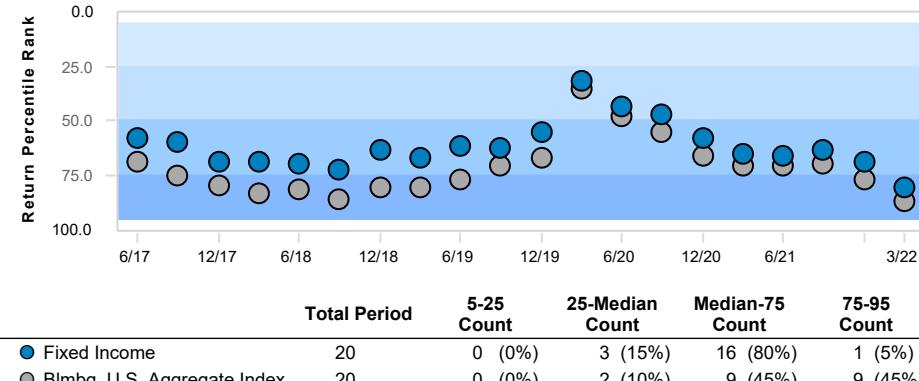
Comparative Performance

	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Fixed Income	-0.05	0.26	1.99	-3.34	0.72	1.07
Blmbg. U.S. Aggregate Index	0.01	0.05	1.83	-3.38	0.67	0.62

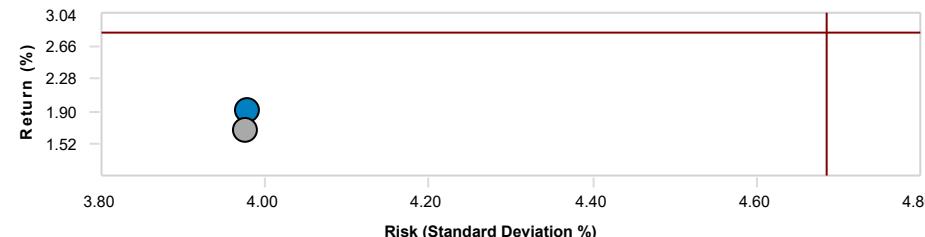
### 3 Yr Rolling Under/Over Performance - 5 Years



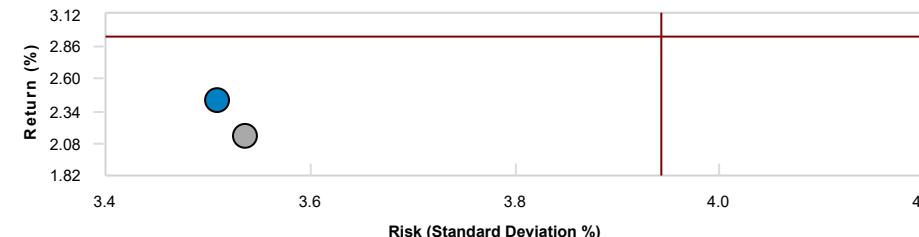
### 3 Yr Rolling Percentile Ranking - 5 Years



### Peer Group Scattergram - 3 Years



### Peer Group Scattergram - 5 Years



### Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Fixed Income	0.50	101.94	97.86	0.23	0.43	0.30	0.99	2.63
Blmbg. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.24	1.00	2.59

### Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Fixed Income	0.42	102.01	95.72	0.31	0.66	0.39	0.98	2.20
Blmbg. U.S. Aggregate Index	0.00	100.00	100.00	0.00	N/A	0.31	1.00	2.20



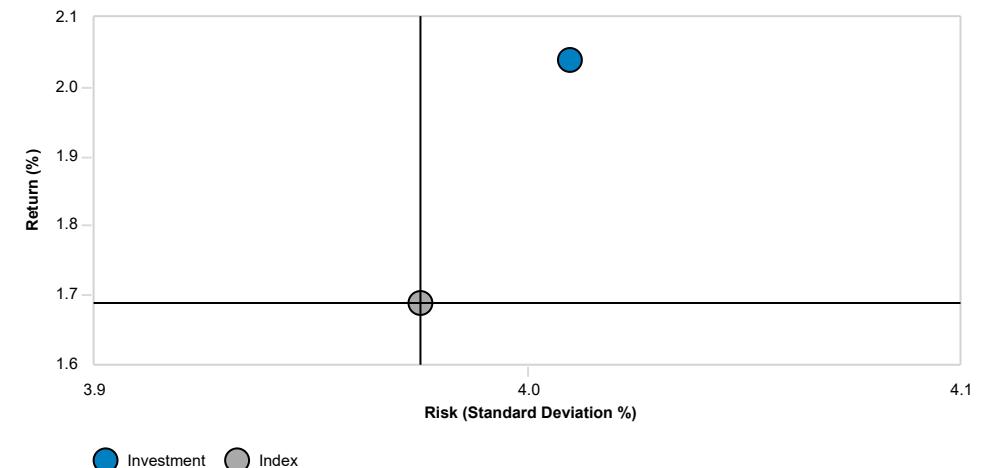
#### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.04	4.01	0.33	102.46	9	95.62	3
Index	1.69	3.98	0.24	100.00	10	100.00	2

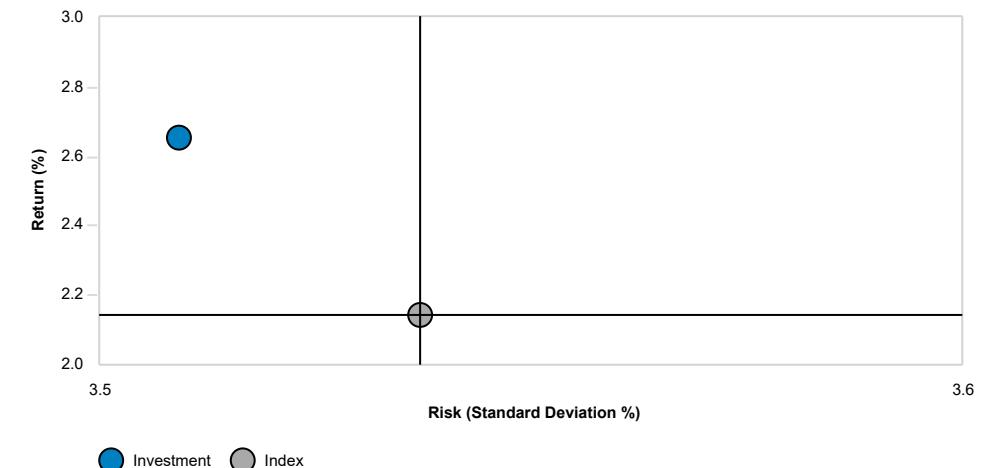
#### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.66	3.51	0.45	102.94	16	91.13	4
Index	2.14	3.54	0.31	100.00	16	100.00	4

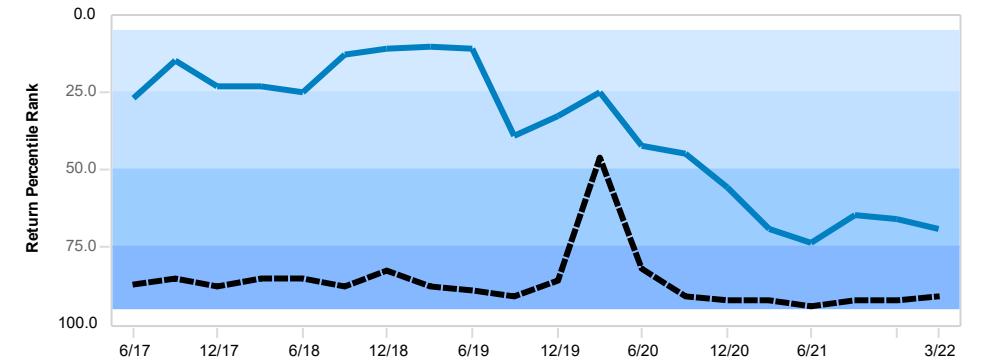
#### Risk and Return 3 Years



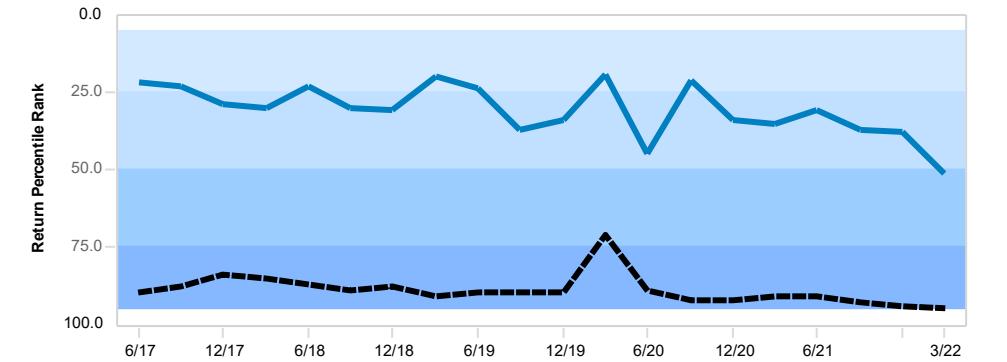
#### Risk and Return 5 Years



#### 3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



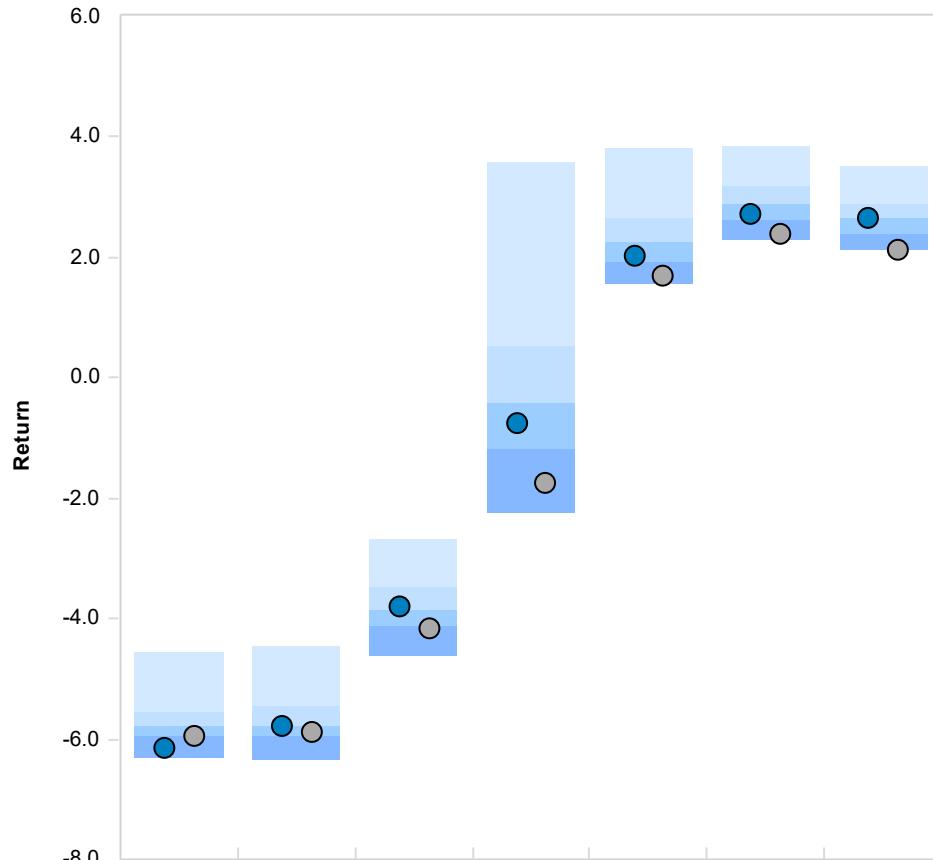
#### 5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



