

Investment Performance Review
Period Ending March 31, 2019

Employees' Retirement System of the City of Norfolk



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Executive Summary

HIGHLIGHTS

Winners for the recent quarter

- Russell Mid Cap +16.5%
- Russell 2000 +14.6%
- Russell 3000 +14.0%

Losers for the recent quarter

- None

Areas of strength for the recent quarter

- Domestic Equities
- Corporate Bonds

Winners for the trailing year

- S&P 500 +9.5%
- Russell 1000 +9.3%
- Russell 3000 +8.8%

Losers for the trailing year

- MSCI Emerging Markets -7.4%
- MSCI ACWI x US -4.2%

Areas of strength for the trailing year

- Domestic Equities
- US High Yield Bonds

COMMENTARY

- Allocation to equities ended the quarter at 56%, inside the target range of 45%-65%. Market value for the **Total Fund** was \$1.079 billion by quarter-end versus \$ 1.013 billion in the previous quarter. The Total Fund posted an 8.8% return for the trailing quarter and 4.3% for the trailing 12 months. The Total Fund met the Policy Index for the quarter and outperformed its Policy Index by 86 bps over the trailing year.

- The **Total Fund** ranked in the 41st percentile in the peer universe for the quarter and 46th percentile over the last 12 months.

- The **Global Equity Composite** returned 12.4% for the quarter, outperforming the index by 14 bps and ranking in the 57th percentile versus peers. Over the trailing 12 months, the portfolio returned 2.3%, outperforming the benchmark by 41 bps and ranking in the 56th percentile of the peer universe.

- The **Fixed Income Composite** returned 2.9% over the quarter, meeting the Bloomberg Barclays U.S. Aggregate and ranking in the 67th percentile versus universe peers. Over the trailing 12 months, the composite returned 4.6% and outperformed the Index by 11 bps and ranked in the 36th percentile of the peer universe.

- The **Real Estate Composite** returned 0.6% for the quarter and 5.97% for the trailing 12 months.

- The **MLP Composite** returned 19.7% for the quarter, outperforming the index by 288 bps and ranking in the 38th percentile versus peers. For the trailing year, the composite has returned 15.7% and has outperformed the benchmark by 60 bps, ranking in the 48th percentile versus peers. Since inception, the MLP Composite is ahead of its Alerian MLP Index benchmark by 446 bps and has returned 2.7%.

Employees' Retirement System of the City of Norfolk

Executive Summary

REBALANCING ACTIVITY FOR THE QUARTER

Raise cash for benefit payments:

PIMCO Total Return

To cash \$7,500,000
January 2019

PIMCO Total Return

To cash \$8,100,000
February 2019

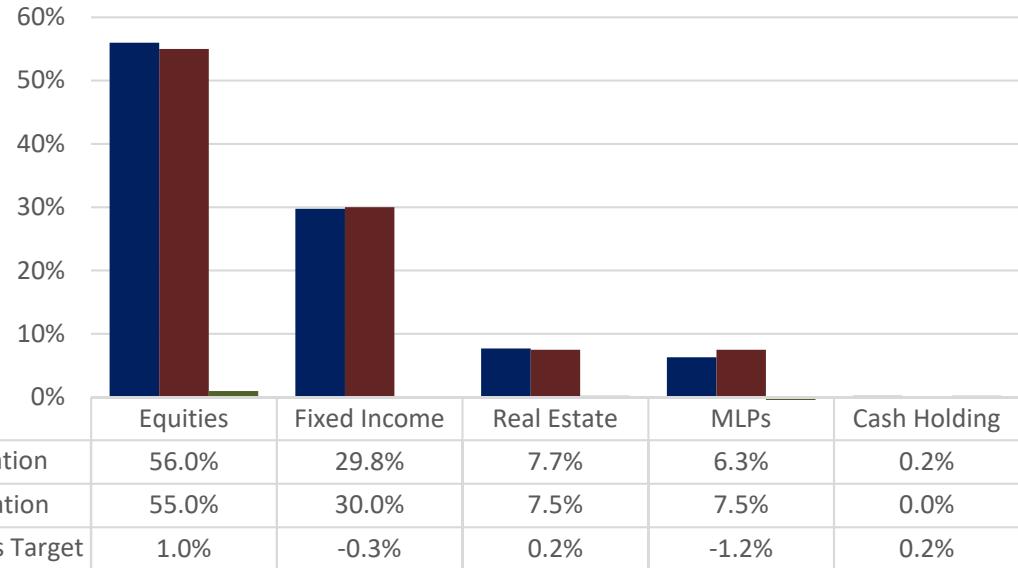
PIMCO Total Return

To cash \$4,400,000
March 2019

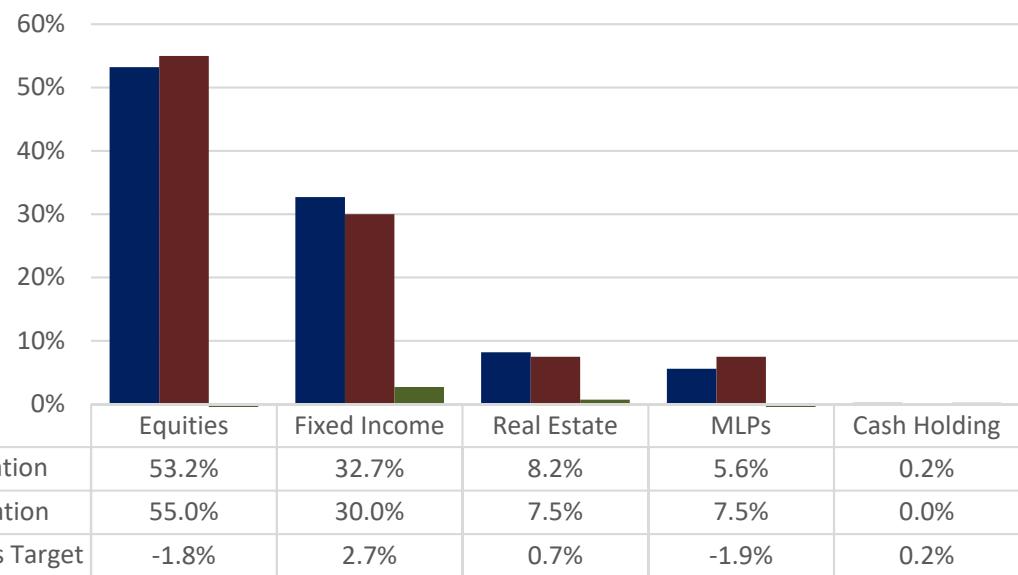
SSgA MSCI ACWI IMI

To cash \$2,400,000
March 2019

Asset Allocation – March 31, 2019

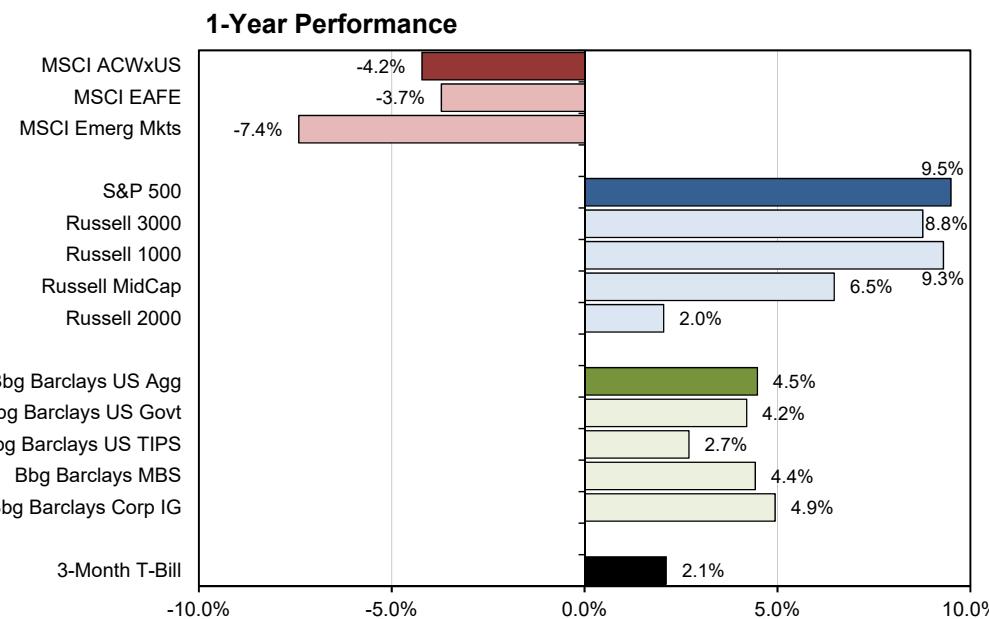
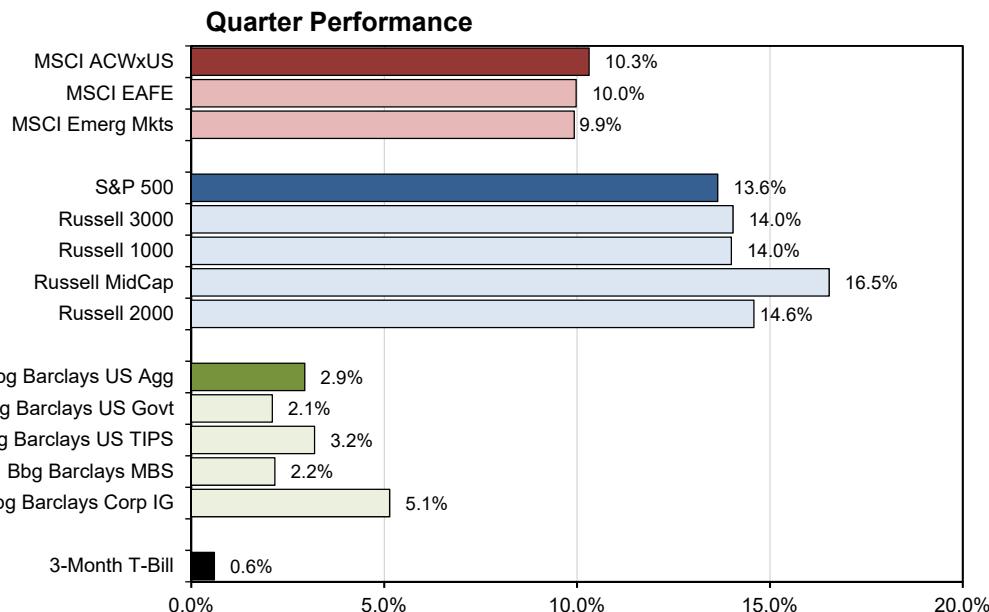


Asset Allocation – December 31, 2018



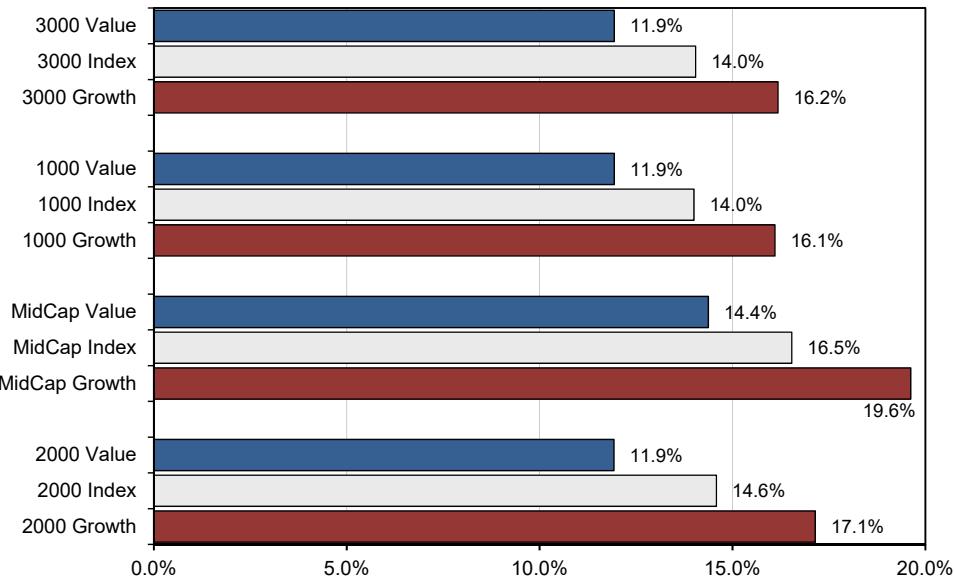
1st Quarter 2019 Market Environment

- After a difficult end to 2018, markets rebounded strongly during the 1st quarter of 2019 with higher risk assets posting the greatest returns. Broad international and domestic equity markets had double-digit gains during the period as investors overlooked signs of weakening global growth in favor of increased accommodation in global monetary policy and progress in global trade negotiations. While muted relative to equities, fixed income returns were also positive during the quarter. Within equities, domestic stocks outperformed international markets. US markets pushed higher as the US Federal Reserve (Fed) shifted their stance on monetary policy toward a more accommodative posture, the US and China moved closer to a resolution of their ongoing trade dispute and the partial government shutdown that began in December came to an end. The large cap S&P 500 Index returned 13.6% during the quarter while the small cap Russell 2000 Index gained 14.6% for the period. US equity returns over the 1-year period are positive with the S&P 500 appreciating 9.5% while the Russell 2000 posted a more modest gain of 2.0%.
- Similar to US markets, international equity investors were encouraged by a general easing in central bank monetary policy, including new stimulus measures in Europe and China, as well as the de-escalation of trade tensions with the US. Despite the continued softening in global macroeconomic data and the lack of certainty around Brexit, international equity index returns finished the quarter in positive territory with the MSCI ACWI ex US Index returning 10.3%. The developed market MSCI EAFE Index and the MSCI Emerging Markets Index had similar performance during the 1st quarter returning 10.0% and 9.9% respectively. Despite the strong quarter, returns over the 1-year period remain negative with developed markets falling -3.7%, outperforming emerging markets which fell -7.4%.
- Fixed income securities underperformed equities to start 2019 with the broad market Bloomberg Barclays Aggregate Index returning 2.9%. Interest rates fell for all maturities across the US Treasury Yield Curve as Fed guidance signaled a pause in monetary policy tightening through 2019. Interest rates in the middle of the curve saw the greatest declines causing the curve to invert with shorter-term maturities paying higher interest rates than those in the middle of the curve. This has historically preceded a recession by 6-24 months. Investment grade corporate issues were the best performing securities this quarter, outperforming Treasury and securitized issues. The Bloomberg Barclays Corporate IG Index returned 5.1% for the period, as corporate credit had tailwinds due to its greater interest rate sensitivity, higher yields and tightening credit spreads. Corporate issues also outperformed the other major fixed income sectors over the 1-year period, returning 4.9% versus a 4.5% return for the Bloomberg Barclays Aggregate Index.