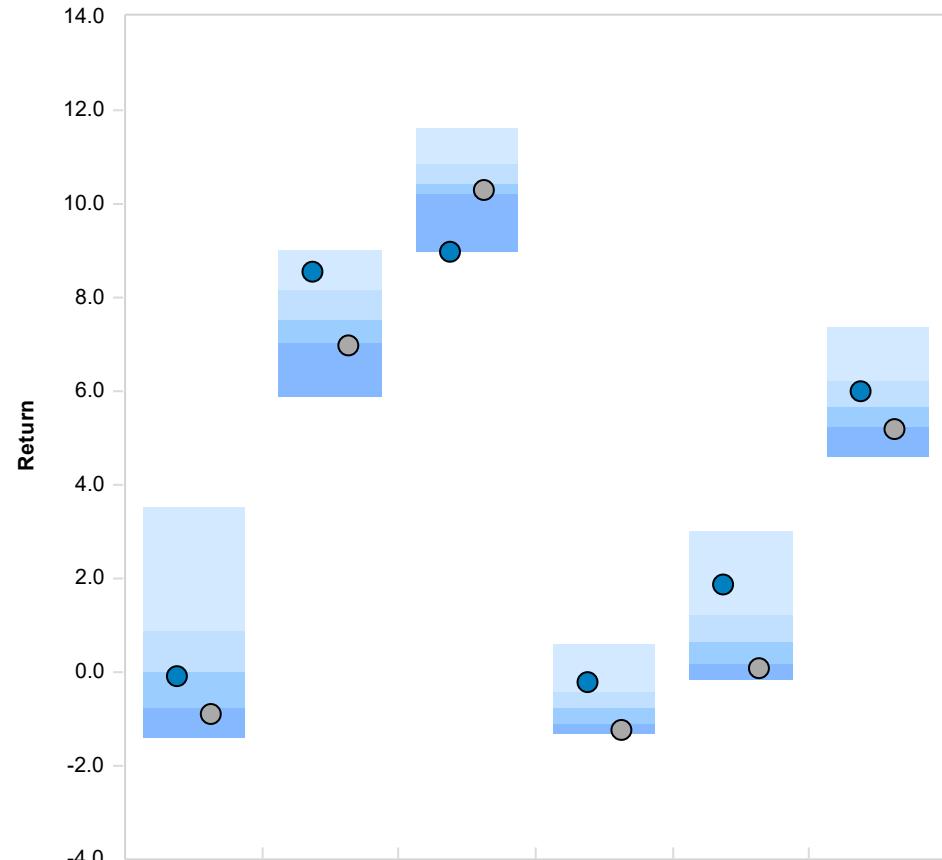
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	5 (25%)	6 (30%)	0 (0%)
Index	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	12 (60%)	1 (5%)	0 (0%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	-6.14 (87)	-5.79 (53)	-3.80 (44)	-0.74 (67)	2.04 (69)	2.72 (70)	2.66 (51)
Index	-5.93 (73)	-5.87 (70)	-4.15 (80)	-1.75 (92)	1.69 (91)	2.38 (94)	2.14 (95)
Median	-5.80	-5.78	-3.87	-0.41	2.24	2.88	2.67

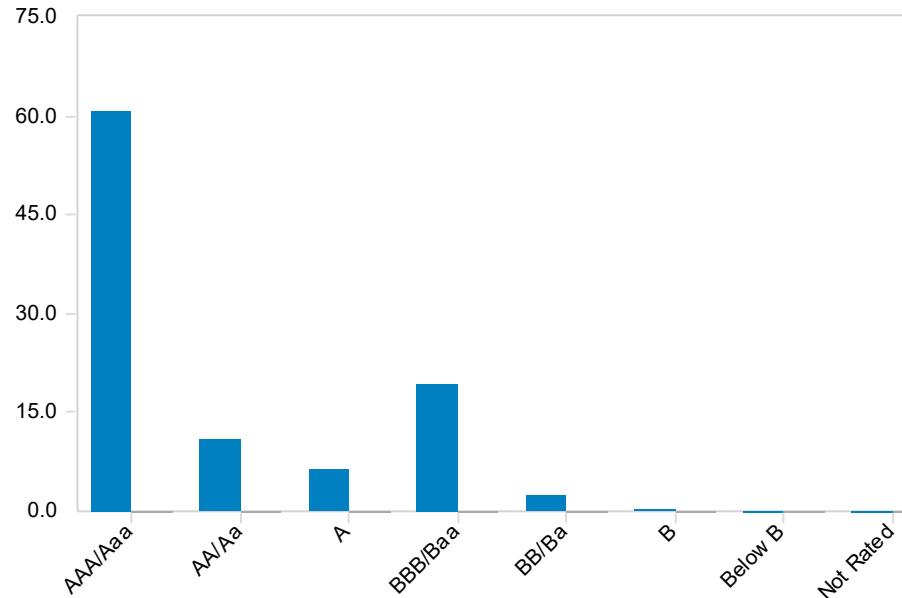
	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016
Investment	-0.10 (55)	8.56 (14)	9.00 (95)	-0.23 (17)	1.89 (11)	5.99 (33)
Index	-0.90 (84)	6.98 (77)	10.30 (69)	-1.22 (88)	0.07 (84)	5.19 (80)
Median	-0.02	7.52	10.42	-0.75	0.63	5.66

Comparative Performance

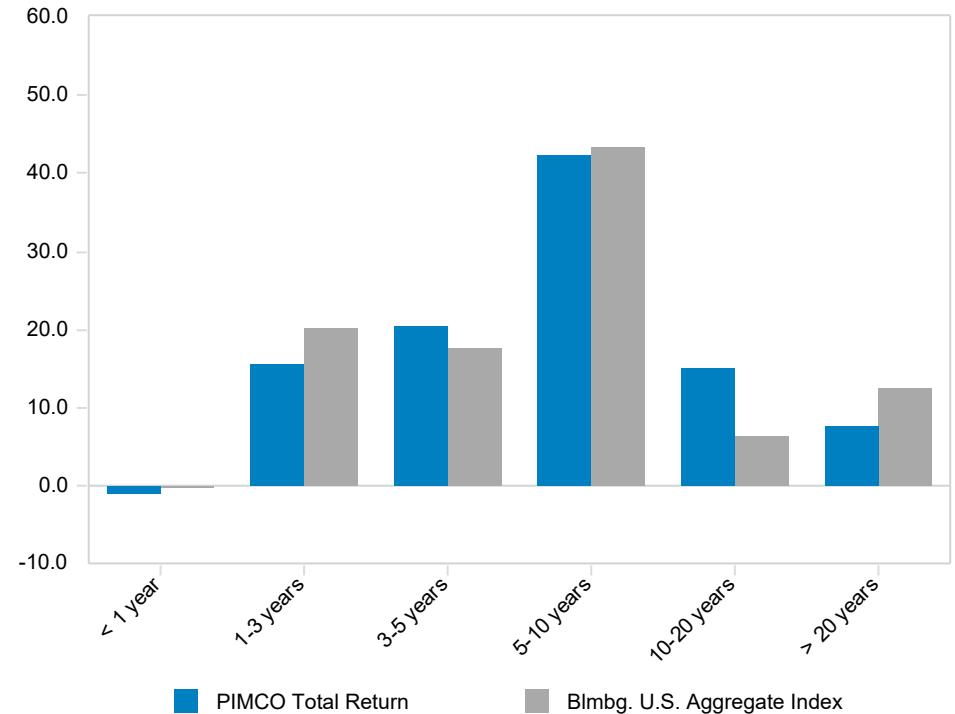
	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Investment	-0.09	0.45	2.12	-3.34	0.75	1.41
Index	0.01	0.05	1.83	-3.38	0.67	0.62



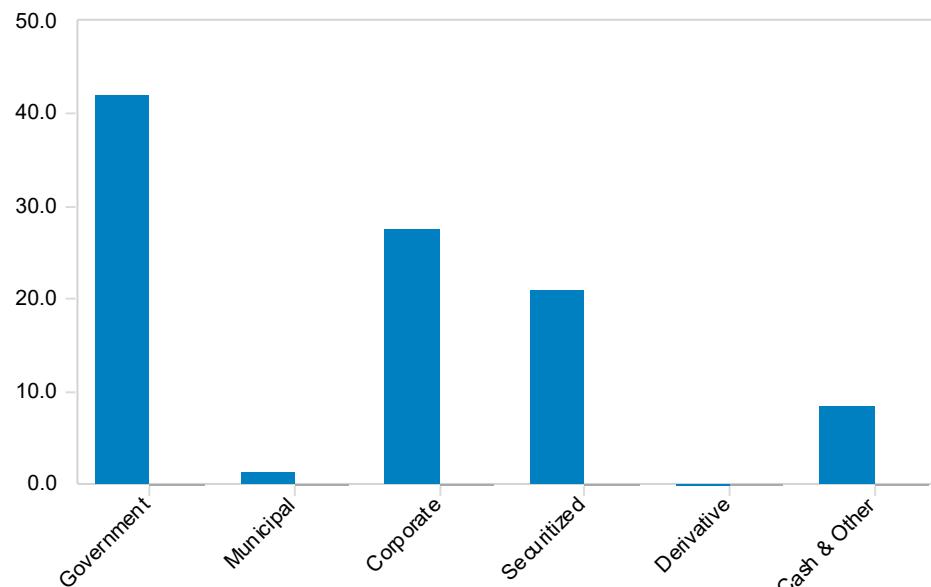
## Credit Quality Distribution (%)



## Maturity Distribution (%)



## Sector Distribution (%)



## Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	9.44	8.77
Avg. Quality	AA	AA1/AA2
Coupon Rate (%)	2.40	2.44
Yield To Maturity (%)	2.20	2.92
Current Yield	2.24	2.92
Effective Duration	5.84	6.58
Holdings Count	528	12,393

Strategy Review  
SSgA Bond Market Index | Blmbg. U.S. Aggregate Index  
As of March 31, 2022