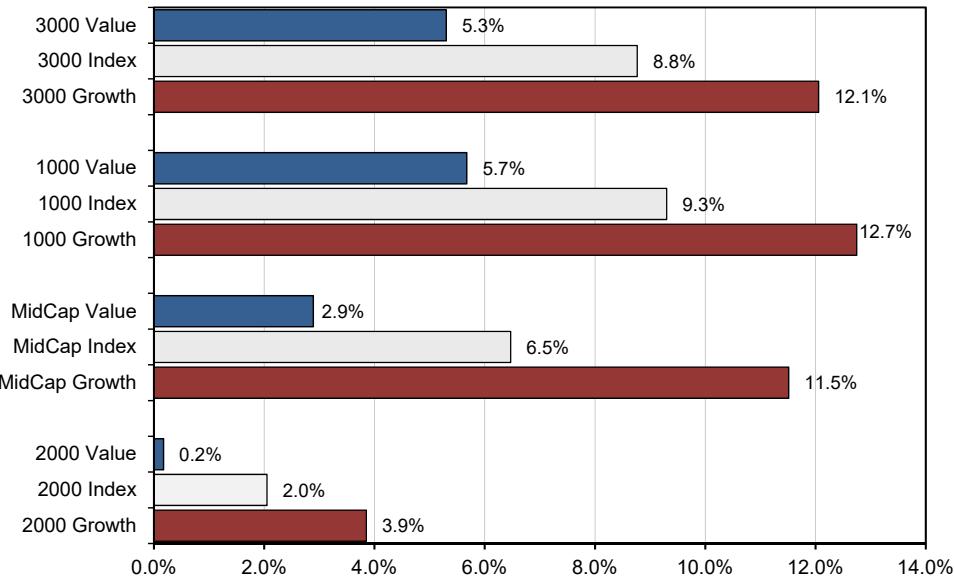


- US equity index returns were strongly positive across the style and capitalization spectrum to start the year with all indices posting double digit returns. Macroeconomic data released during the quarter was mixed with disappointing data released late in the quarter for GDP and employment being particularly notable. Even though earnings reported during the period were viewed favorably, many companies provided negative forward earnings guidance due to slowing global growth, trade concerns and the fading effects of US tax reform. However, investor concerns over the economy were overshadowed by positive developments in trade negotiations with China and an accommodative shift in Fed monetary policy. With regards to trade, President Trump delayed the implementation of new Chinese tariffs scheduled for March 1st citing substantial progress in ongoing discussions. Stocks also rallied on Fed guidance to put further monetary policy tightening on hold as they lowered projections for growth and inflation. Lastly, we saw the end of the partial government shutdown that began in December due to a partisan disagreement over funds for the construction of a border wall with Mexico. While the spending bill that passed did not budget for the wall, President Trump declared a national state of emergency later in the quarter in order to secure the needed funding.
- During the quarter, mid cap stocks were the best performers while small cap stocks outperformed large cap equities across growth, value and core indices. The Russell MidCap Index gained 16.5% during the period versus a 14.6% return for the small cap Russell 2000 Index and a 14.0% gain on the large cap Russell 1000 Index. Part of the reason for strength in small cap names is the projected hold on interest rate increases that occurred over 2018 as small and mid-cap companies typically maintain higher percentages of debt than their large cap peers. Small and mid-cap companies are usually more domestically focused which will serve as a tailwind in periods where the US economy is on stronger footing than international markets. It is also not unusual for smaller market cap stocks to outperform in risk-on market environments. When viewed over the most recent 1-year period, large cap stocks outperformed relative to small cap stocks. The Russell 1000 returned 9.3% for the year while the Russell 2000 gained only 2.0%.
- Growth indices outperformed value indices across the market cap spectrum during the 1st quarter. Growth stocks have outperformed value in all but one quarter over the last two years. The Russell MidCap Growth Index was the best performing style index for the period, returning 19.6% for the quarter. The large cap and small cap value indices had the lowest relative returns, both gaining 11.9%. The trend of growth outperformance is also visible over the 1-year period as growth indices have benefitted from larger exposures to technology which has been a large driver of index performance over the last year, as well as a meaningful underweight to financials which has been a relative detractor.

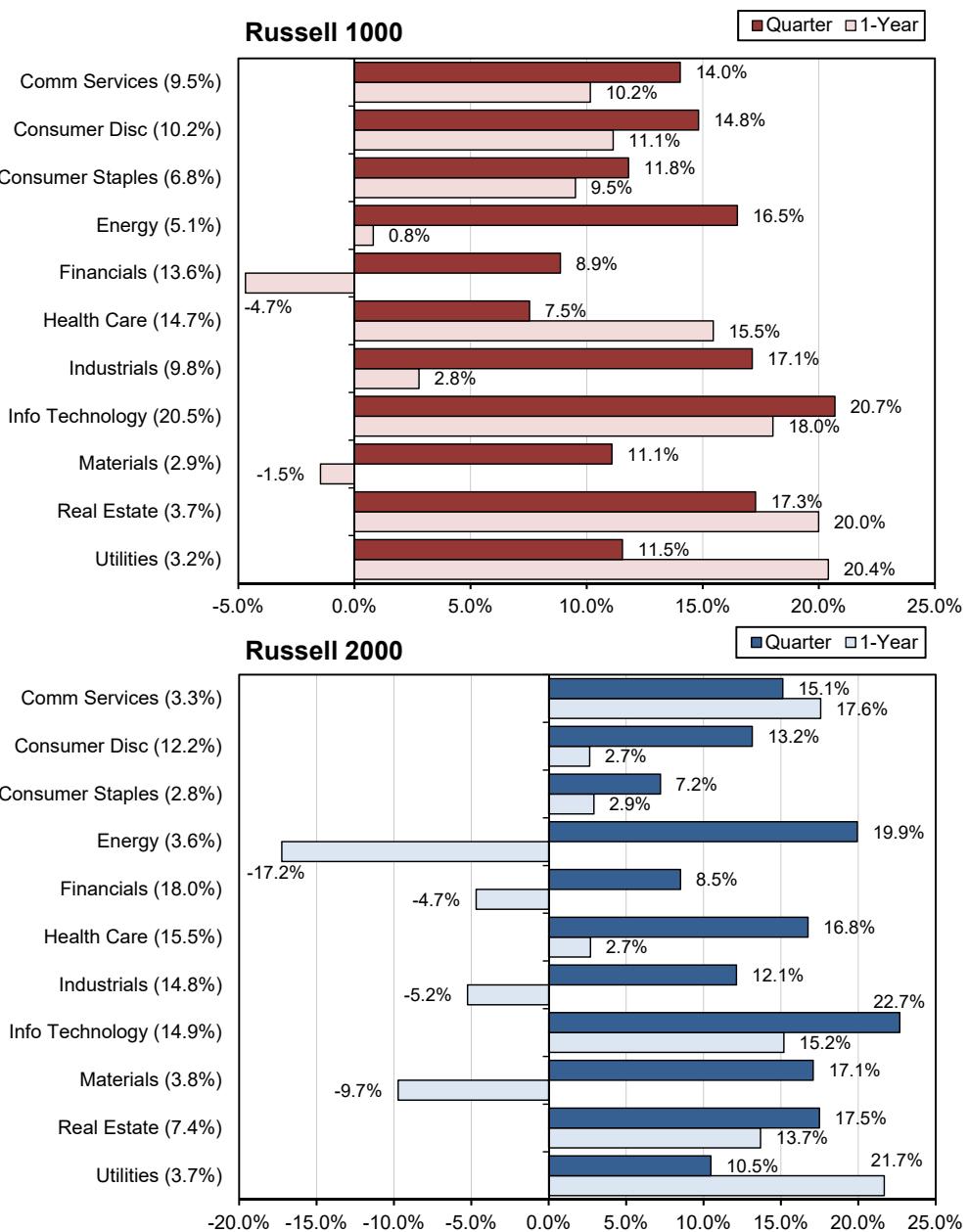
Quarter Performance - Russell Style Series



1-Year Performance - Russell Style Series



- Sector performance was broadly positive across large cap sectors for the 1st quarter. There were strong gains for all sectors within the Russell 1000 Index during the period with five sectors outpacing the return of the index. While the rally was broad with nine of eleven sectors posting double digit returns, cyclical sectors such as technology, industrials and energy were some of the best performers through the quarter returning 20.7%, 17.1% and 16.5% respectively. Technology stocks rose on strong earnings and attractive valuations following their 4th quarter 2018 sell off. Energy companies benefitted from a large rebound in oil prices which increased by over 30% during the quarter following an OPEC led supply cut and US sanctions against Iran and Venezuela. Industrial stocks, among others, gained on hopes that trade tensions between the US and China would continue to abate. REITs also had a particularly strong quarter, returning 17.3% as the prospect of lower interest rates acted as a tailwind. Financials and health care stocks were the worst performers during the period returning 8.9% and 7.5% respectively. Health care stocks faced uncertainty around the potential for future regulation following congressional hearings on drug pricing while the prospect of lower earnings due to a muted interest rate environment weighed on financial stocks. Returns over the 1-year period were positive with nine out of eleven sectors posting gains, six of which were over 10%. Utilities, REITs and information technology were the best performers returning 20.4%, 20.0% and 18.0% respectively. Financials and materials posted negative results at -4.7% and -1.5% while energy was only slightly positive at 0.8%.
- Quarterly results for small cap sectors were mixed relative to their large capitalization counterparts with six of eleven sectors outperforming their corresponding large cap equivalents. Like large caps, all eleven sectors produced gains during the period with six of eleven economic sectors outpacing the Russell 2000 Index return for the quarter and nine returning over 10.0%. Similar to large caps, cyclical sectors performed well with technology, energy and materials returning 22.7%, 19.9% and 17.1% respectively. Real estate also did well returning 17.5%. The largest detractors over the period were consumer staples, financials and utilities which still produced gains of 7.2%, 8.5% and 10.5%. Over the trailing 1-year period, returns varied significantly with four sectors posting double digit gains and four losing value. Despite a very strong quarter, energy stocks were the worst performers over the 1-year period, falling a considerable -17.2%, while the defensive utilities sector produced the greatest gains, appreciating 21.7%.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2019

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	3.42%	20.9%	14.9%	Information Technology
Microsoft Corp	3.39%	16.6%	30.8%	Information Technology
Amazon.com Inc	2.78%	18.6%	23.0%	Consumer Discretionary
Facebook Inc A	1.50%	27.2%	4.3%	Communication Services
Berkshire Hathaway Inc B	1.48%	-1.6%	0.7%	Financials
Johnson & Johnson	1.42%	9.0%	12.1%	Health Care
Alphabet Inc C	1.36%	13.3%	13.7%	Communication Services
Alphabet Inc A	1.33%	12.6%	13.5%	Communication Services
Exxon Mobil Corp	1.30%	19.8%	12.9%	Energy
JPMorgan Chase & Co	1.27%	4.6%	-5.6%	Financials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Etsy Inc	0.40%	41.3%	139.6%	Consumer Discretionary
Five Below Inc	0.33%	21.4%	69.4%	Consumer Discretionary
The Trade Desk Inc A	0.32%	70.6%	298.9%	Information Technology
Integrated Device Technology Inc	0.31%	1.2%	60.3%	Information Technology
HubSpot Inc	0.30%	32.2%	53.5%	Information Technology
Planet Fitness Inc A	0.30%	28.2%	81.9%	Consumer Discretionary
Cree Inc	0.29%	33.8%	41.9%	Information Technology
Ciena Corp	0.26%	10.1%	44.2%	Information Technology
Primerica Inc	0.26%	25.4%	27.7%	Financials
Array BioPharma Inc	0.25%	71.1%	49.4%	Health Care

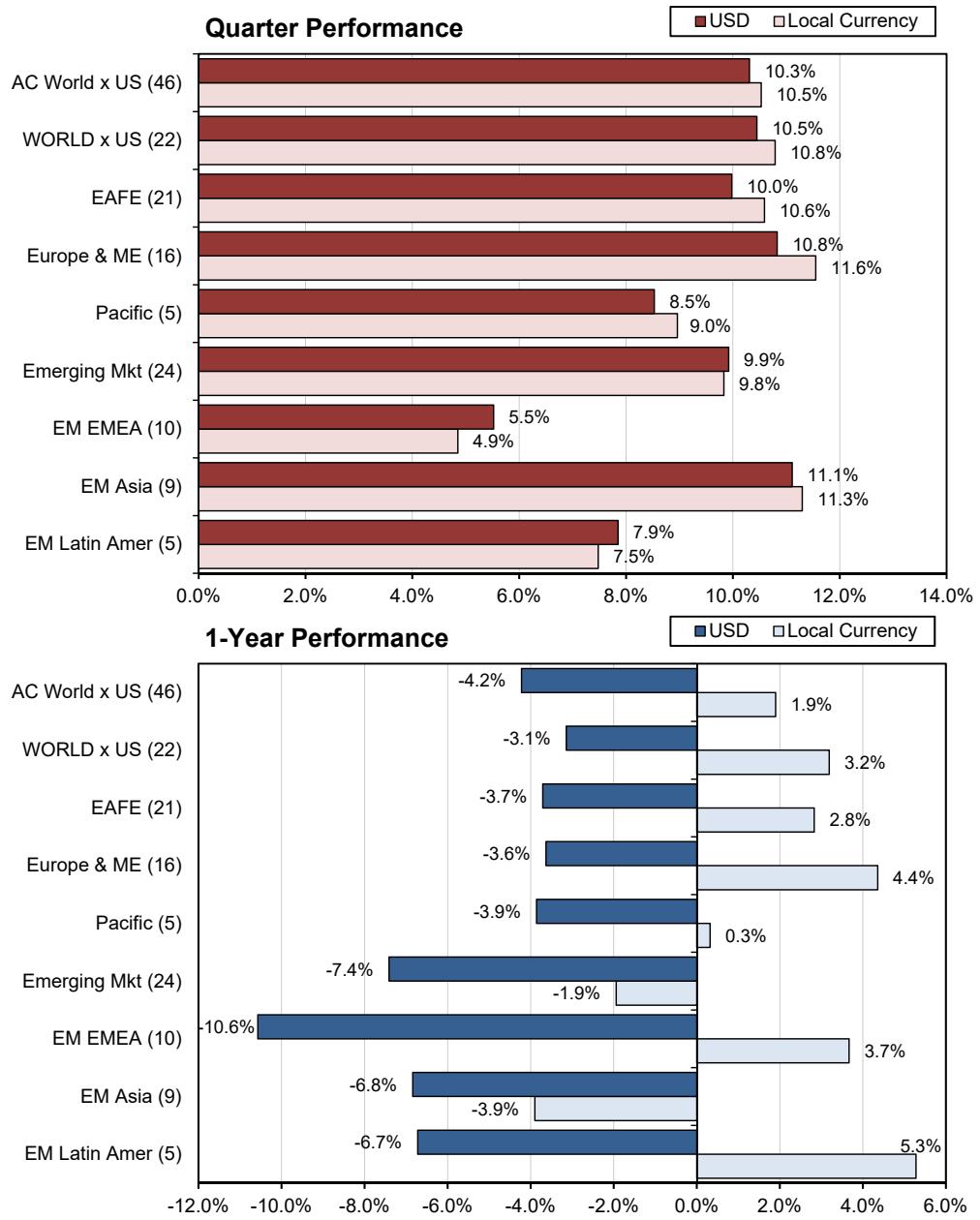
Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Versum Materials Inc	0.02%	81.9%	34.7%	Information Technology
Coty Inc Class A	0.02%	77.3%	-34.3%	Consumer Staples
Nabors Industries Ltd	0.00%	72.5%	-48.7%	Energy
Sage Therapeutics Inc	0.03%	66.0%	-1.3%	Health Care
Wayfair Inc Class A	0.03%	64.8%	119.8%	Consumer Discretionary
Chipotle Mexican Grill Inc Class A	0.07%	64.5%	119.8%	Consumer Discretionary
Universal Display Corp	0.02%	63.5%	51.7%	Information Technology
Xerox Corp	0.02%	63.1%	15.7%	Information Technology
Floor & Decor Holdings Inc	0.01%	59.2%	-20.9%	Consumer Discretionary
bluebird bio Inc	0.03%	58.6%	-7.9%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Immune Design Corp	0.01%	350.0%	77.3%	Health Care
Diebold Nixdorf Inc	0.04%	344.6%	-28.1%	Information Technology
Constellation Pharmaceuticals Inc	0.01%	237.9%	N/A	Health Care
Flotek Industries Inc	0.01%	197.2%	-46.9%	Materials
Spark Therapeutics Inc	0.18%	191.0%	71.0%	Health Care
Magenta Therapeutics Inc	0.01%	188.9%	N/A	Health Care
ION Geophysical Corp	0.01%	178.8%	-46.7%	Energy
Catalyst Pharmaceuticals Inc	0.02%	165.6%	113.4%	Health Care
VirnetX Holding Corp	0.02%	163.8%	60.3%	Information Technology
Rockwell Medical Inc	0.01%	151.8%	9.2%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Uniti Group Inc	0.01%	-27.8%	-23.8%	Real Estate
PG&E Corp	0.03%	-25.1%	-59.5%	Utilities
The Kraft Heinz Co	0.07%	-23.2%	-45.1%	Consumer Staples
Realogy Holdings Corp	0.01%	-21.8%	-57.3%	Real Estate
Nu Skin Enterprises Inc Class A	0.01%	-21.5%	-33.7%	Consumer Staples
Biogen Inc	0.18%	-21.4%	-13.7%	Health Care
Centennial Resource Development A	0.01%	-20.2%	-52.1%	Energy
CenturyLink Inc	0.04%	-19.3%	-19.0%	Communication Services
Qurate Retail Inc Class A	0.03%	-18.1%	-36.5%	Consumer Discretionary
Macy's Inc	0.03%	-18.0%	-15.2%	Consumer Discretionary