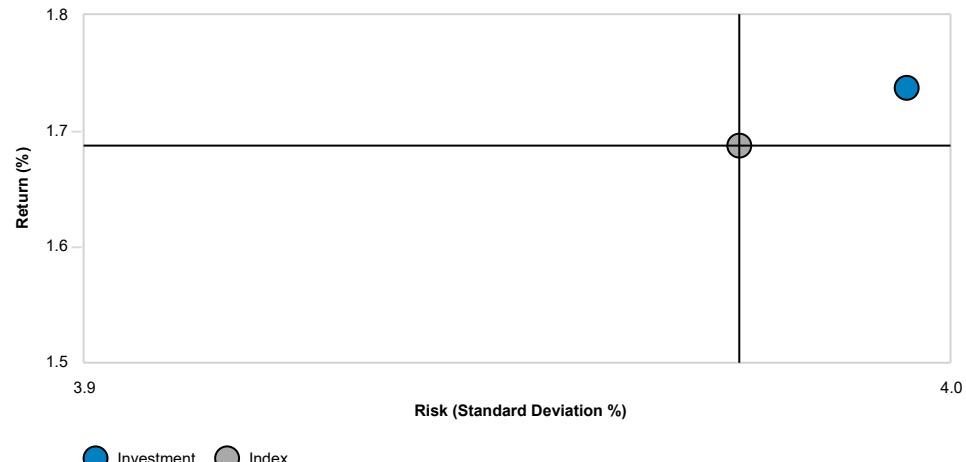
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.74	3.99	0.26	101.22	9	100.59	3
Index	1.69	3.98	0.24	100.00	10	100.00	2

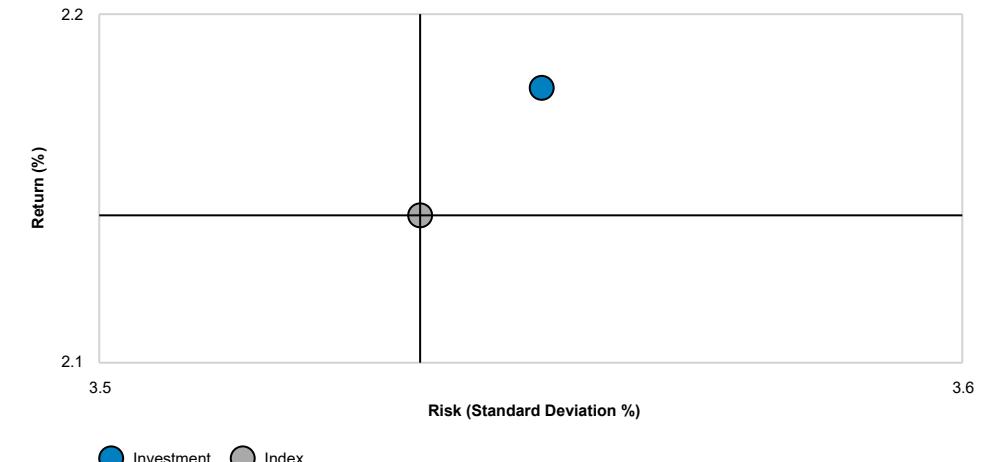
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.18	3.55	0.32	100.86	15	100.39	5
Index	2.14	3.54	0.31	100.00	16	100.00	4

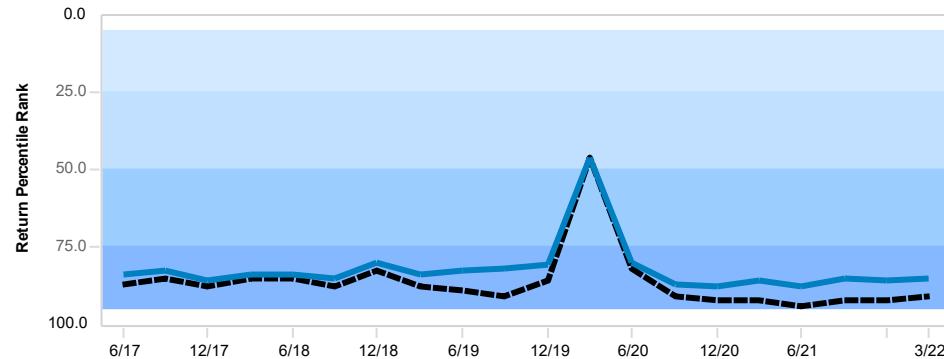
**Risk and Return 3 Years**



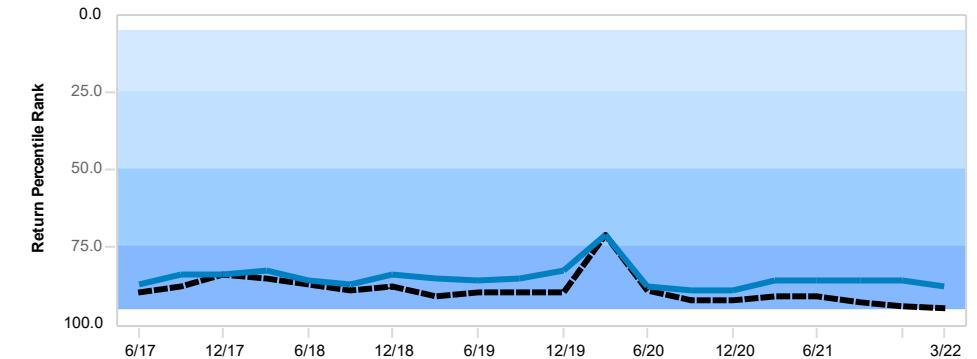
**Risk and Return 5 Years**



**3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



**5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**

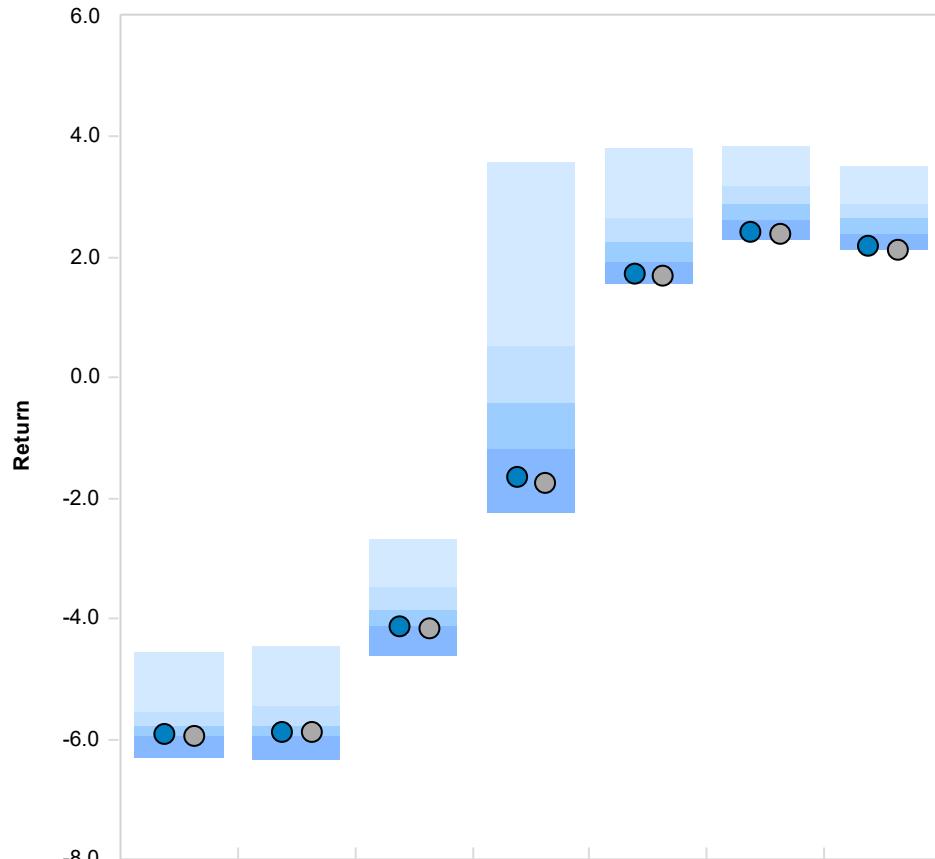


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)
Index	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

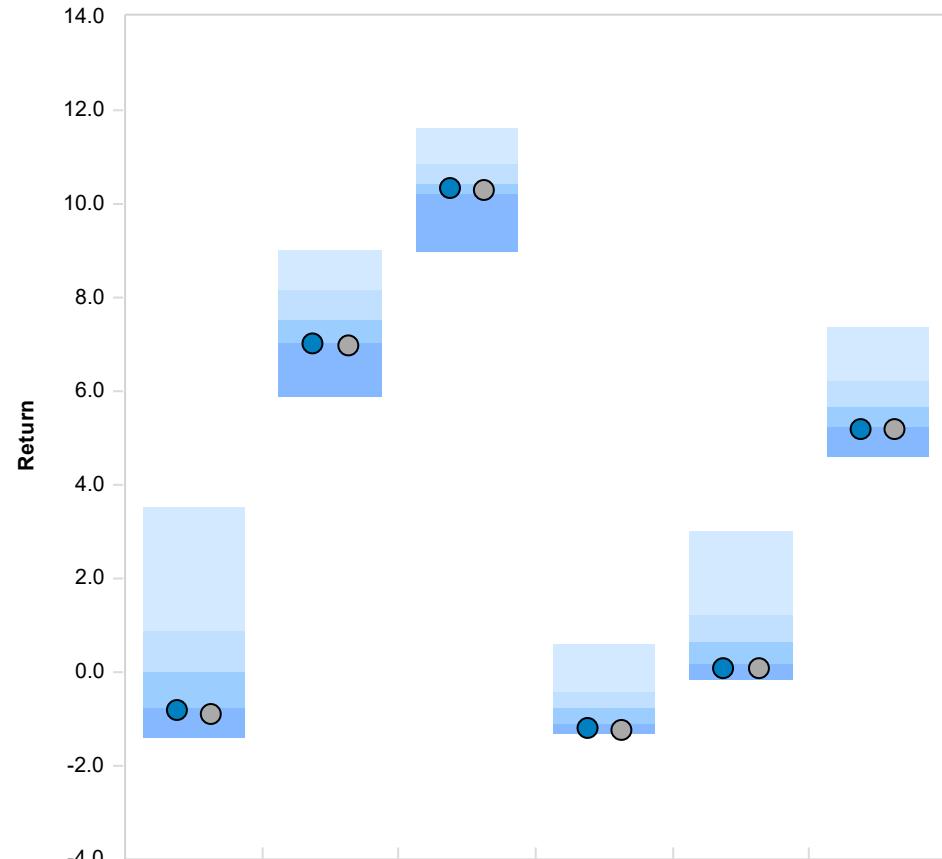
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)



**Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)**



**Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	-5.91 (70)	-5.87 (69)	-4.13 (77)	-1.66 (84)	1.74 (85)	2.42 (88)	2.18 (88)
Index	-5.93 (73)	-5.87 (70)	-4.15 (80)	-1.75 (92)	1.69 (91)	2.38 (94)	2.14 (95)
Median	-5.80	-5.78	-3.87	-0.41	2.24	2.88	2.67

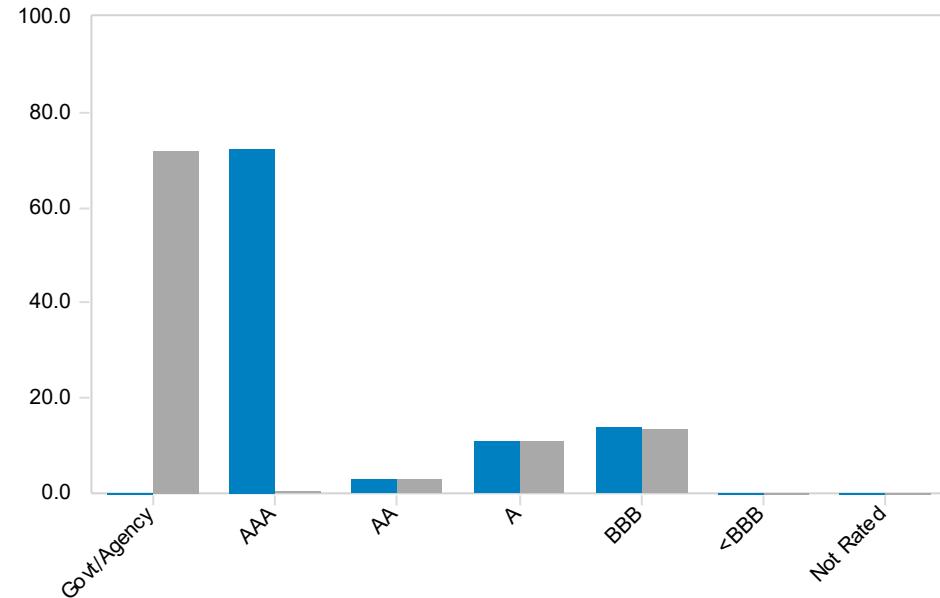
	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017	Oct-2015 To Sep-2016
Investment	-0.82 (80)	7.04 (72)	10.35 (64)	-1.21 (87)	0.08 (82)	5.20 (79)
Index	-0.90 (84)	6.98 (77)	10.30 (69)	-1.22 (88)	0.07 (84)	5.19 (80)
Median	-0.02	7.52	10.42	-0.75	0.63	5.66

**Comparative Performance**

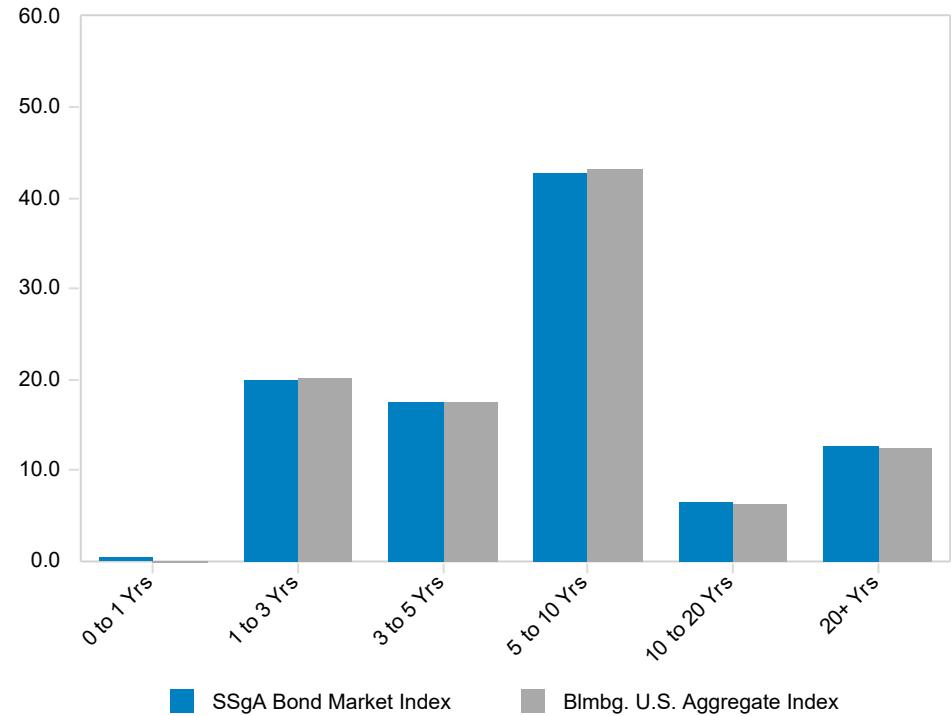
	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Investment	-0.02	0.06	1.85	-3.35	0.69	0.65
Index	0.01	0.05	1.83	-3.38	0.67	0.62



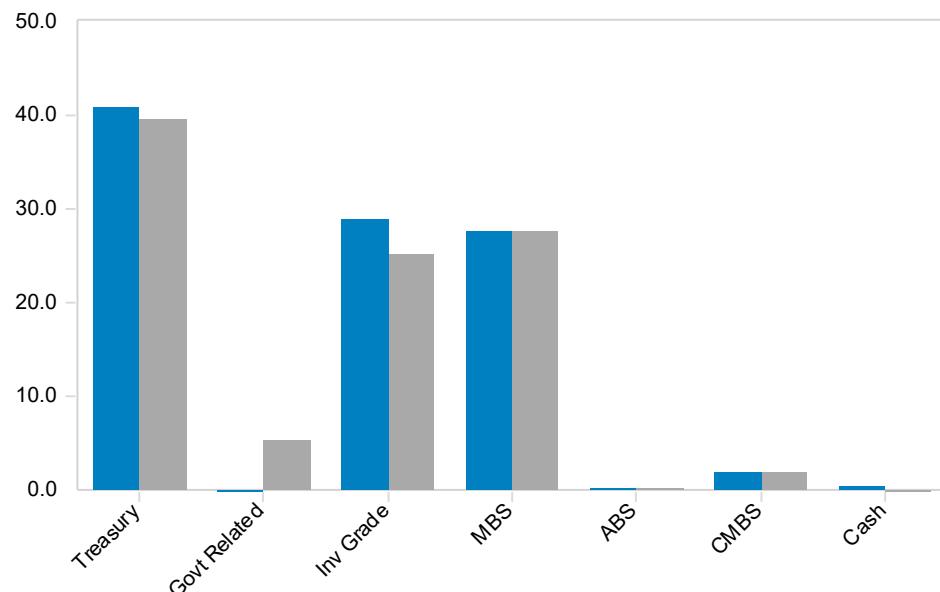
## Credit Quality Distribution (%)



## Maturity Distribution (%)



## Sector Distribution (%)



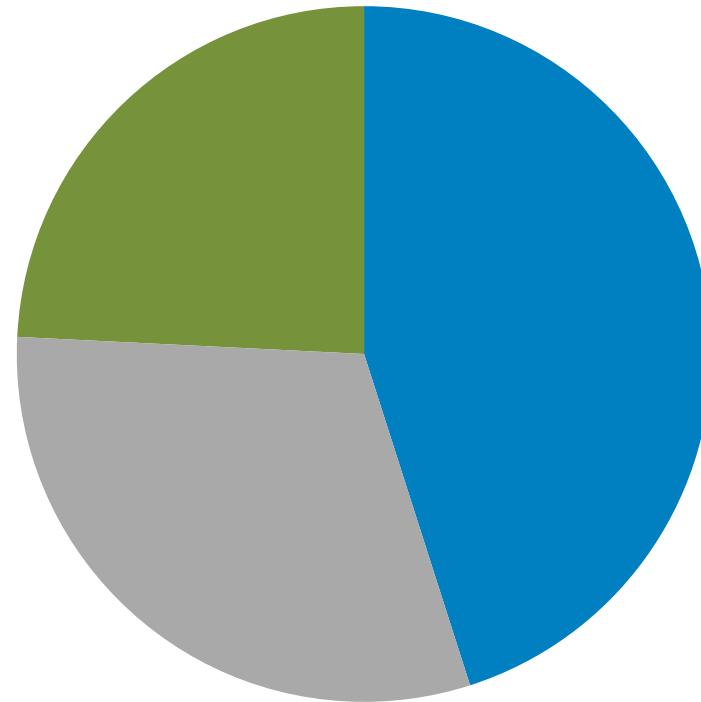
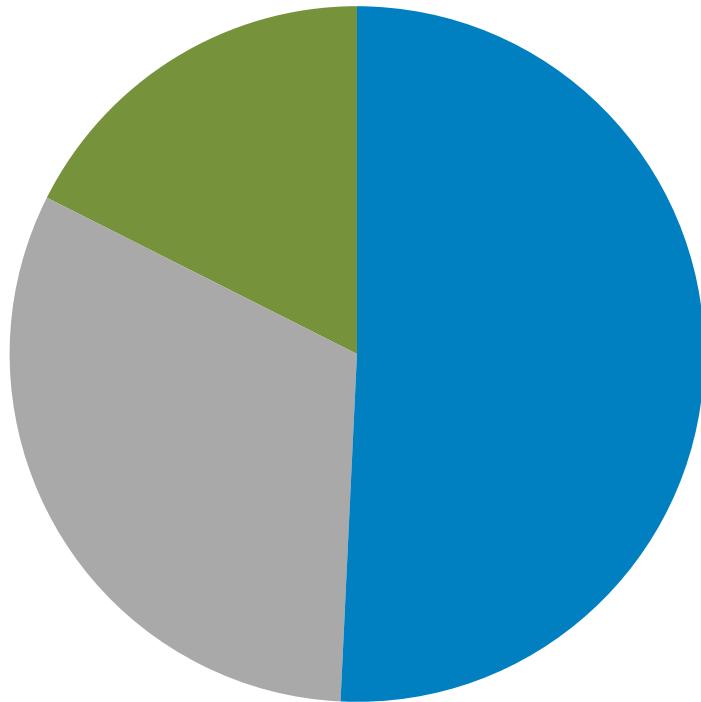
## Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.86	8.77
Avg. Quality	Aa2	AA1/AA2
Coupon Rate (%)	2.55	2.44
Yield To Maturity (%)	2.92	2.92
Current Yield	2.53	2.92
Effective Duration	6.62	6.58
Holdings Count	9,601	12,393

# **Real Estate**

March 31, 2022 : \$109,065,921

December 31, 2021 : \$115,605,758



JP Morgan Asset Management Strategic Property Fund	55,360,356
UBS Trumbull Property Fund	34,532,528
Vanguard Real Estate Index (VGSNX)	19,173,036