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Zomedica Pharmaceuticals Corp	0.00%	-77.0%	-84.2%	Health Care
Aptinyx Inc	0.00%	-75.5%	N/A	Health Care
Alta Mesa Resources Inc Class A	0.00%	-73.5%	-96.7%	Energy
Novavax Inc	0.01%	-70.1%	-73.8%	Health Care
Maxar Technologies Inc	0.01%	-66.3%	-91.0%	Industrials
Solid Biosciences Inc	0.01%	-65.7%	22.7%	Health Care
Achaogen Inc	0.00%	-62.9%	-96.5%	Health Care
EP Energy Corp A	0.00%	-62.9%	-80.6%	Energy
Proteostasis Therapeutics Inc	0.00%	-61.1%	-73.5%	Health Care
Approach Resources Inc	0.00%	-59.4%	-86.4%	Energy

- Broad international equity returns were positive for the quarter in both local currency and USD terms. The MSCI ACWI ex US Index gained 10.5% in local currency terms and 10.3% in USD terms during the 1st quarter. Similar to US markets, international equity investors were encouraged by central bank responses to slowing global growth as they shifted towards more accommodative policies and the improvement in dialogue around global trade. Returns in local currency typically outperformed USD returns in the developed markets, as the USD continued to strengthen against most major developed currencies. While the currency effect was detrimental in developed markets, it acted as a slight tailwind in emerging markets. The USD strength is particularly noticeable over the 1-year period where local currency returns on the MSCI ACWI ex US Index were 1.9%, but after accounting for foreign exchange, translated to a loss of -4.2% for a USD investor.
- Fourth quarter results for developed market international indices were positive in both local currency and USD terms with the MSCI EAFE Index returning 10.6% and 10.0% respectively. Ongoing weakness in global economic reporting pushed major central banks to move toward less restrictive postures around monetary policy. In Europe, the European Central Bank (ECB) announced plans for additional stimulus while putting any future interest rate increases on hold until 2020. The Bank of England (BoE) left policy unchanged as uncertainties around Brexit coincided with a slowing economy. Prime Minister Theresa May held two votes on her withdrawal plan, both of which failed, forcing her to request an extension to the March 29th withdrawal deadline. Data from Japan drew concerns that the country's economy is contracting as corporate earnings, exports, manufacturing, retail sales and inflation all hinted at an economic slowdown. The MSCI EAFE Index returned 2.8% and -3.7% for the last twelve months in local currency and USD terms respectively.
- Emerging markets slightly underperformed relative to developed markets for the 1st quarter, but still appreciated in both local currency and USD terms with the MSCI Emerging Markets Index returning 9.8% and 9.9% respectively. A major tailwind for equity markets was the improvement in trade relations between the US and China. As Chinese economic data appeared to be slowing, the Chinese government also announced continued stimulus in the form of tax cuts, infrastructure investment and lowered the reserve requirement for banks in order to encourage lending. We also saw commodity prices rise over the quarter which is generally beneficial to emerging market countries with rising oil prices helping Russian and Colombian equity returns. In Brazil, President Jair Bolsonaro officially took office. Bolsonaro announced his plan to reform the country's debt laden pension system and promised market friendly economic reforms. One year returns for the MSCI Emerging Market Index were -1.9% in local currency terms and -7.4% in USD terms.



The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2019

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.4%	4.3%	-4.5%
Consumer Discretionary	11.0%	7.5%	-10.4%
Consumer Staples	11.8%	12.4%	3.3%
Energy	5.9%	10.4%	4.6%
Financials	18.9%	6.9%	-12.7%
Health Care	11.3%	11.2%	7.4%
Industrials	14.4%	10.6%	-5.4%
Information Technology	6.3%	15.3%	-3.8%
Materials	7.5%	13.2%	-3.0%
Real Estate	3.9%	14.0%	4.2%
Utilities	3.7%	9.0%	8.7%
Total	100.0%	10.0%	-3.7%

MSCI - ACWIxUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.1%	6.9%	-1.8%
Consumer Discretionary	11.1%	11.2%	-10.3%
Consumer Staples	9.9%	11.2%	1.6%
Energy	7.4%	12.4%	5.2%
Financials	21.6%	7.7%	-9.4%
Health Care	8.4%	11.0%	4.4%
Industrials	11.7%	10.2%	-4.9%
Information Technology	8.4%	14.7%	-7.3%
Materials	7.6%	11.3%	-3.6%
Real Estate	3.5%	14.4%	2.8%
Utilities	3.3%	8.2%	6.1%
Total	100.0%	10.3%	-4.2%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	12.3%	9.5%	-3.3%
Consumer Discretionary	13.4%	20.8%	-13.2%
Consumer Staples	6.4%	5.3%	-8.4%
Energy	8.1%	12.2%	9.4%
Financials	24.2%	7.2%	-6.0%
Health Care	2.6%	3.6%	-23.4%
Industrials	5.4%	4.8%	-7.6%
Information Technology	14.6%	12.8%	-10.8%
Materials	7.4%	6.9%	-6.2%
Real Estate	3.2%	15.6%	-2.1%
Utilities	2.5%	4.2%	-2.7%
Total	100.0%	9.9%	-7.4%

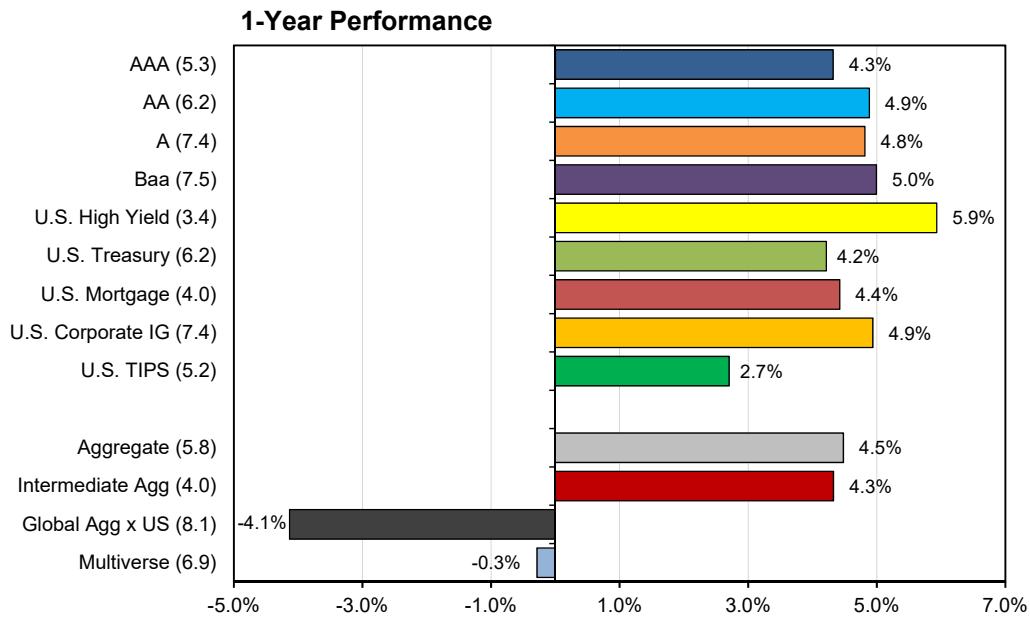
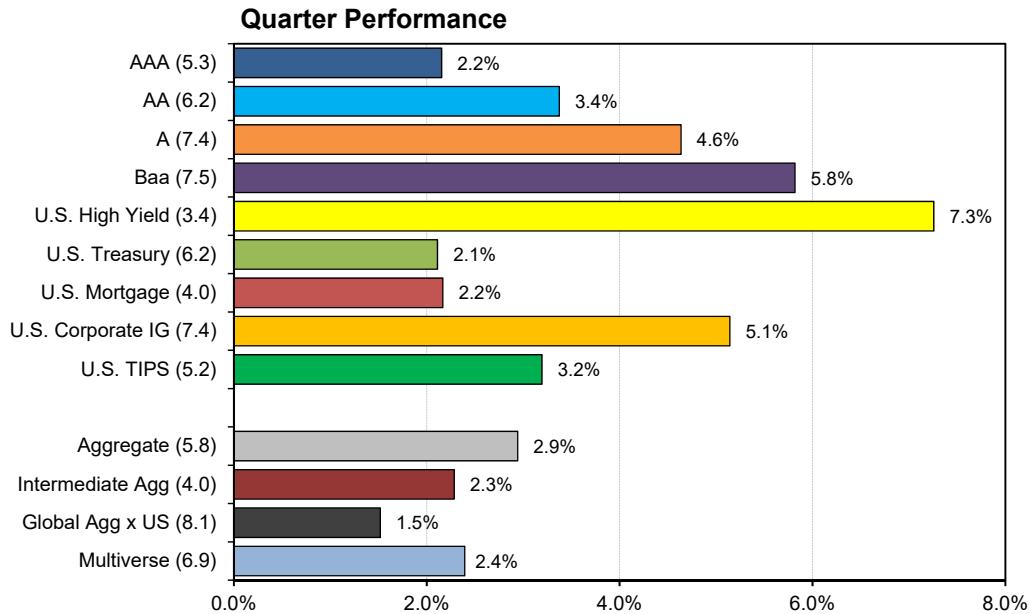
Country	MSCI-EAFE Weight	MSCI-ACWIxUS Weight	Quarter Return	1- Year Return
Japan	24.0%	16.1%	6.7%	-7.8%
United Kingdom	17.1%	11.5%	11.9%	-0.1%
France	11.3%	7.6%	10.7%	-3.7%
Switzerland	8.9%	6.0%	13.1%	7.5%
Germany	8.6%	5.8%	6.9%	-13.7%
Australia	6.9%	4.7%	11.4%	4.5%
Hong Kong	4.1%	2.8%	15.6%	8.0%
Netherlands	3.6%	2.4%	13.6%	-2.3%
Spain	3.0%	2.0%	7.0%	-8.8%
Sweden	2.6%	1.8%	7.4%	-5.1%
Italy	2.4%	1.6%	14.6%	-10.6%
Denmark	1.8%	1.2%	12.8%	-3.2%
Singapore	1.3%	0.9%	6.2%	-6.4%
Finland	1.0%	0.7%	8.0%	-3.6%
Belgium	1.0%	0.7%	16.2%	-15.5%
Norway	0.7%	0.5%	7.0%	-4.4%
Ireland	0.5%	0.4%	11.4%	-11.6%
Israel	0.5%	0.4%	10.1%	9.9%
Austria	0.2%	0.2%	8.4%	-23.0%
New Zealand	0.2%	0.2%	16.7%	18.1%
Portugal	0.2%	0.1%	10.2%	-4.9%
Total EAFE Countries	100.0%	67.1%	10.0%	-3.7%
Canada		6.8%	15.4%	3.1%
Total Developed Countries		73.9%	10.5%	-3.1%
China		8.6%	17.7%	-6.2%
Korea		3.4%	4.9%	-16.7%
Taiwan		3.0%	9.0%	-6.1%
India		2.4%	7.2%	6.8%
Brazil		1.9%	8.1%	-4.2%
South Africa		1.5%	4.4%	-18.0%
Russia		1.0%	12.2%	2.2%
Mexico		0.7%	5.5%	-11.7%
Thailand		0.6%	7.4%	-6.9%
Indonesia		0.6%	4.3%	2.0%
Malaysia		0.6%	0.3%	-13.1%
Poland		0.3%	-0.6%	-5.7%
Philippines		0.3%	7.9%	1.8%
Chile		0.3%	4.1%	-17.5%
Qatar		0.2%	-3.5%	22.2%
United Arab Emirates		0.2%	8.7%	1.3%
Turkey		0.1%	-3.2%	40.3%
Colombia		0.1%	24.8%	5.3%
Peru		0.1%	11.0%	2.2%
Hungary		0.1%	6.0%	0.5%
Greece		0.1%	12.8%	-23.6%
Czech Republic		0.0%	3.8%	-6.8%
Egypt		0.0%	15.8%	-10.2%
Pakistan		0.0%	8.3%	-36.6%
Total Emerging Countries		26.1%	9.9%	-7.4%
Total ACWIxUS Countries		100.0%	10.3%	-4.2%

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

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.

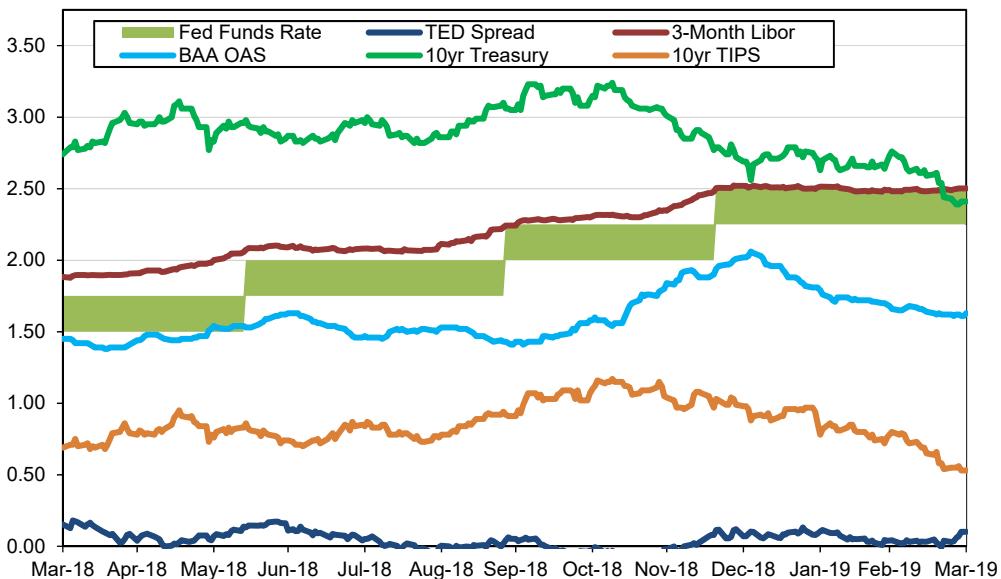


- Broad fixed income benchmarks were positive to start 2019. Following the late 2018 market volatility, the Federal Open Market Committee (FOMC) issued dovish guidance after their January meeting stating that they would be patient in determining future interest rate adjustments. The FOMC also commented on the ongoing balance sheet reduction program, stating that they would be open to changes to the program if market conditions warranted them. Later in March, Fed Chair Jerome Powell communicated that the FOMC is no longer projecting any further interest rate increases through 2019. He also stated that they would begin tapering the roll off from the balance sheet reduction program in May with a plan to halt the program entirely in September. The stoppage of the balance sheet reduction program represents an easing of monetary policy. Interest rates fell across all maturities on the US Treasury Yield Curve with the greatest declines occurring in the mid- and long-term issues. This caused continued inversion in the yield curve with short-term maturities paying higher interest rates than issues in the mid- to long-end of the curve. The difference in yields between the 2-year and 10-year Treasury now sits at just 0.14% with the 30-day T-Bill yielding more than the 10-year bond by 0.02%. Historically, an inverted yield curve has been a leading indicator of a recession in the next 6-24 months. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 2.9% and 4.5% respectively.
- Within investment grade credit, lower quality issues outperformed higher quality issues as investors gravitated toward higher risk securities during the quarter. Lower quality issues also benefitted from their higher durations. On an absolute basis, without negating the duration differences in the sub-indices, Baa rated credit was the best performing investment grade credit quality segment returning 5.8% for the quarter, while AAA was the worst performing, returning 2.2%. Despite their relatively low durations, high yield securities posted very strong returns for the quarter, gaining 7.3%, as spreads tightened by 135 basis points on these issues. When viewed over the 1-year period, returns for the various quality segments generally show lower quality securities outperforming higher quality issues by a small margin.
- During the 1st quarter, investment grade corporates outperformed the more defensive Treasury and mortgage backed sectors of the Bloomberg Barclays US Aggregate Index's three broad sectors. Investment grade corporate credit returned 5.1%, as the drop in interest rates benefitted these securities to a greater degree and credit spreads tightened considerably since the end of 2018. This quarter's performance carried through to the 1-year period as corporate credit outperformed both Treasuries and mortgage backed securities. Corporate issues returned 4.9% versus a 4.4% return for mortgages and 4.2% gain on Treasury securities.

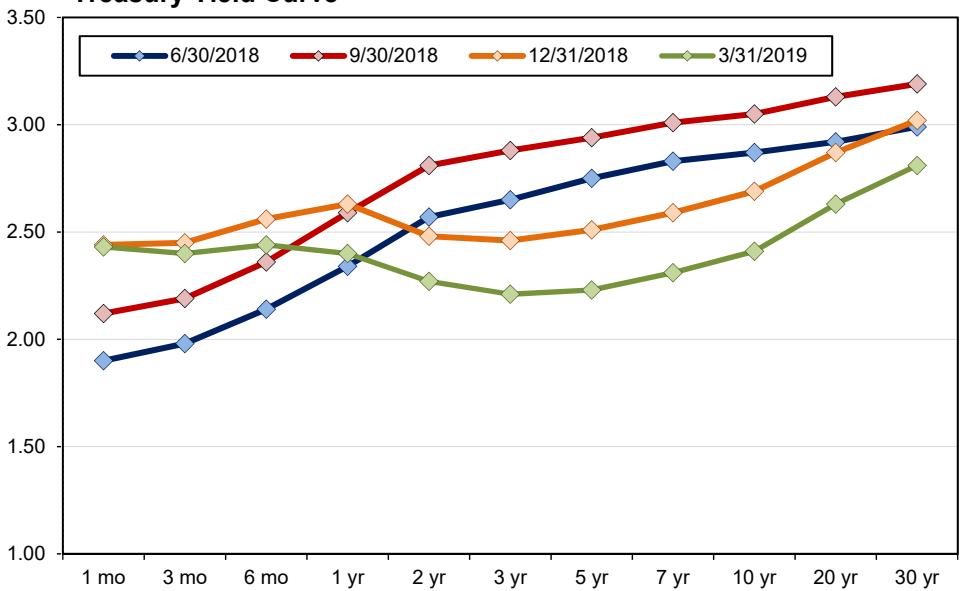


- Global fixed income indices continue to struggle relative to their domestic counterparts, underperforming during the 1st quarter. These indices have lower, or in some cases (Germany, Japan), negative yields and the returns of these indices are also significantly influenced by fluctuations in their currency denomination relative to the USD. The USD has appreciated against most other developed currencies, negatively impacting the returns on global bond indices. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was 1.5% and -4.1% for the quarter and 1-year period respectively. As global growth has shown signs of stalling, several international central banks have started to step back from more restrictive postures. Notably, the ECB announced a program to extend loans to European banks in an effort to increase lending and pledged to keep interest rates steady through the end of 2019. China also announced new stimulus to help spur its economy. The Bank of England and the Bank of Japan made no major policy changes during the quarter as they continue to review macroeconomic data within their respective countries.
- Much of the index performance detailed in the bar graphs on the previous page is visible on a time series basis by reviewing the line graphs to the right. The '1-Year Trailing Market Rates' chart illustrates that the 10-year Treasury yield (green line) fell from recent high's greater than 3.0%, to yields below 2.5% to end the first quarter. 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-Treasury issues. This line illustrates a relatively tight range in credit spreads throughout most of 2018, but highlights an abrupt increase during the 4th quarter of 2018 as investors moved to higher quality assets during the quarter's risk-off environment. Subsequently, spreads dropped steadily over the 1st quarter of 2019. This spread tightening is equivalent to an interest rate decrease on corporate bonds, which produces an additional tailwind for corporate bond index returns. These credit spreads have tightened by about 34 basis points over the last three months. The green band across the graph illustrates the gradual increase in the Federal Funds Rate due to the tightening of US monetary policy during 2018. As mentioned, the Fed's current guidance is for zero rate increases in 2019.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four calendar quarters. The downward shift of interest rates as well as a general flattening of the yield curve are clearly visible over the last quarter. As mentioned, the yield curve continues to invert as yields on shorter-term maturities fell less than interest rates in the middle- to long-end of the curve.

1-Year Trailing Market Rates



Treasury Yield Curve



Employees' Retirement System of the City of Norfolk

Annual Asset Class Performance

March 31, 2019

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
Best ↑	MSCI Emerging Mkts (Net) 34.0 %	MSCI Emerging Mkts (Net) 32.2 %	MSCI Emerging Mkts (Net) 39.4 %	Blmbg Barc US Agg 5.2 %	MSCI Emerging Mkts (Net) 78.5 %	Russell 2000 Growth 29.1 %	NCREF ODCE (EW) (Net) 15.0 %	MSCI Emerging Mkts (Net) 18.2 %	Russell 2000 Growth 43.3 %	S&P 500 13.7 %	NCREF ODCE (EW) (Net) 14.2 %	Russell 2000 Value 31.7 %	MSCI Emerging Mkts (Net) 37.3 %	NCREF ODCE (EW) (Net) 7.3 %	Russell 2000 Growth 17.1 %
	NCREF ODCE (EW) (Net) 19.0 %	MSCI EAFE (Net) 26.3 %	NCREF ODCE (EW) (Net) 15.0 %	Blmbg Barc Global Agg Ex USD 4.4 %	Blmbg Barc US Corp High Yield 58.2 %	Russell 2000 Value 24.5 %	Blmbg 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 %	Blmbg Barc US Agg 0.0 %	Russell 1000 Growth 16.1 %
	MSCI EAFE (Net) 13.5 %	Russell 2000 Value 23.5 %	Russell 1000 Growth 11.8 %	NCREF ODCE (EW) (Net) -11.1 %	Russell 1000 Growth 37.2 %	MSCI Emerging Mkts (Net) 18.9 %	Blmbg 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 %	Blmbg Barc US Corp High Yield 17.1 %	MSCI EAFE (Net) 25.0 %	Russell 1000 Growth -1.5 %	S&P 500 13.6 %
	Russell 1000 Value 7.1 %	Russell 1000 Value 22.2 %	MSCI EAFE (Net) 11.2 %	Strategic Policy -23.5 %	Russell 2000 Growth 34.5 %	Russell 1000 Growth 16.7 %	Blmbg Barc Global Agg Ex USD 4.4 %	MSCI EAFE (Net) 17.3 %	Russell 1000 Value 32.5 %	NCREF ODCE (EW) (Net) 11.4 %	Blmbg Barc US Agg 0.5 %	S&P 500 12.0 %	Russell 2000 Growth 22.2 %	Blmbg Barc US Corp High Yield -2.1 %	Russell 1000 Value 11.9 %
	Russell 1000 Growth 5.3 %	S&P 500 15.8 %	Blmbg Barc Global Agg Ex USD 11.0 %	Blmbg 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 %	Blmbg Barc Global Agg Ex USD -2.1 %	Russell 2000 Value 11.9 %
	S&P 500 4.9 %	NCREF ODCE (EW) (Net) 15.1 %	Strategic Policy 7.2 %	Russell 2000 Value -28.9 %	S&P 500 26.5 %	Blmbg Barc US Corp High Yield 15.1 %	S&P 500 2.1 %	Blmbg Barc US Corp High Yield 15.8 %	MSCI EAFE (Net) 22.8 %	Blmbg 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) 10.0 %
	Russell 2000 Value 4.7 %	Russell 2000 Growth 13.3 %	Russell 2000 Growth 7.0 %	Russell 1000 Value -36.8 %	Russell 2000 Value 20.6 %	NCREF 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 %	NCREF ODCE (EW) (Net) 8.4 %	Russell 1000 Value 13.7 %	Strategic Policy -5.8 %	MSCI Emerging Mkts (Net) 9.9 %
	Russell 2000 Growth 4.2 %	Blmbg Barc US Corp High Yield 11.9 %	Blmbg Barc US Agg 7.0 %	S&P 500 -37.0 %	Strategic Policy 20.4 %	S&P 500 15.1 %	Russell 1000 Value 0.4 %	Russell 2000 Growth 14.6 %	NCREF ODCE (EW) (Net) 12.4 %	Russell 2000 Value 4.2 %	Russell 1000 Value -3.8 %	Strategic Policy 7.9 %	Blmbg Barc Global Agg Ex USD 10.5 %	Russell 1000 Value -8.3 %	Strategic Policy 9.0 %
	Strategic Policy 4.0 %	Strategic Policy 11.2 %	S&P 500 5.5 %	Russell 1000 Growth -38.4 %	Russell 1000 Value 19.7 %	Strategic Policy 12.0 %	Russell 2000 Growth -2.9 %	Strategic Policy 12.1 %	Blmbg Barc US Corp High Yield 7.4 %	Blmbg Barc US Corp High Yield 2.5 %	Blmbg Barc US Corp High Yield -4.5 %	Russell 1000 Growth 7.1 %	Russell 2000 Value 7.8 %	Russell 2000 Growth -9.3 %	Blmbg Barc US Corp High Yield 7.3 %
	Blmbg Barc US Corp High Yield 2.7 %	Russell 1000 Growth 9.1 %	Blmbg Barc US Corp High Yield 1.9 %	Russell 2000 Growth -38.5 %	Blmbg Barc Global Agg Ex USD 7.5 %	MSCI EAFE (Net) 7.8 %	Russell 2000 Value -5.5 %	NCREF ODCE (EW) (Net) 9.9 %	Blmbg Barc US Agg -2.0 %	MSCI Emerging Mkts (Net) -2.2 %	Blmbg Barc Global Agg Ex USD -6.0 %	Blmbg Barc US Corp High Yield 2.6 %	Russell 2000 Value -12.9 %	Blmbg Barc US Agg 2.9 %	Russell 2000 Blmbg Barc US Agg 1.5 %
Worst ↓	Blmbg Barc Global Agg Ex USD -8.7 %	Blmbg Barc US Agg 4.3 %	Russell 2000 Value -9.8 %	MSCI Emerging Mkts (Net) -53.3 %	NCREF ODCE (EW) (Net) -31.3 %	Blmbg Barc Global Agg Ex USD 4.9 %	MSCI Emerging Mkts (Net) -18.4 %	Blmbg Barc Global Agg Ex USD 4.1 %	Blmbg Barc Global Agg Ex USD -3.1 %	MSCI EAFE (Net) -4.9 %	MSCI Emerging Mkts (Net) -14.9 %	MSCI EAFE (Net) 1.0 %	Blmbg Barc US Agg 3.5 %	MSCI Emerging Mkts (Net) -14.6 %	NCREF ODCE (EW) (Net) 1.5 %
	Blmbg Barc Global Agg Ex USD -31.3 %	Blmbg Barc US Agg 4.3 %	Russell 2000 Value -9.8 %	MSCI Emerging Mkts (Net) -53.3 %	NCREF ODCE (EW) (Net) -31.3 %	Blmbg Barc Global Agg Ex USD 4.9 %	MSCI Emerging Mkts (Net) -18.4 %	Blmbg Barc Global Agg Ex USD 4.1 %	Blmbg Barc Global Agg Ex USD -3.1 %	MSCI EAFE (Net) -4.9 %	MSCI Emerging Mkts (Net) -14.9 %	MSCI EAFE (Net) 1.0 %	Blmbg Barc US Agg 3.5 %	MSCI Emerging Mkts (Net) -14.6 %	NCREF ODCE (EW) (Net) 1.5 %