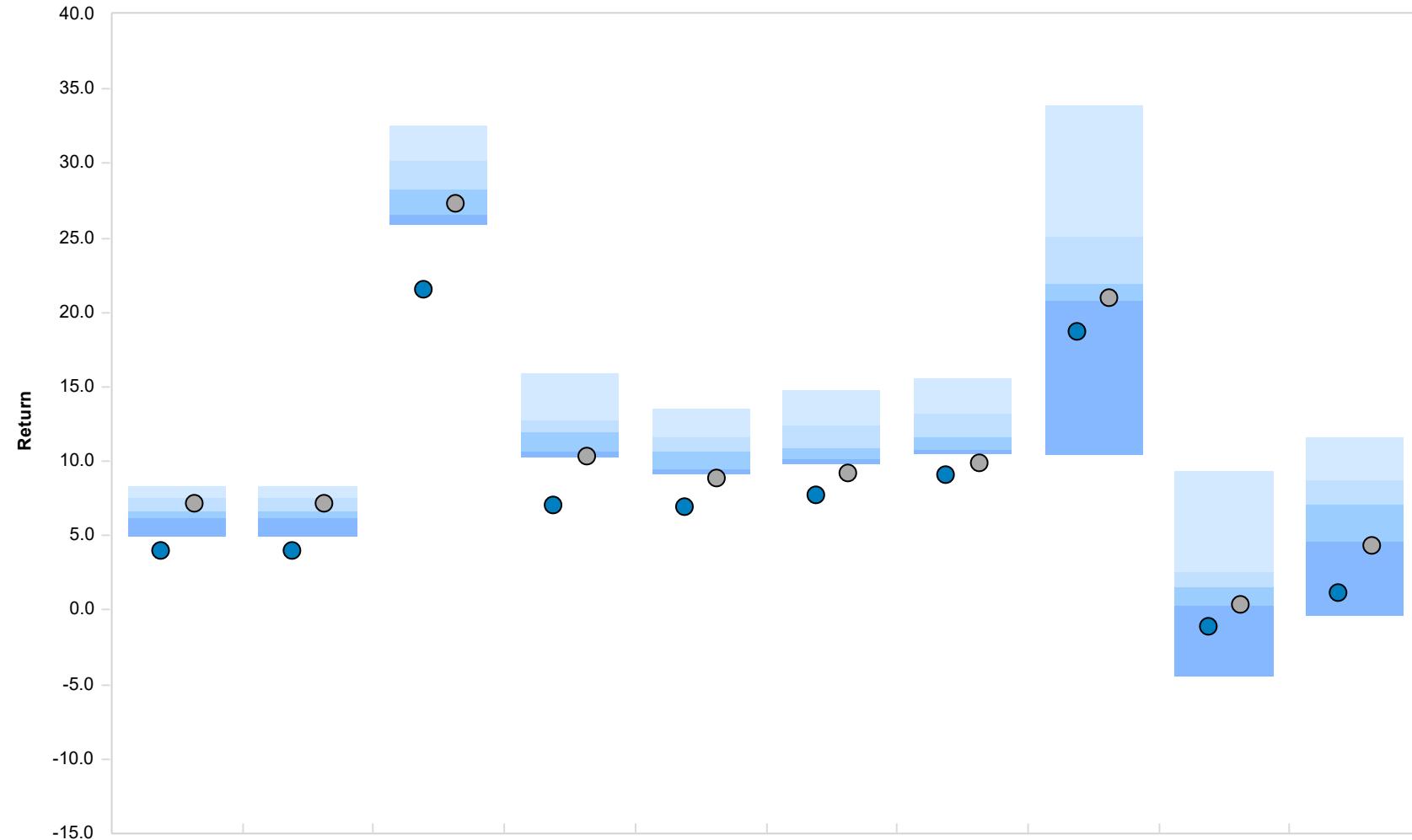
	Market Value	Allocation
JP Morgan Asset Management Strategic Property Fund	55,360,356	50.8
UBS Trumbull Property Fund	34,532,528	31.7
Vanguard Real Estate Index (VGSNX)	19,173,036	17.6

JP Morgan Asset Management Strategic Property Fund	52,095,003
UBS Trumbull Property Fund	35,519,186
Vanguard Real Estate Index (VGSNX)	27,991,569

	Market Value	Allocation
JP Morgan Asset Management Strategic Property Fund	52,095,003	45.1
UBS Trumbull Property Fund	35,519,186	30.7
Vanguard Real Estate Index (VGSNX)	27,991,569	24.2



## Peer Group Analysis



	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
Real Estate	3.97 (100)	3.97 (100)	21.57 (100)	7.12 (100)	6.92 (100)	7.78 (100)	9.08 (100)	18.78 (81)	-1.07 (86)	1.18 (94)
NCREIF Fund Index-ODCE (VW) (Net)	7.17 (32)	7.17 (32)	27.29 (58)	10.31 (92)	8.91 (100)	9.21 (100)	9.92 (100)	21.02 (65)	0.34 (75)	4.39 (79)
5th Percentile	8.35	8.35	32.56	15.86	13.50	14.80	15.59	33.87	9.28	11.62
1st Quartile	7.55	7.55	30.11	12.78	11.59	12.36	13.15	25.02	2.54	8.81
Median	6.61	6.61	28.27	11.92	10.65	10.86	11.57	21.86	1.58	7.02
3rd Quartile	6.14	6.14	26.50	10.74	9.46	10.09	10.83	20.73	0.24	4.57
95th Percentile	4.87	4.87	25.85	10.26	9.10	9.78	10.46	10.49	-4.53	-0.38

Parentheses contain percentile rankings.  
Calculation based on quarterly periodicity.



## **Master Limited Partnerships**

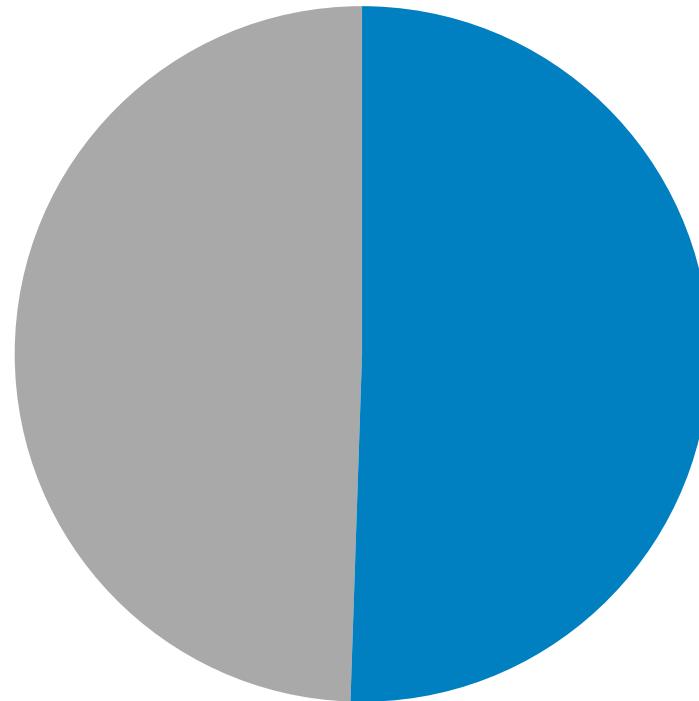
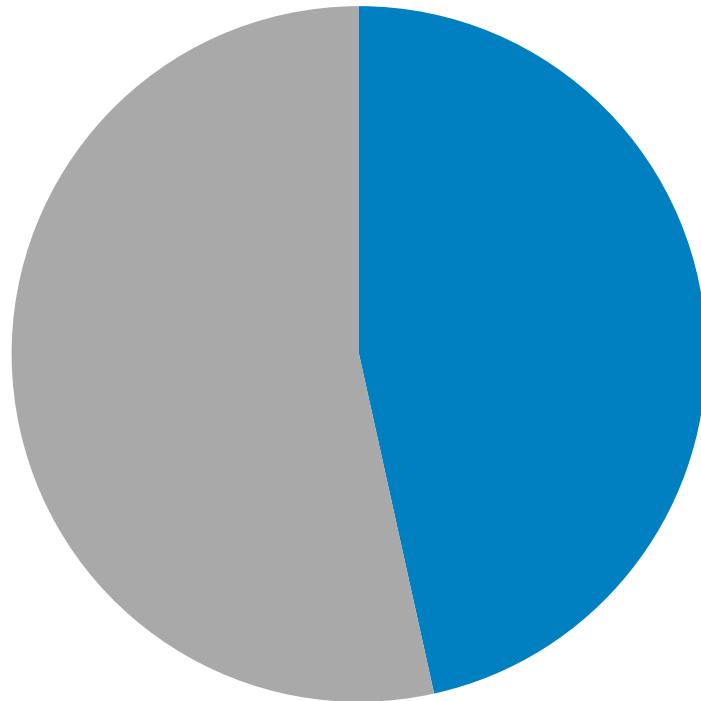
Employees' Retirement System of the City of Norfolk