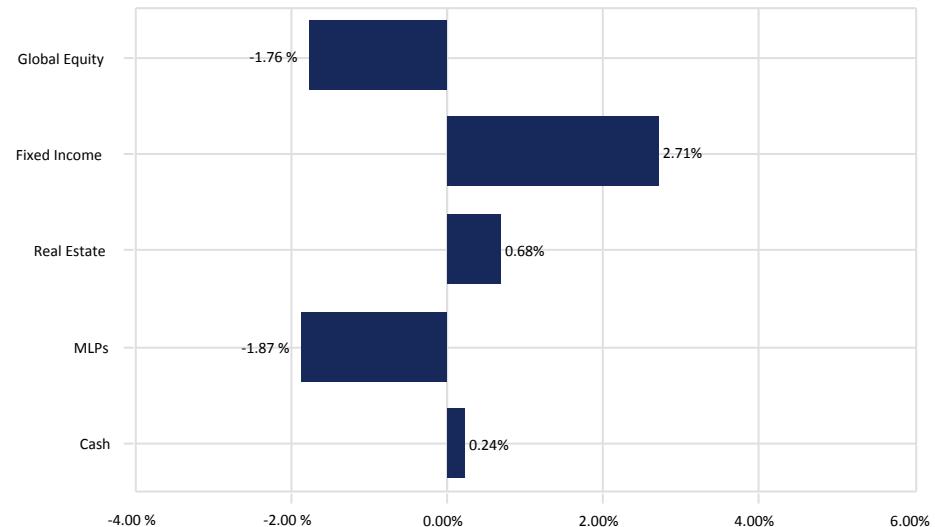
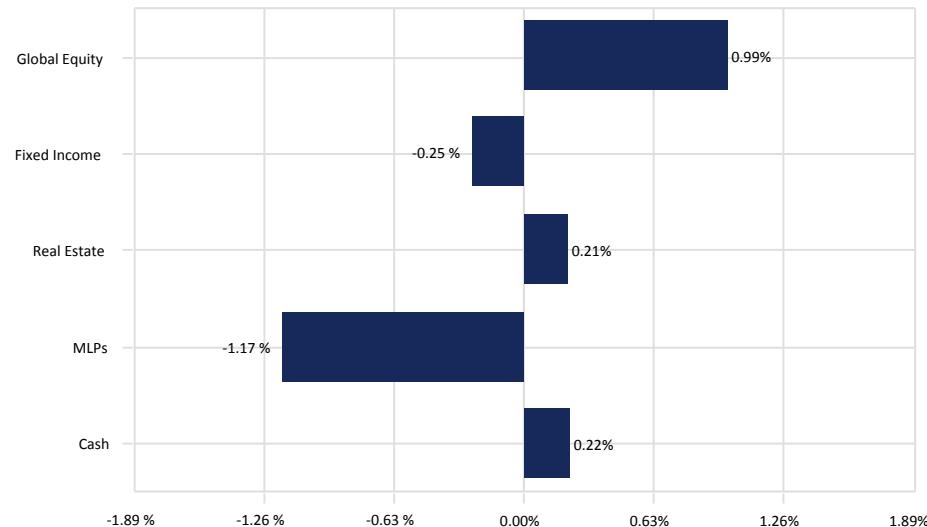


Total Fund

Employees' Retirement System of the City of Norfolk

Asset Allocation vs. Target Allocation

March 31, 2019



March 31, 2019

	Market Value (\$)	Allocation (%)	Target (%)
Global Equity	604,392,483	55.99	55.00
Fixed Income	321,105,176	29.75	30.00
Real Estate	83,229,012	7.71	7.50
MLPs	68,282,862	6.33	7.50
Cash	2,405,611	0.22	0.00
Total Fund	1,079,415,145	100.00	100.00

December 31, 2018

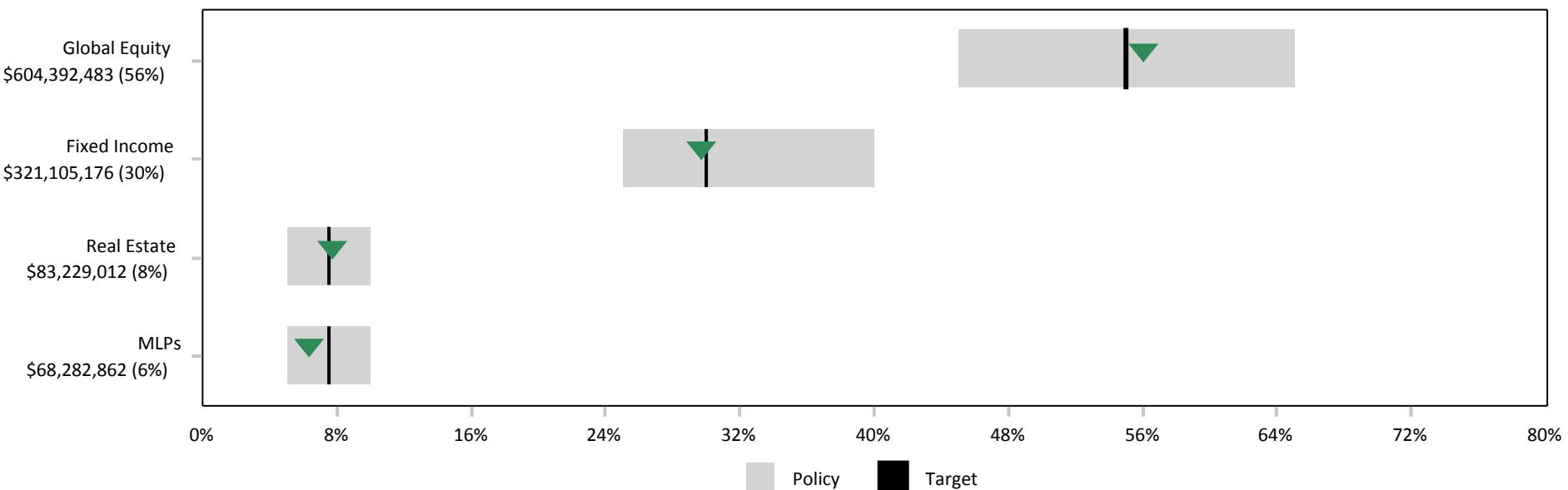
	Market Value (\$)	Allocation (%)	Target (%)
Global Equity	539,745,314	53.24	55.00
Fixed Income	331,649,951	32.71	30.00
Real Estate	82,948,272	8.18	7.50
MLPs	57,042,763	5.63	7.50
Cash	2,436,046	0.24	0.00
Total Fund	1,013,822,346	100.00	100.00

Employees' Retirement System of the City of Norfolk

Asset Allocation Compliance

March 31, 2019

Executive Summary



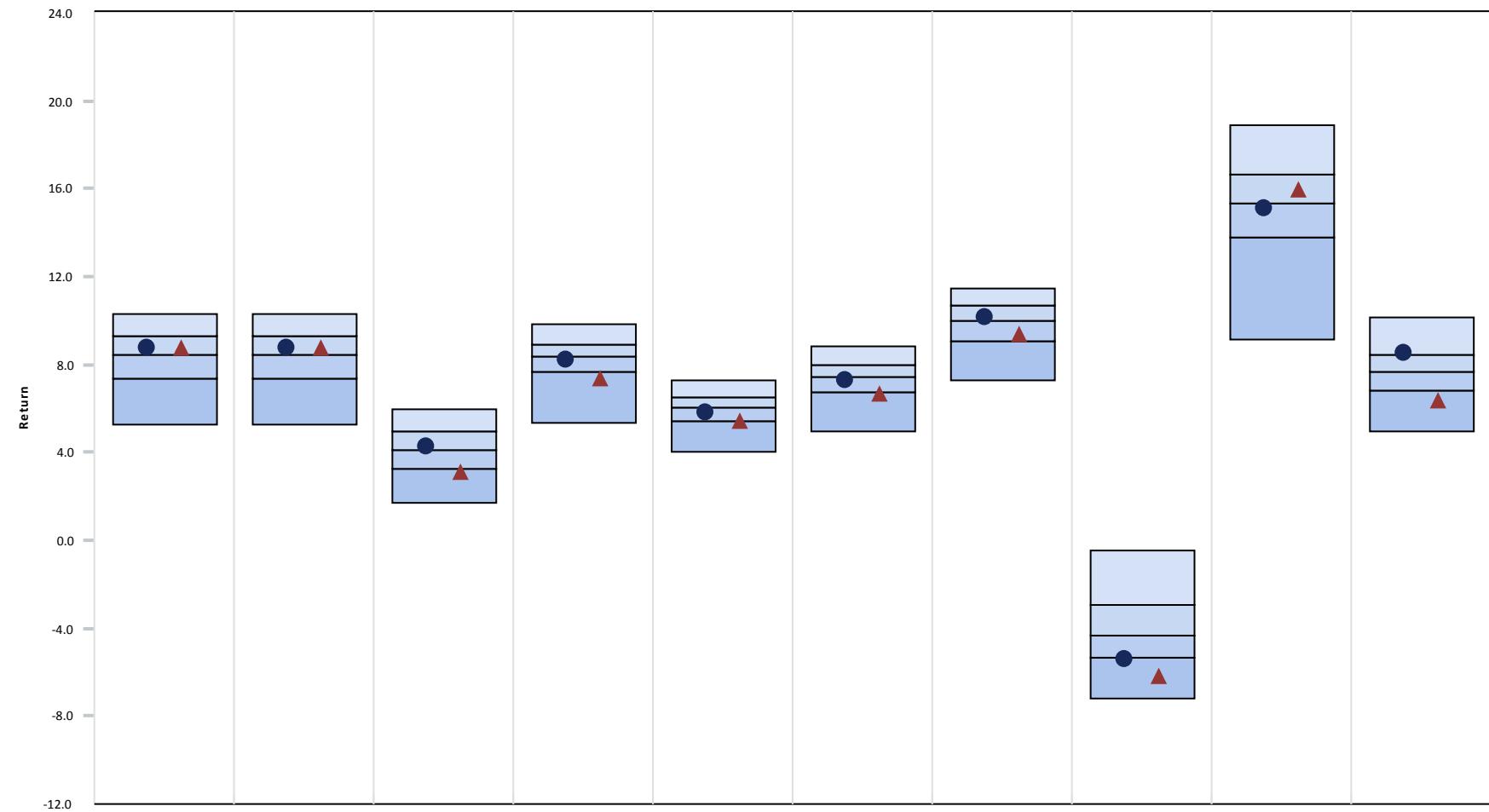
	Asset Allocation \$ (\$)	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Rebalance (\$)
Total Fund	1,079,415,145	100.00	100.00			
Global Equity	604,392,483	55.99	55.00	45.00	65.00	(10,714,154)
SSgA MSCI ACWI IMI Index Fund	604,392,483	55.99				
Fixed Income	321,105,176	29.75	30.00	25.00	40.00	2,719,367
PIMCO Total Return	163,921,003	15.19				
SSgA Bond Market Index	157,184,173	14.56				
Real Assets	151,511,874	14.04	15.00			10,400,398
Real Estate	83,229,012	7.71	7.50	5.00	10.00	(2,272,876)
JP Morgan Asset Management Strategic Property Fund	41,970,859	3.89				
UBS Trumbull Property Fund	41,258,153	3.82				
MLPs	68,282,862	6.33	7.50	5.00	10.00	12,673,274
Harvest MLP	34,312,647	3.18				
Tortoise Capital Advisors	33,970,215	3.15				
Cash	2,405,611	0.22				



Employees' Retirement System of the City of Norfolk

Plan Sponsor Peer Group Analysis - All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

March 31, 2019



	<u>3 Month</u>	<u>CYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>7 Year</u>	<u>10 Year</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
● Total Fund Composite	8.76 (41)	8.76 (41)	4.28 (46)	8.24 (56)	5.78 (63)	7.30 (54)	10.15 (41)	-5.43 (78)	15.10 (55)	8.48 (25)
▲ Total Fund Policy	8.76 (41)	8.76 (41)	3.10 (80)	7.39 (80)	5.41 (76)	6.67 (80)	9.38 (67)	-6.19 (89)	15.91 (39)	6.39 (83)
5th Percentile	10.26	10.26	5.99	9.84	7.28	8.82	11.49	-0.45	18.86	10.12
1st Quartile	9.26	9.26	4.96	8.89	6.52	7.98	10.66	-2.91	16.65	8.46
Median	8.46	8.46	4.11	8.37	6.02	7.43	9.96	-4.34	15.30	7.64
3rd Quartile	7.36	7.36	3.26	7.64	5.43	6.77	9.08	-5.36	13.76	6.78
95th Percentile	5.26	5.26	1.71	5.31	4.00	4.94	7.30	-7.17	9.12	4.96

Parentheses contain percentile rankings.