Asset Allocation By Manager

As of March 31, 2022

March 31, 2022 : \$111,799,018

December 31, 2021 : \$98,085,692



Market Value

Allocation

Harvest MLP	52,026,540
Tortoise Capital Advisors	59,772,478

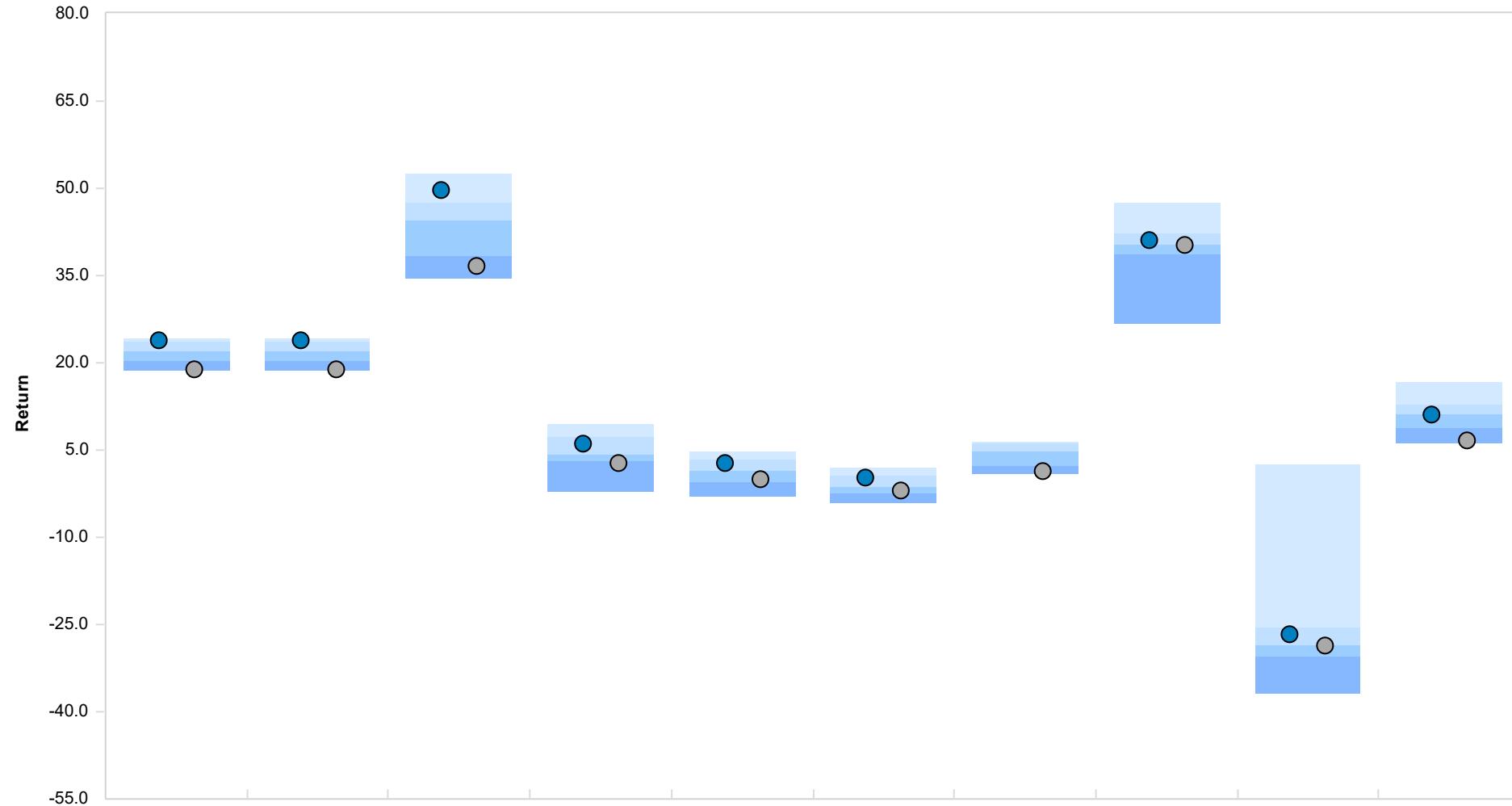
Market Value

Allocation

Harvest MLP	49,568,773
Tortoise Capital Advisors	48,516,920



## Peer Group Analysis

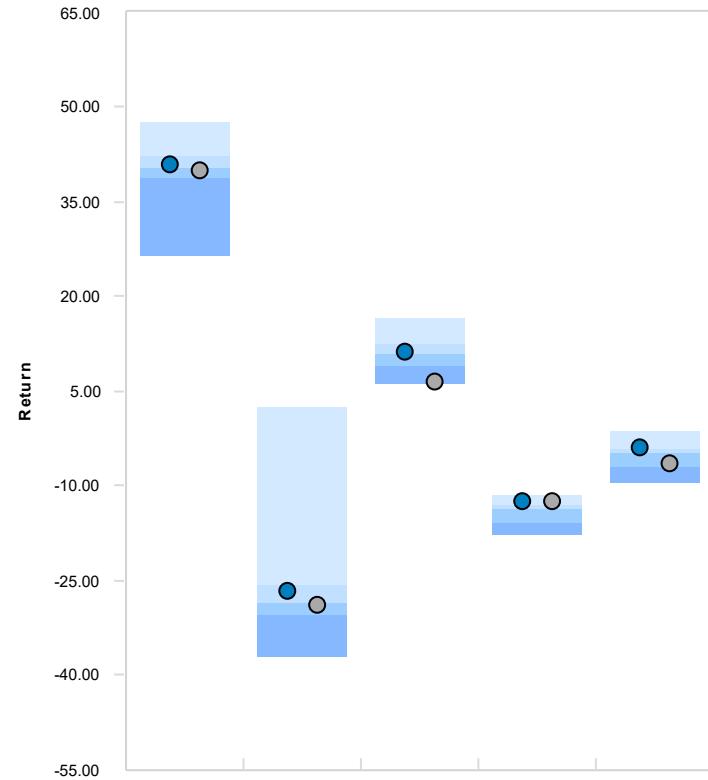
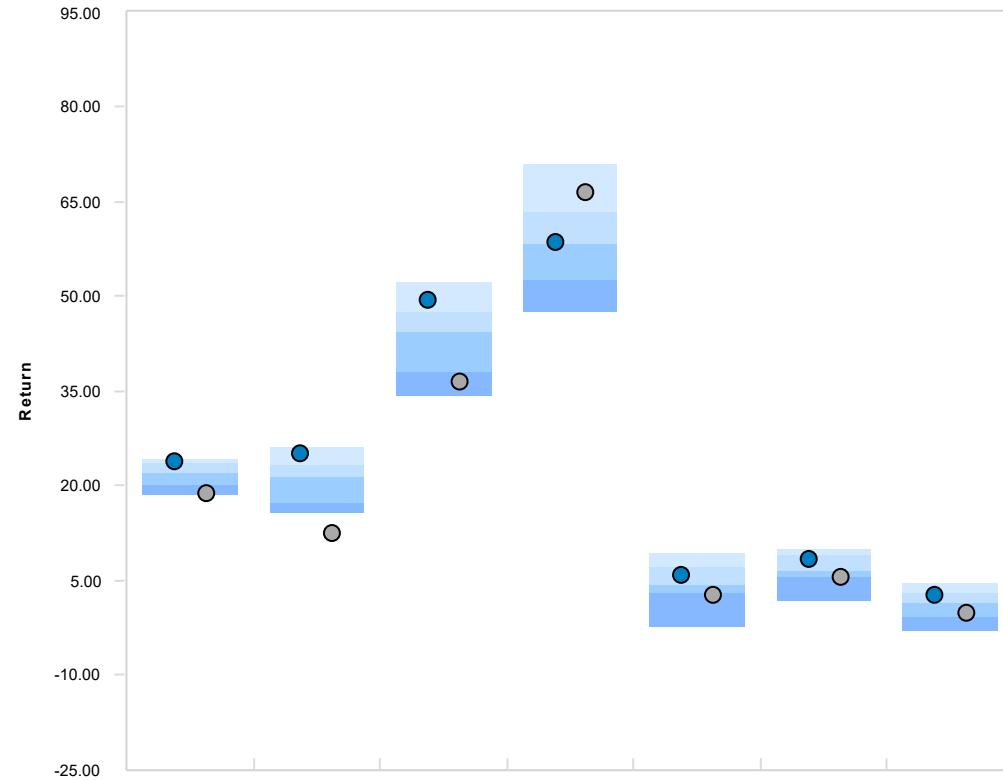


	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2021	2020	2019
MLPs	23.96 (16)	23.96 (16)	49.61 (17)	5.99 (32)	2.80 (30)	0.33 (30)	N/A	41.07 (34)	-26.67 (29)	11.16 (36)
Alerian MLP Index	18.81 (95)	18.81 (95)	36.56 (85)	2.70 (78)	-0.07 (67)	-1.94 (60)	1.28 (91)	40.17 (54)	-28.69 (55)	6.56 (91)
5th Percentile	24.28	24.28	52.50	9.39	4.71	1.99	6.42	47.48	2.41	16.53
1st Quartile	23.62	23.62	47.59	7.10	3.25	0.62	6.03	42.16	-25.55	12.73
Median	21.92	21.92	44.44	4.22	1.37	-1.51	4.72	40.26	-28.54	11.00
3rd Quartile	20.29	20.29	38.28	2.95	-0.64	-2.37	2.28	38.69	-30.51	8.97
95th Percentile	18.65	18.65	34.32	-2.16	-2.96	-4.04	0.73	26.63	-37.04	6.20

Parentheses contain percentile rankings.  
Calculation based on monthly periodicity.



Plan Sponsor Peer Group Analysis - Master Limited Partnerships (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
MLPs	23.96 (16)	25.13 (15)	49.61 (17)	58.61 (49)	5.99 (32)	8.34 (33)	2.80 (30)
Alerian MLP Index	18.81 (95)	12.64 (100)	36.56 (85)	66.55 (16)	2.70 (78)	5.67 (74)	-0.07 (67)
Median	21.92	21.31	44.44	58.27	4.22	6.70	1.37

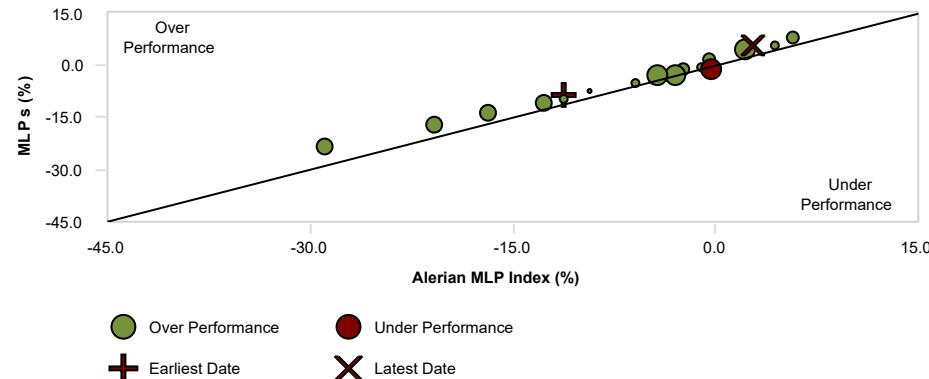
	2021	2020	2019	2018	2017
MLPs	41.07 (34)	-26.67 (29)	11.16 (36)	-12.45 (9)	-3.96 (20)
Alerian MLP Index	40.17 (54)	-28.69 (55)	6.56 (91)	-12.42 (9)	-6.52 (70)
Median	40.26	-28.54	11.00	-13.48	-4.94

Comparative Performance

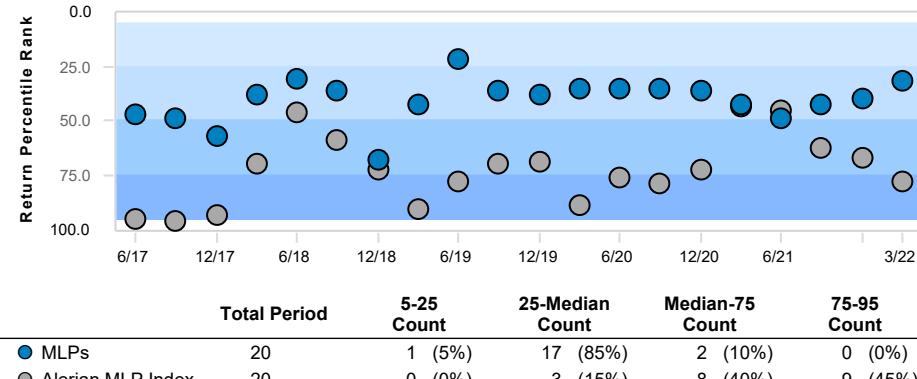
	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
MLPs	2.31	-1.33	19.57	16.88	24.76	-12.38
Alerian MLP Index	0.55	-5.71	21.23	21.95	32.45	-16.26