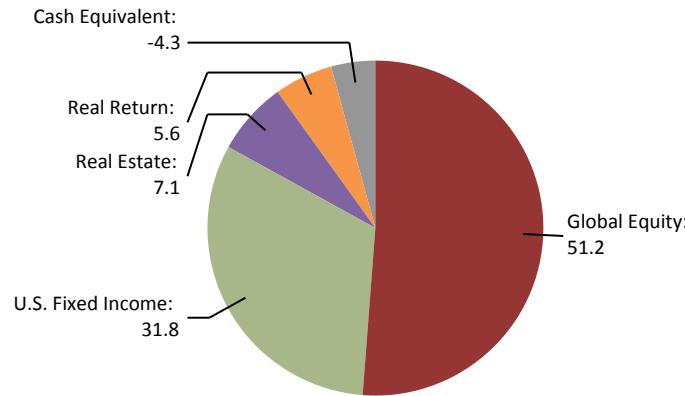


Employees' Retirement System of the City of Norfolk

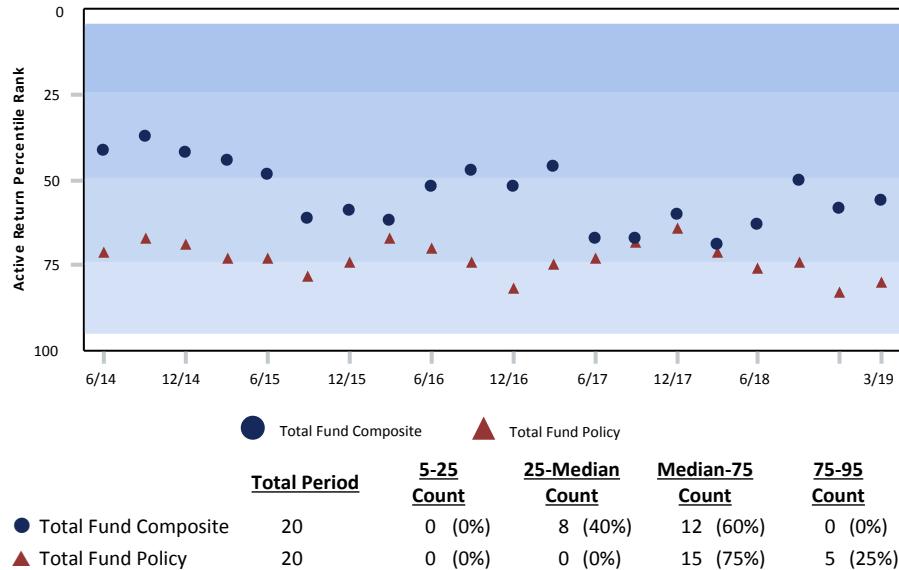
Total Fund Composite

March 31, 2019

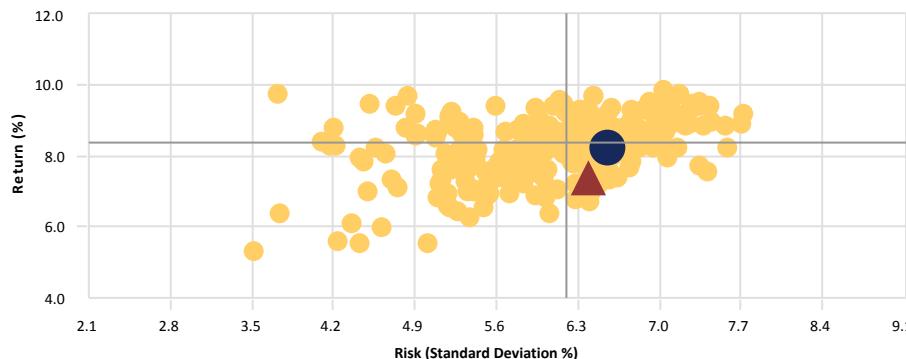
Asset Allocation by Segment



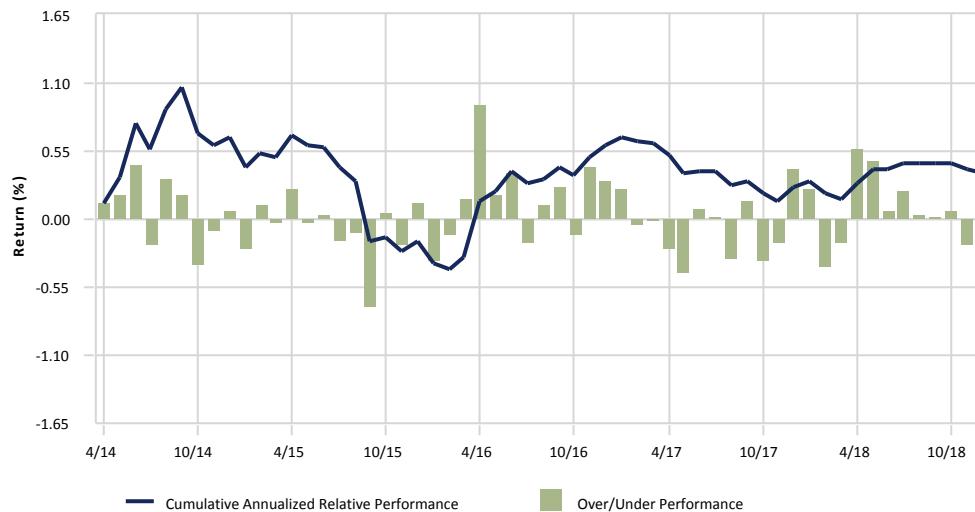
3 Year Rolling Return Rank



Risk vs. Return (04/01/16 - 03/31/19)



Relative Performance vs. Total Fund Policy



Note: Cash Equivalent allocation includes manager cash.



Global Equity

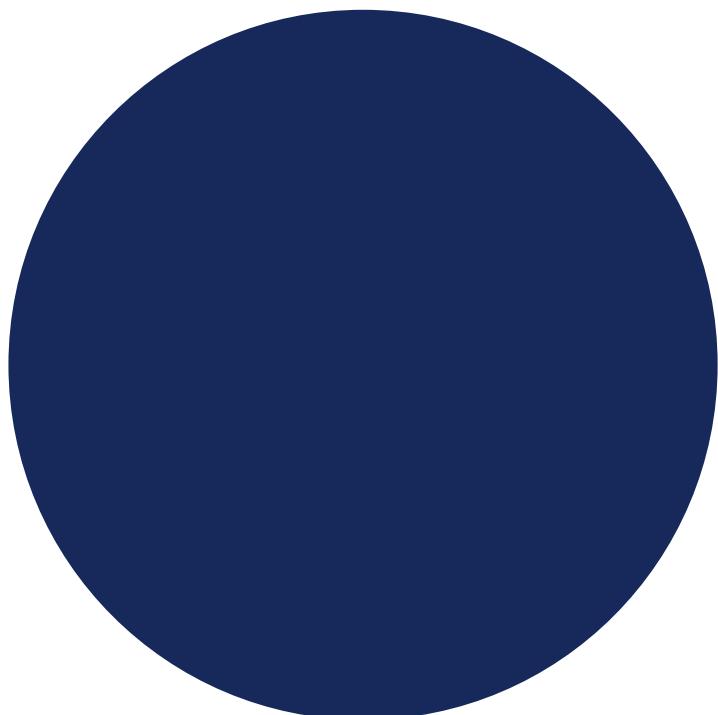
Employees' Retirement System of the City of Norfolk

Global Equity Composite vs. MSCI AC World IMI (Net)

March 31, 2019

Manager Allocation

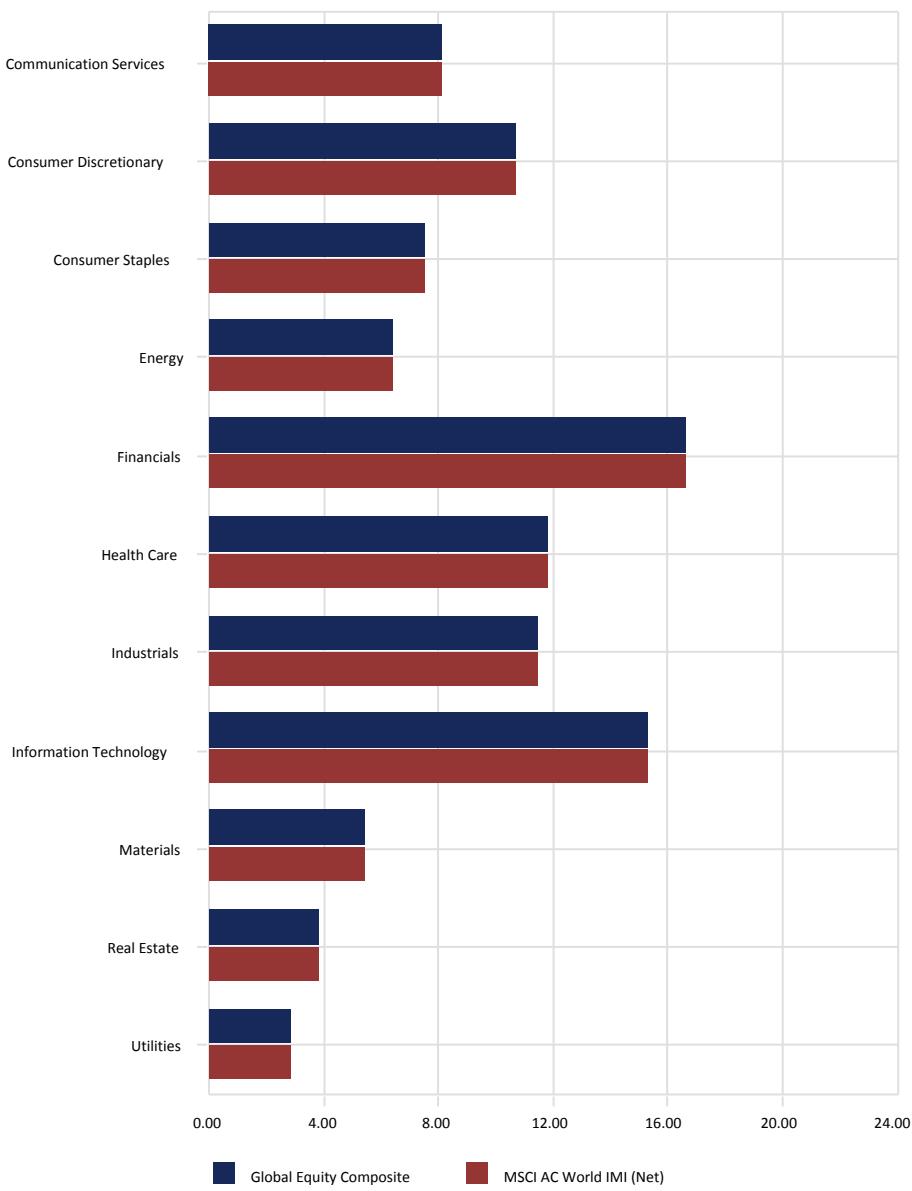
March 31, 2019 : \$604,392,483



■ SSgA MSCI ACWI IMI Index Fund

Market Value (\$)	Allocation (%)
604,392,483	100.00

Sector Allocation - Holdings Based

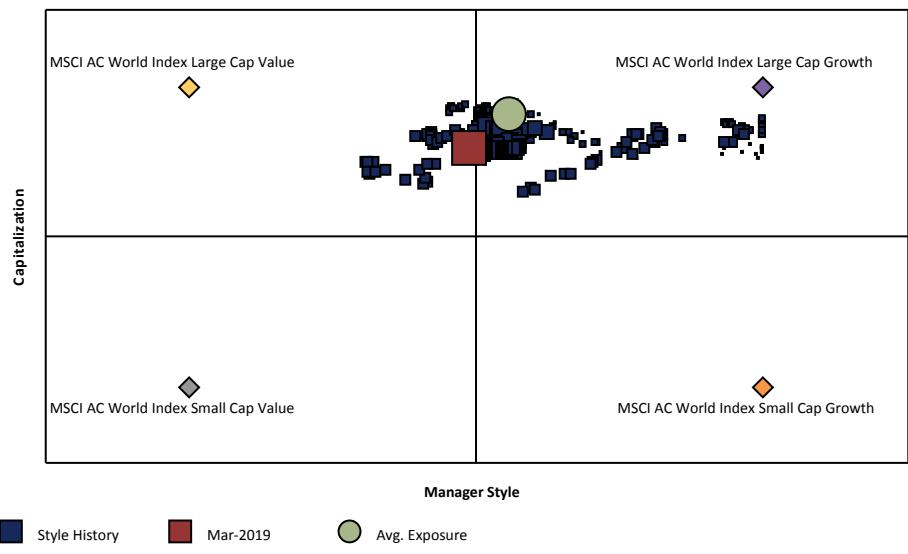


Employees' Retirement System of the City of Norfolk

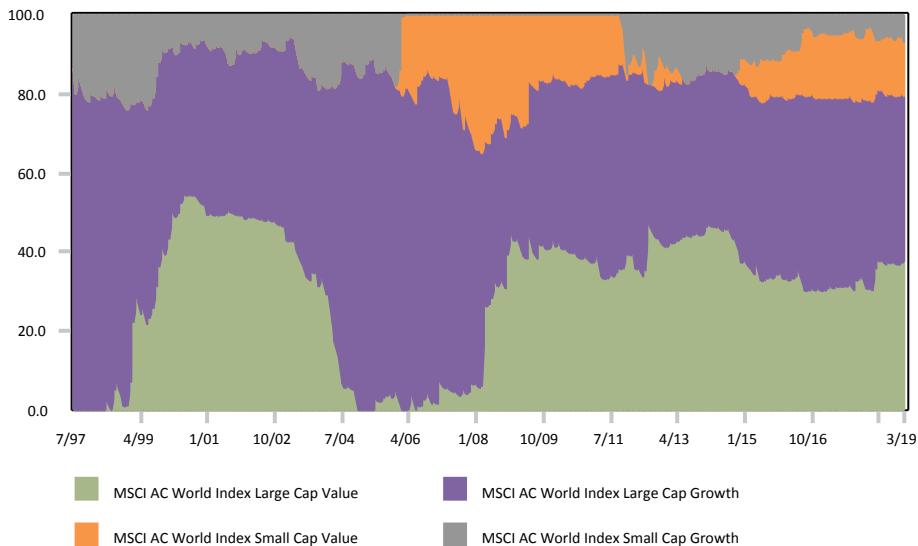
Global Equity Composite vs. MSCI AC World IMI (Net)