### 3 Yr Rolling Under/Over Performance - 5 Years



### 3 Yr Rolling Percentile Ranking - 5 Years

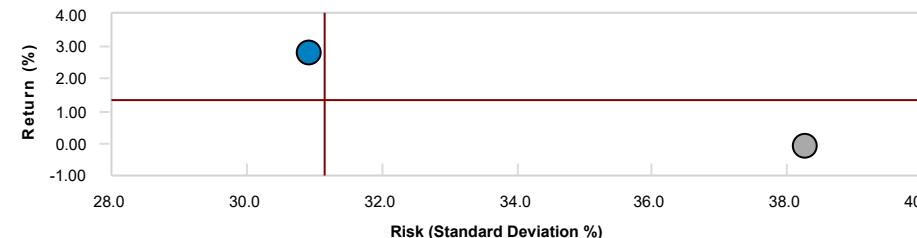


### Peer Group Scattergram - 3 Years



	Return	Standard Deviation
MLPs	5.99	36.39
Alerian MLP Index	2.70	46.77
Median	4.22	37.25

### Peer Group Scattergram - 5 Years



	Return	Standard Deviation
MLPs	2.80	30.92
Alerian MLP Index	-0.07	38.26
Median	1.37	31.17

### Historical Statistics - 3 Years

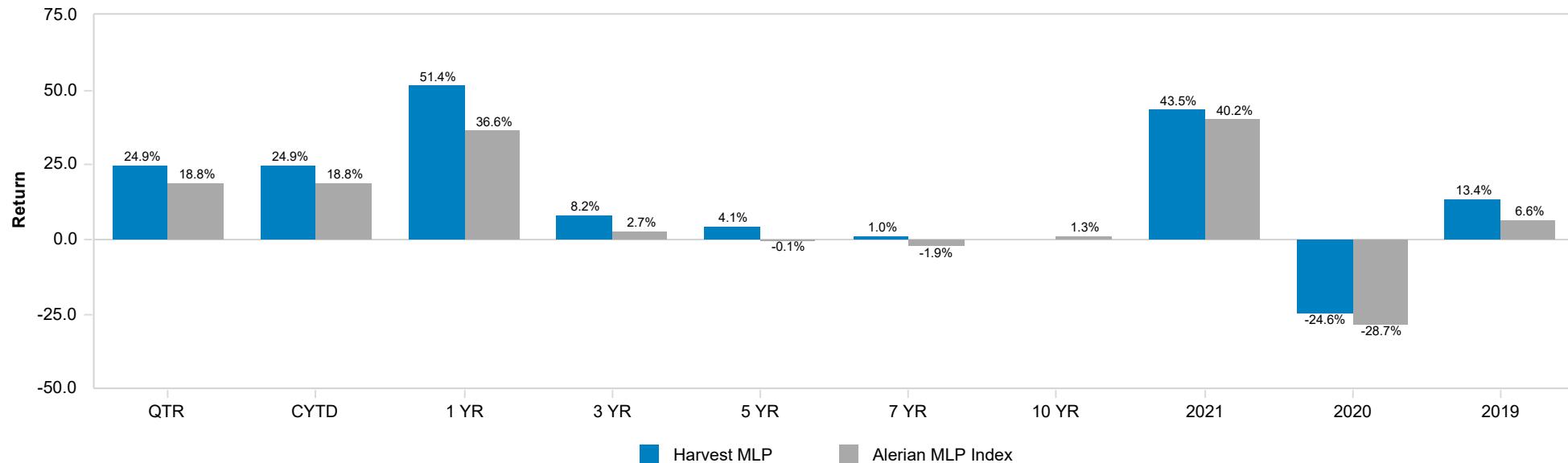
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MLPs	12.45	84.42	82.08	2.14	-0.10	0.34	0.77	26.13
Alerian MLP Index	0.00	100.00	100.00	0.00	N/A	0.29	1.00	31.23

### Historical Statistics - 5 Years

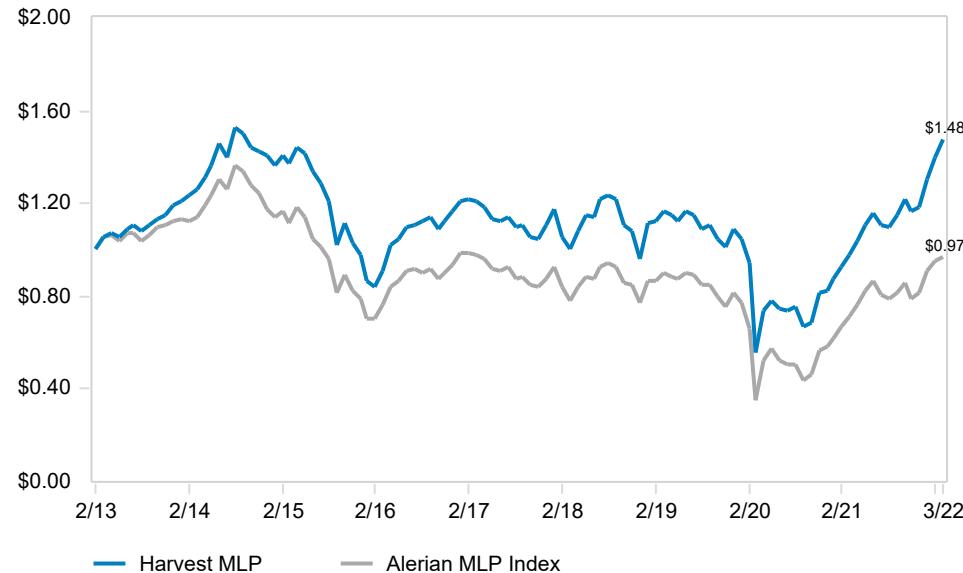
	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
MLPs	9.79	89.57	86.71	1.85	0.02	0.22	0.79	21.91
Alerian MLP Index	0.00	100.00	100.00	0.00	N/A	0.17	1.00	25.66



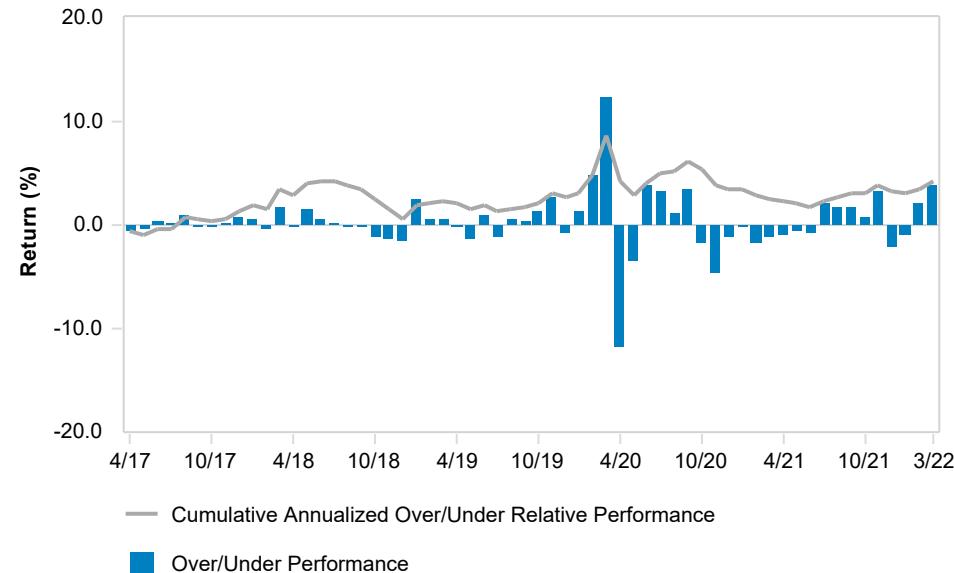
Comparative Performance



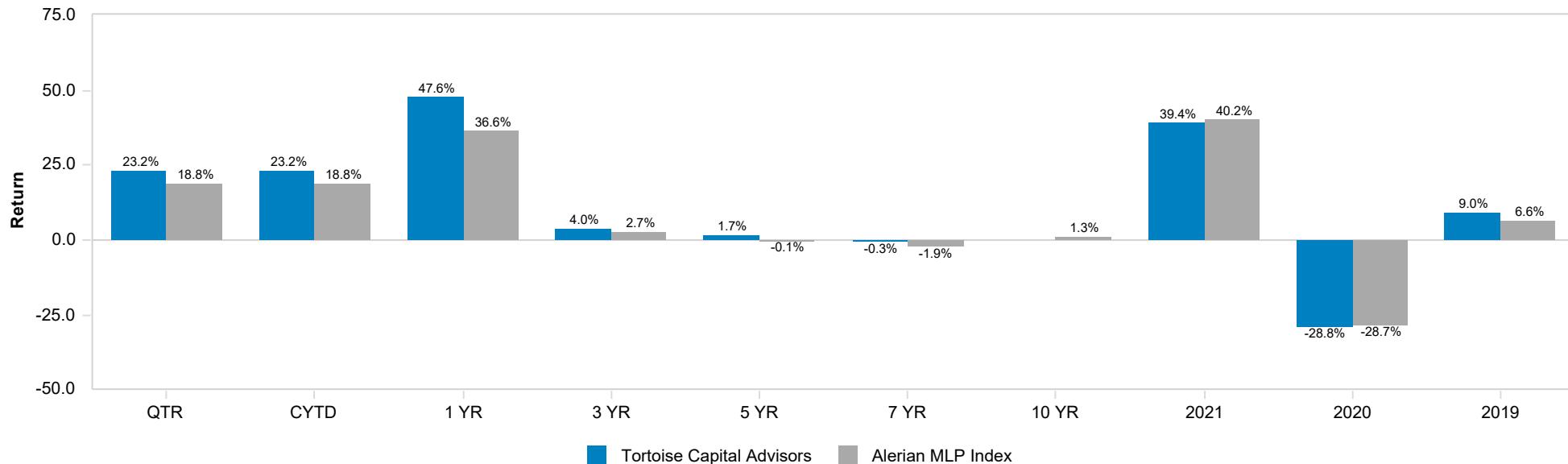
Growth of \$1 - Since Inception (03/01/13)