March 31, 2019

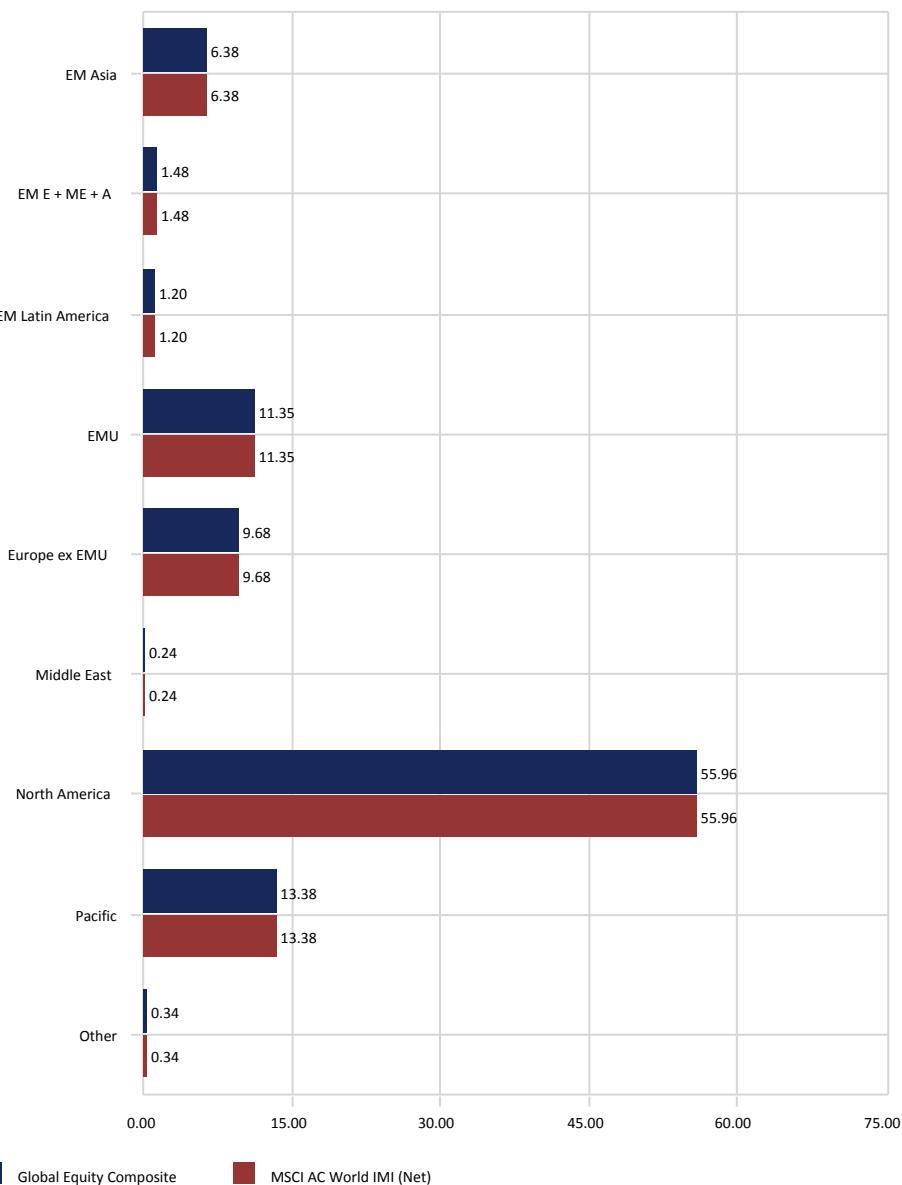
Style Analysis - Returns Based



3 Year Style Analysis



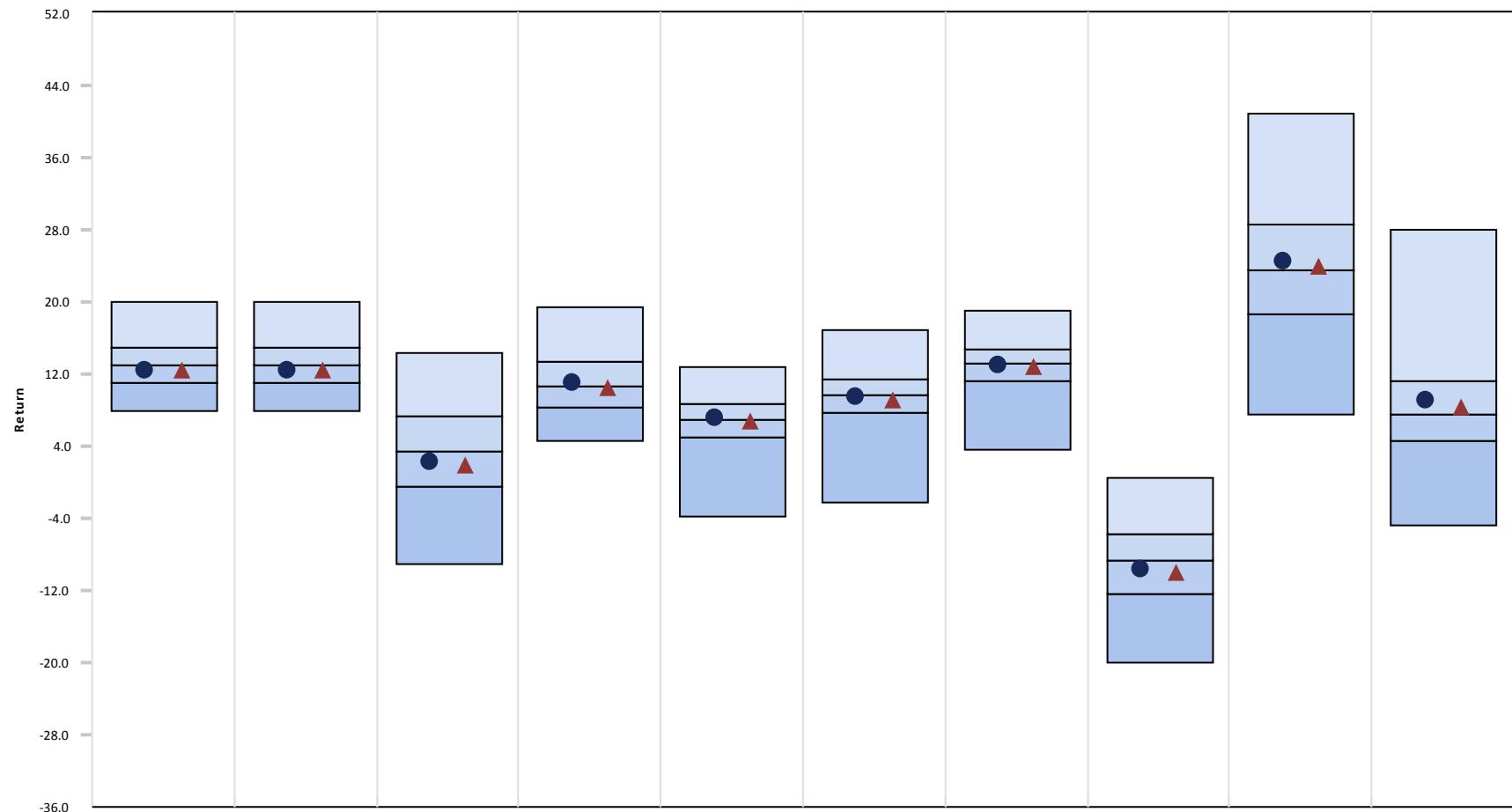
Region Allocation - Holdings Based



Employees' Retirement System of the City of Norfolk

Global Equity Composite vs. IM Global Equity (MF)

March 31, 2019



	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2018	2017	2016
● Global Equity Composite	12.43 (57)	12.43 (57)	2.30 (56)	11.05 (44)	7.17 (45)	9.45 (53)	13.07 (53)	-9.73 (62)	24.48 (47)	8.99 (38)
▲ Global Equity Policy	12.29 (60)	12.29 (60)	1.89 (60)	10.52 (53)	6.75 (53)	9.12 (58)	12.72 (56)	-10.08 (65)	23.95 (49)	8.34 (41)
5th Percentile	19.92	19.92	14.41	19.44	12.69	16.87	18.99	0.45	40.96	28.06
1st Quartile	14.94	14.94	7.24	13.28	8.77	11.36	14.82	-5.75	28.55	11.17
Median	12.92	12.92	3.34	10.64	6.90	9.61	13.23	-8.74	23.61	7.56
3rd Quartile	11.01	11.01	-0.58	8.37	5.04	7.80	11.18	-12.45	18.62	4.53
95th Percentile	7.85	7.85	-9.11	4.65	-3.86	-2.25	3.61	-20.01	7.57	-4.73

gross of fees

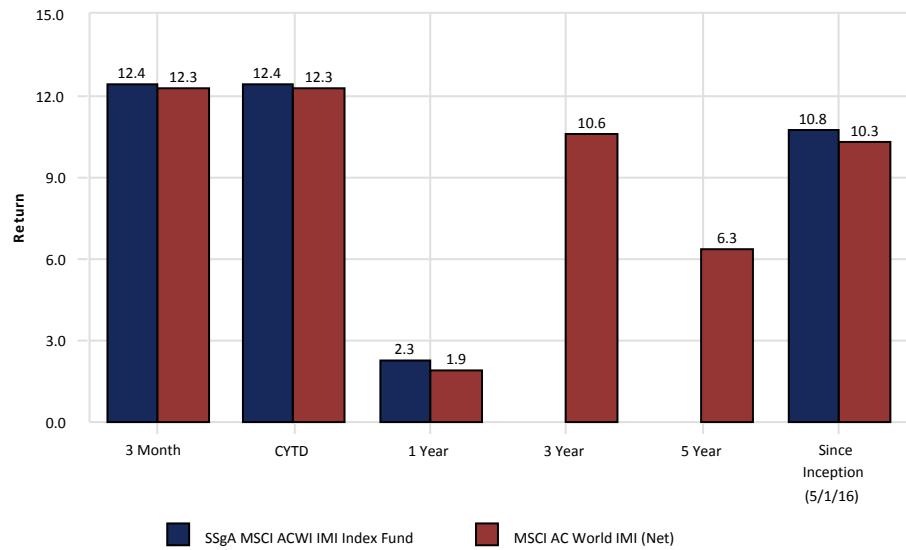


Employees' Retirement System of the City of Norfolk

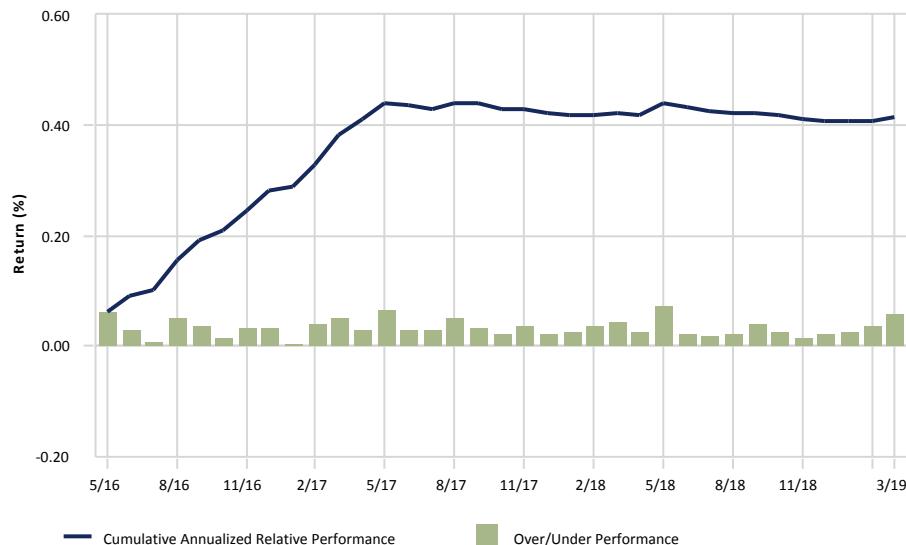
SSgA MSCI ACWI IMI Index Fund vs. IM Global Equity (SA+CF)

March 31, 2019

Comparative Performance

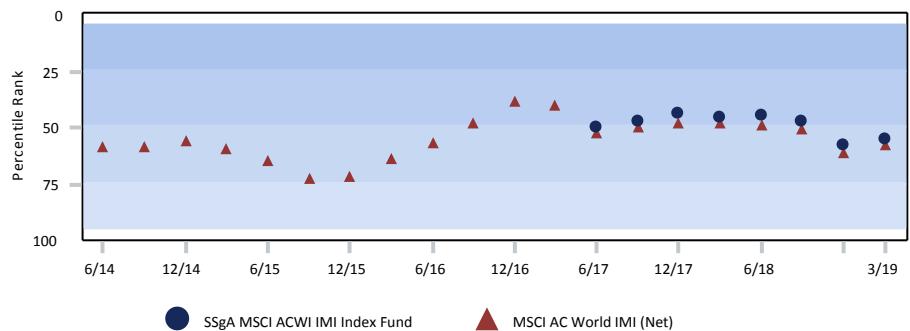


Relative Performance vs MSCI AC World IMI (Net)

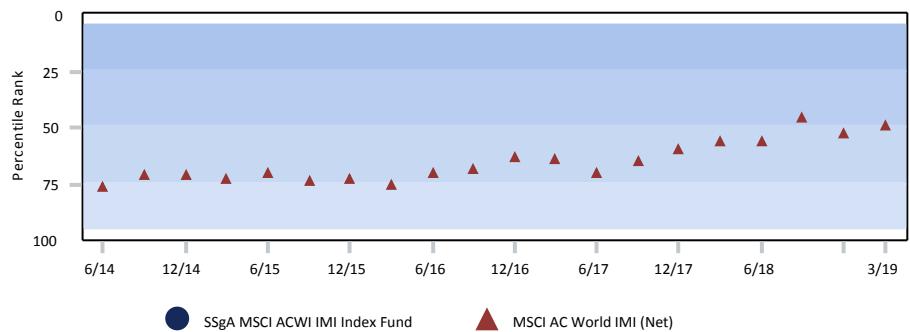


gross of fees

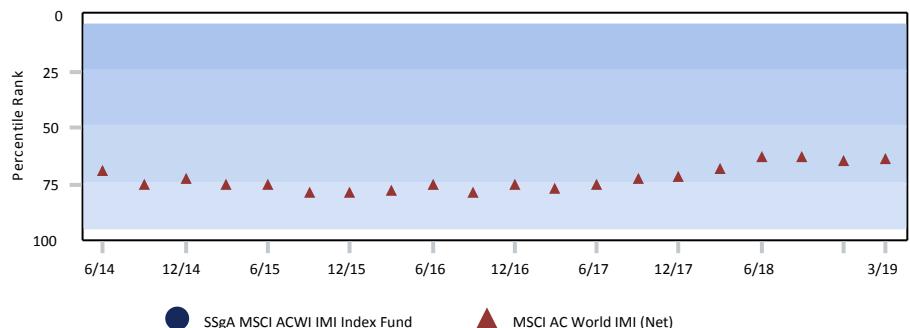
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