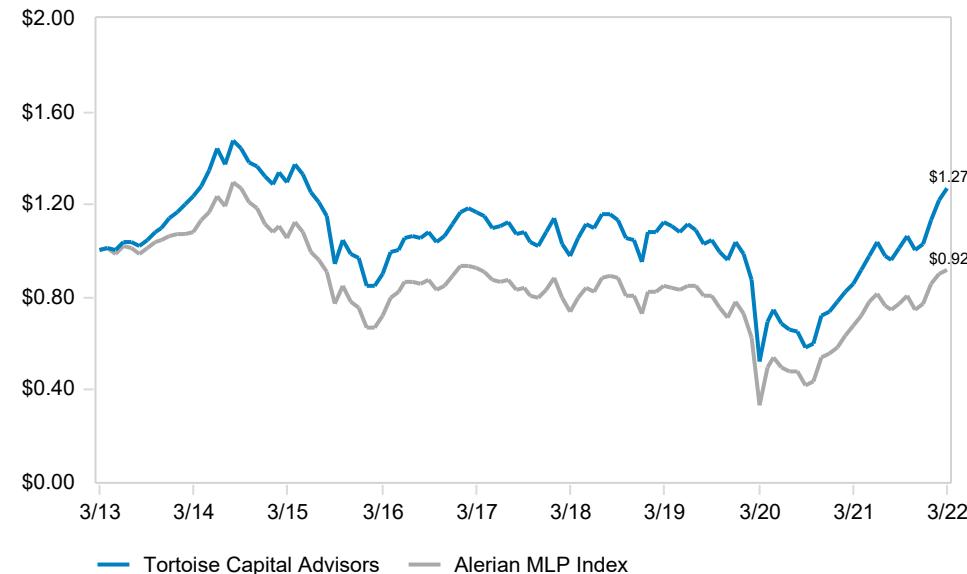
Relative Performance vs. Alerian MLP Index



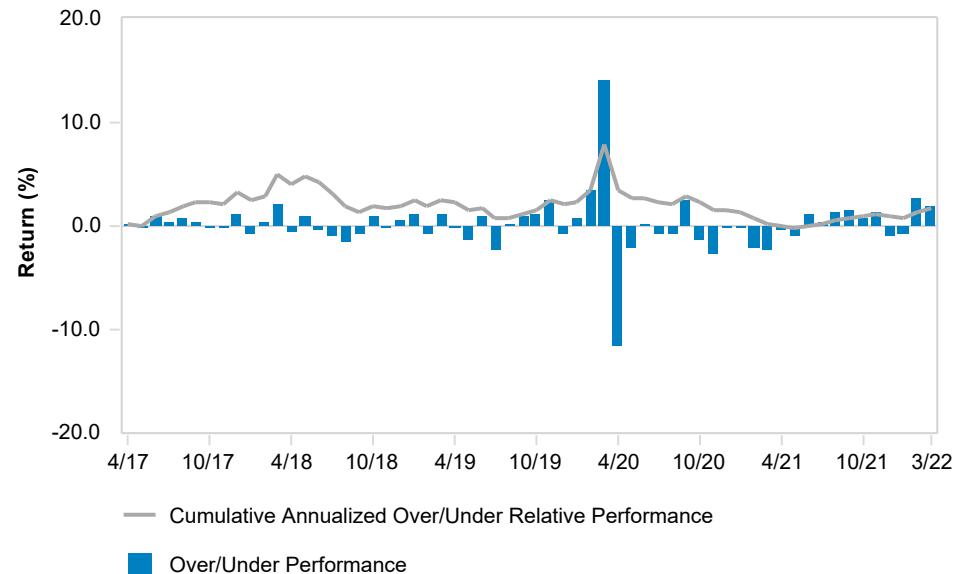
## Comparative Performance



## Growth of \$1 - Since Inception (04/01/13)



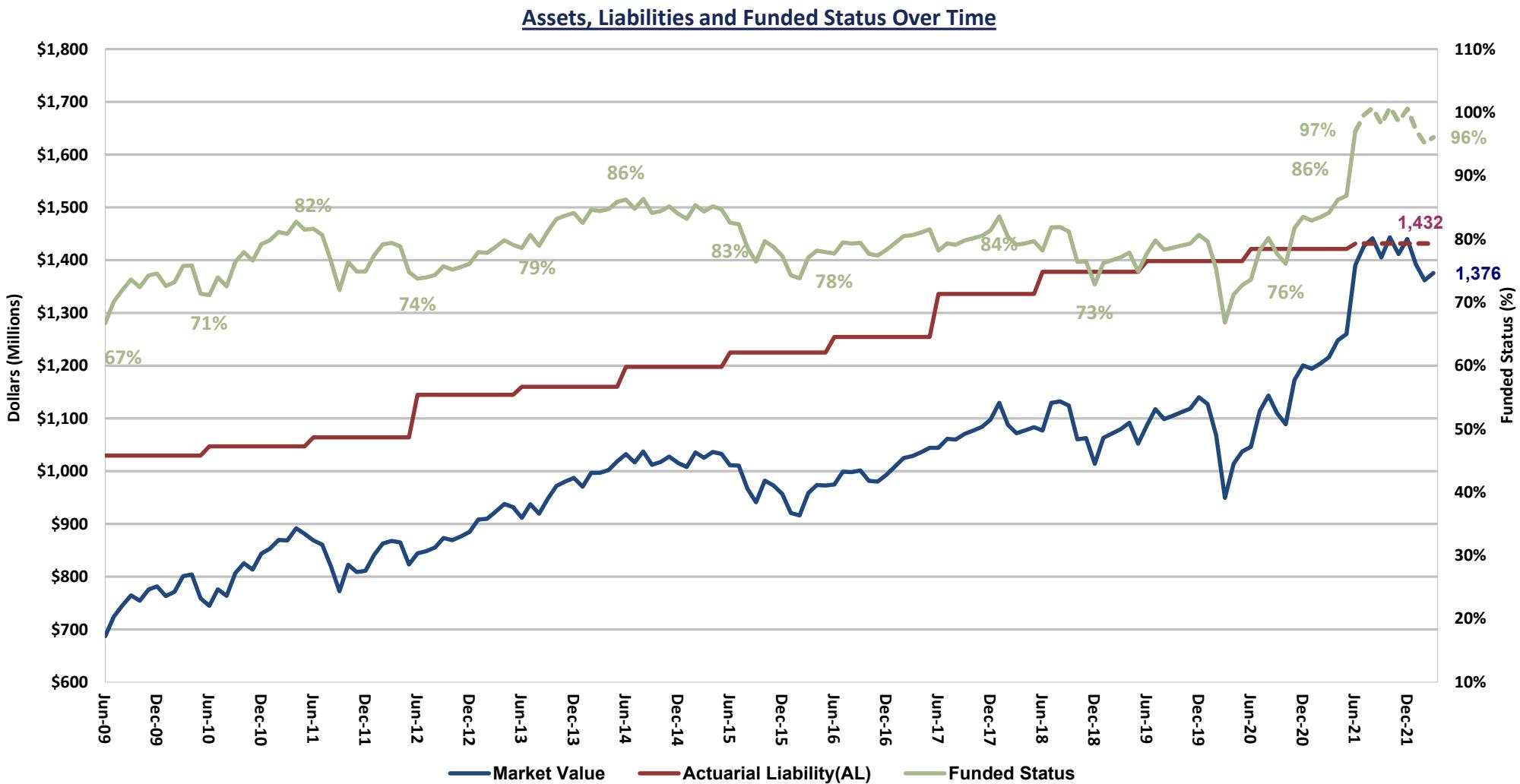
## Relative Performance vs. Alerian MLP Index



# Appendix

# Employees' Retirement System for the City of Norfolk

## Asset Liability Scorecard Net of Fees\*



\*The dashed liability line and dashed funded status line are not actuarial calculations and are for projections purposes only.

As of the Plan's June 30, 2021 actuarial valuation report, the plan had a fiscal year end Actuarial Liability (AL) of \$1,431,515,000.

As of March 31, 2022, the Plan's current market value of assets (MVA) was \$1,375,560,022.

As of March 31, 2022, the Plan's market value funded ratio (current MVA/fiscal year end AL) was 96.1%.

**Employees' Retirement System of the City of Norfolk**
**Fee Analysis**
**As of March 31, 2022**

	<b>Fee Schedule</b>	<b>Market Value (\$)</b>	<b>Estimated Annual Fee (\$)</b>	<b>Estimated Annual Fee (%)</b>
<b>Total Fund</b>		<b>1,375,560,022</b>	<b>2,673,707</b>	<b>0.19</b>
<b>Global Equity</b>		<b>759,669,259</b>	<b>303,868</b>	<b>0.04</b>
SSgA MSCI ACWI IMI Index Fund	0.04 % of Assets	759,669,259	303,868	0.04
<b>Fixed Income</b>		<b>395,009,434</b>	<b>841,033</b>	<b>0.21</b>
PIMCO Total Return	0.41 % of Assets	195,392,645	801,110	0.41
SSgA Bond Market Index	0.02 % of Assets	199,616,789	39,923	0.02
<b>Real Assets</b>		<b>220,864,939</b>	<b>1,528,806</b>	<b>0.69</b>
<b>Real Estate</b>		<b>109,065,921</b>	<b>779,972</b>	<b>0.72</b>
JP Morgan Asset Management Strategic Property Fund	1.00 % of Assets	55,360,356	553,604	1.00
UBS Trumbull Property Fund	0.60 % of Assets	34,532,528	207,195	0.60
Vanguard Real Estate Index (VGSNX)	0.10 % of Assets	19,173,036	19,173	0.10
<b>MLPs</b>		<b>111,799,018</b>	<b>748,834</b>	<b>0.67</b>
Harvest MLP	0.75 % of Assets	52,026,540	390,199	0.75
Tortoise Capital Advisors	0.60 % of Assets	59,772,478	358,635	0.60
Cash		16,391	-	



**Employees' Retirement System of the City of Norfolk**  
**Historical Hybrid Composition**  
**As of March 31, 2022**

<b>Total Fund Policy</b>		<b>Total Fund Strategy Index</b>	
<b>Allocation Mandate</b>	<b>Weight (%)</b>	<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>May-2016</b>			
MSCI AC World IMI (Net)	62.50	MSCI AC World IMI (Net)	55.00
Blmbg. U.S. Aggregate Index	37.50	Blmbg. U.S. Aggregate Index	30.00
		NCREIF Fund Index-ODCE (VW) (Net)	7.50
		Alerian MLP Index	7.50

Strategy Index is comprised of the returns of the various broad market benchmarks assigned to each manager and weighted to reflect the System's target asset allocation.



Global Equity Policy	Allocation Mandate	Weight (%)
<b>Oct-1990</b>	S&P 500 Index	100.00
<b>Jun-2006</b>	Russell 3000 Index	70.00
	MSCI EAFE Index	30.00
<b>Jun-2009</b>	Russell 3000 Index	70.00
	MSCI AC World ex USA (Net)	30.00
<b>Sep-2009</b>	Russell 3000 Index	60.00
	MSCI AC World ex USA (Net)	40.00
<b>May-2016</b>	MSCI AC World IMI (Net)	100.00

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
<b>Distributed to Paid In (DPI)</b>	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
<b>Public Market Equivalent (PME)</b>	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
<b>R-Squared</b>	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
<b>Standard Deviation</b>	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
<b>Total Value to Paid In (TVPI)</b>	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
<b>Up Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

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