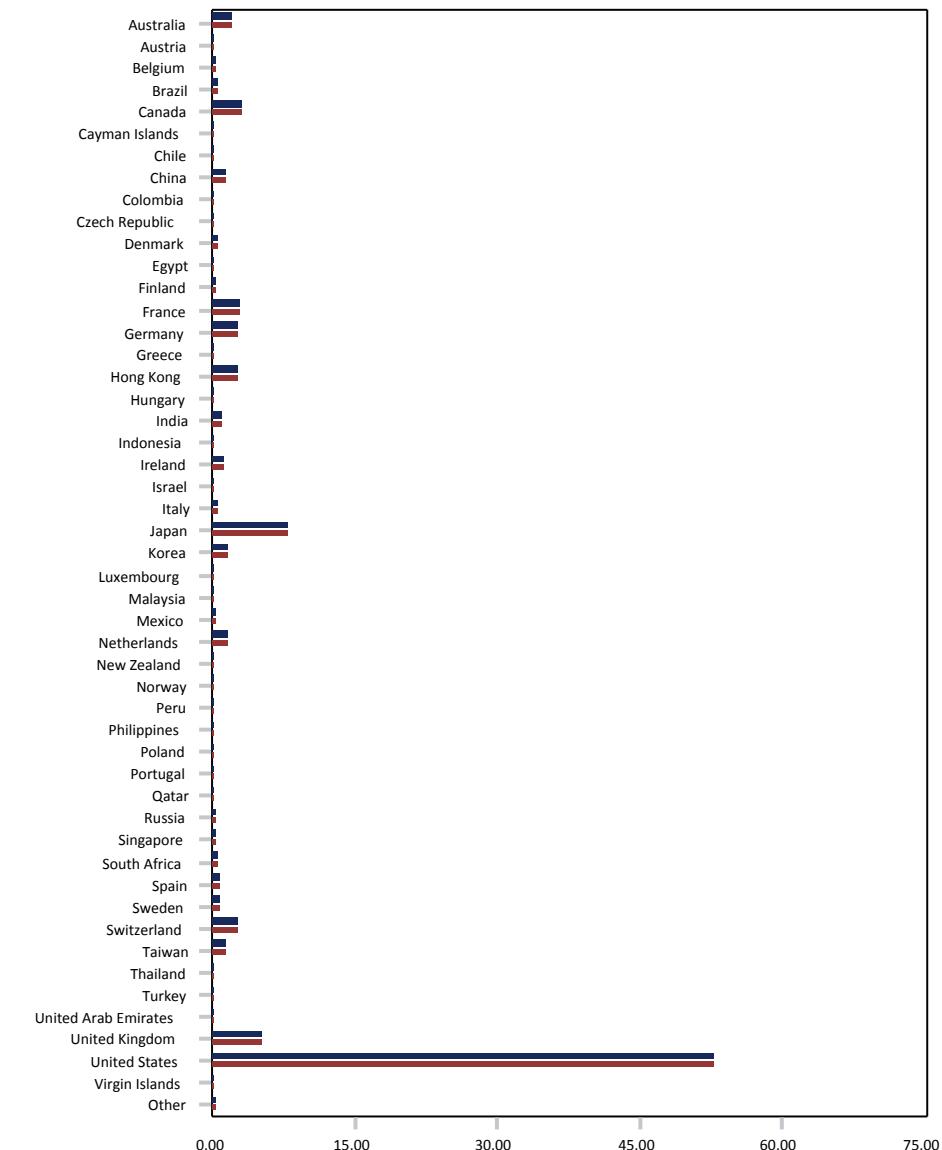


Employees' Retirement System of the City of Norfolk

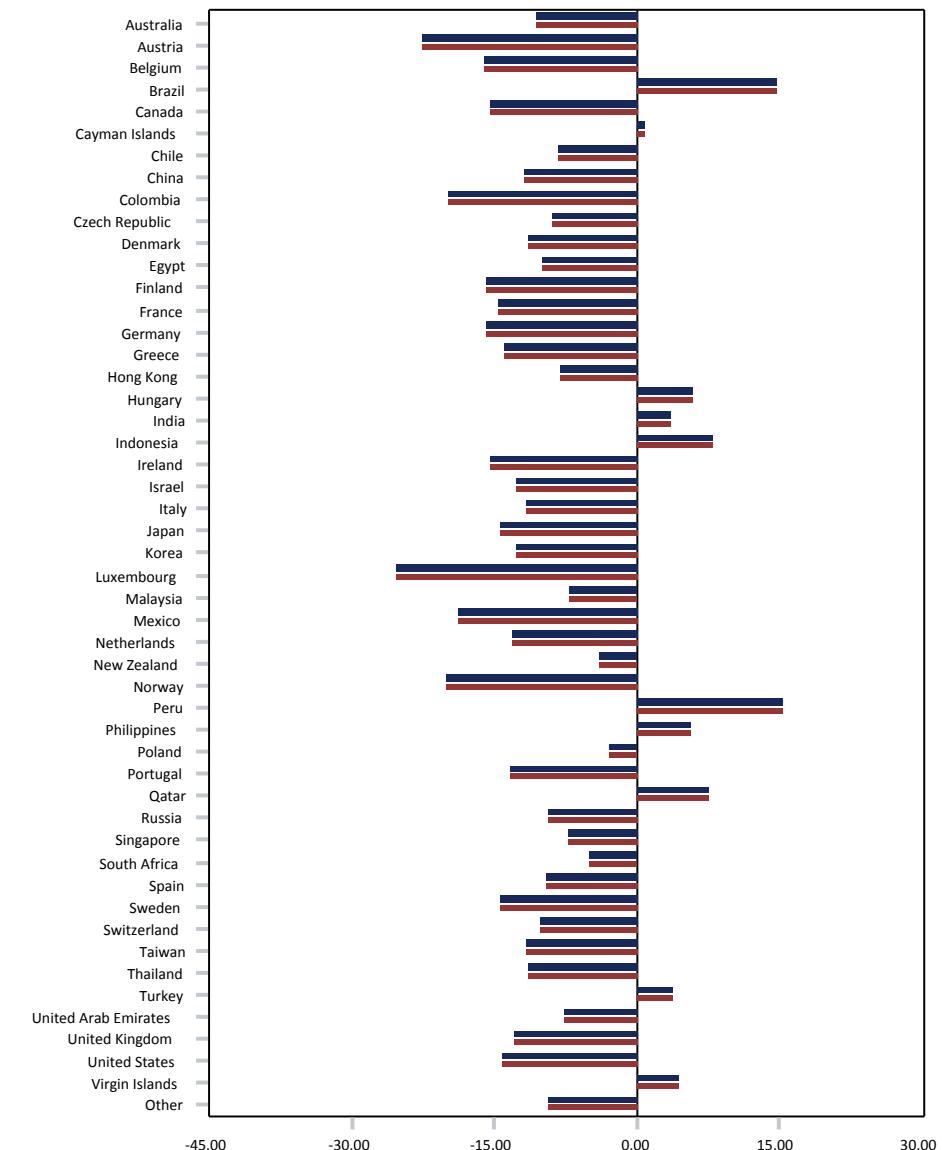
SSgA MSCI ACWI IMI vs. MSCI AC World IMI (Net)

March 31, 2019

Country Allocation



Country Performance



SSgA MSCI ACWI IMI

MSCI AC World IMI (Net)

SSgA MSCI ACWI IMI

MSCI AC World IMI (Net)

Fixed Income

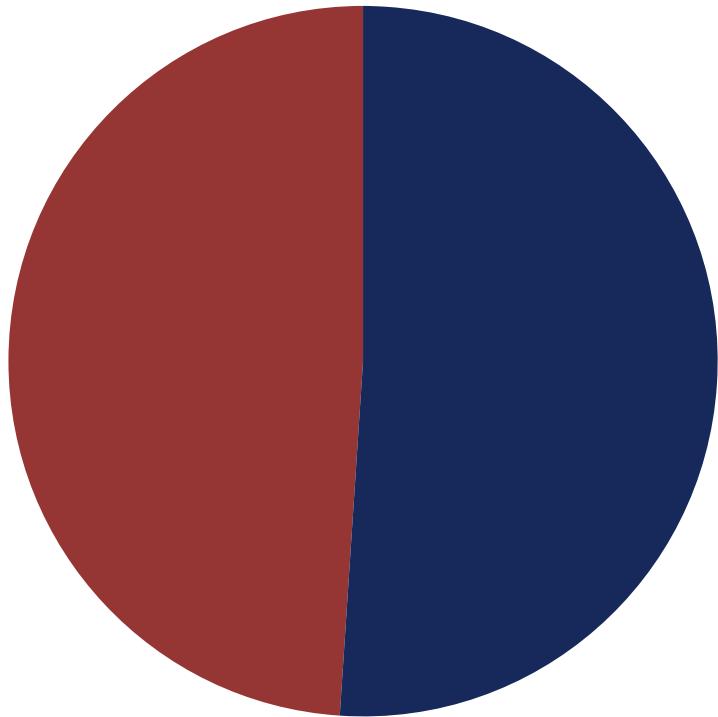
Employees' Retirement System of the City of Norfolk

Fixed Income

March 31, 2019

Manager Allocation

March 31, 2019 : \$321,105,176

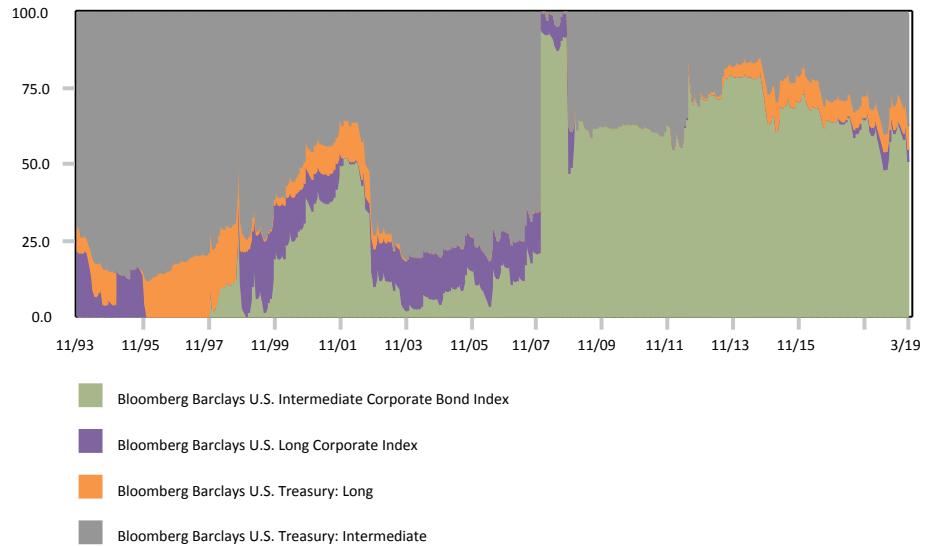


	Market Value (\$)	Allocation (%)
PIMCO Total Return	163,921,003	51.05
SSgA Bond Market Index	157,184,173	48.95

Style Analysis - Returns Based



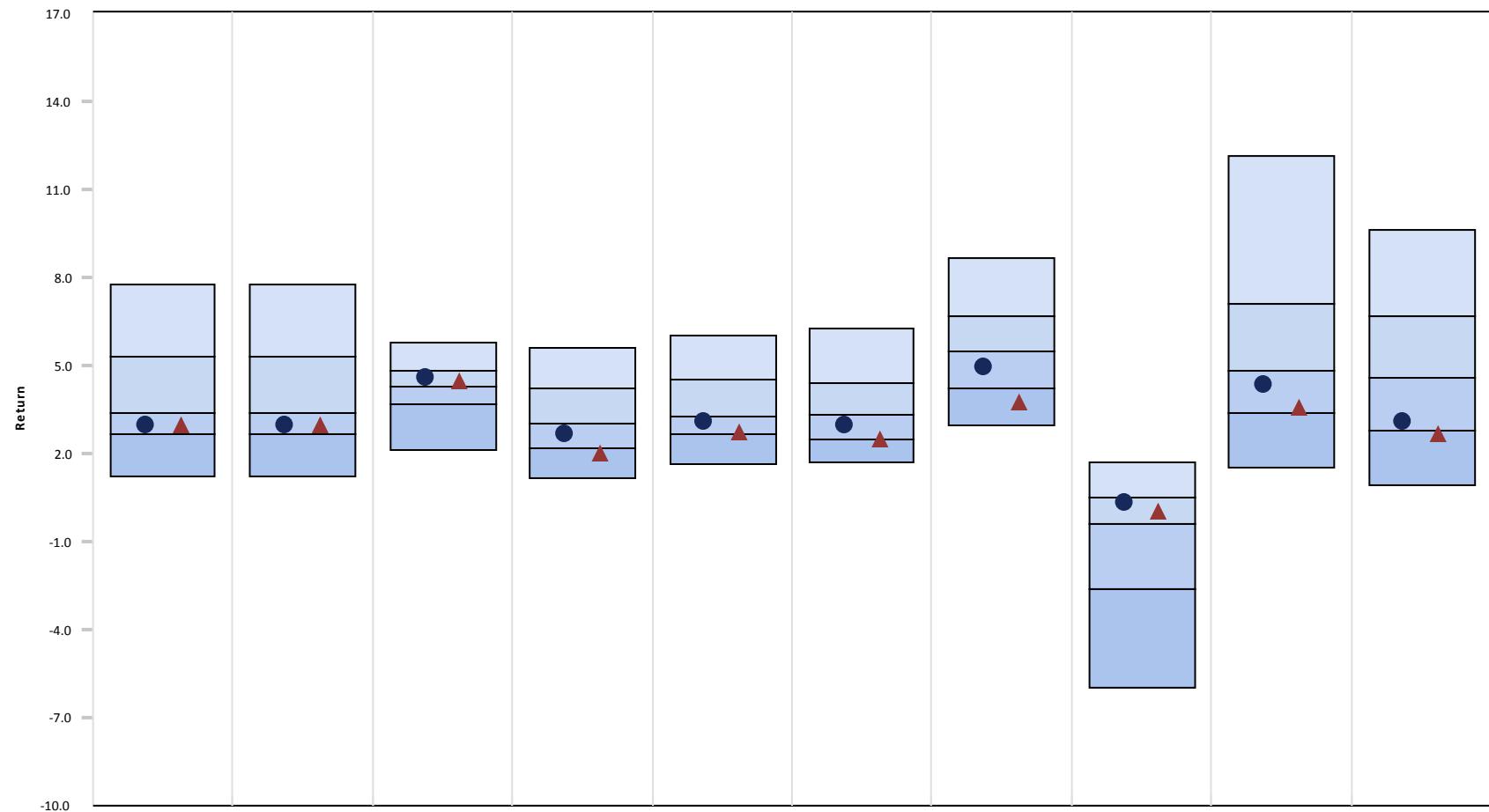
3 Year Style Analysis



Employees' Retirement System of the City of Norfolk

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

March 31, 2019



	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2018	2017	2016
● Fixed Income	2.94 (67)	2.94 (67)	4.59 (36)	2.65 (65)	3.10 (57)	2.96 (62)	4.93 (57)	0.35 (28)	4.34 (56)	3.05 (71)
▲ Blmbg. Barc. U.S. Aggregate	2.94 (67)	2.94 (67)	4.48 (40)	2.03 (82)	2.74 (72)	2.48 (76)	3.77 (85)	0.01 (36)	3.54 (69)	2.65 (78)
5th Percentile	7.77	7.77	5.77	5.63	6.01	6.24	8.64	1.73	12.12	9.61
1st Quartile	5.28	5.28	4.83	4.24	4.53	4.40	6.68	0.47	7.09	6.70
Median	3.36	3.36	4.30	3.05	3.29	3.32	5.45	-0.39	4.80	4.61
3rd Quartile	2.69	2.69	3.69	2.20	2.67	2.48	4.23	-2.64	3.35	2.81
95th Percentile	1.19	1.19	2.12	1.18	1.65	1.69	2.95	-5.97	1.51	0.94

gross of fees

Parentheses contain percentile rankings.

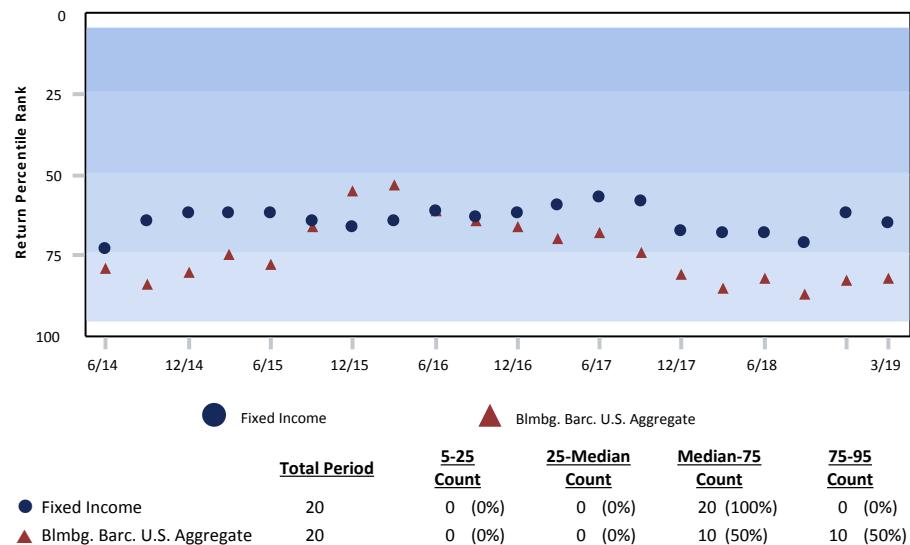


Employees' Retirement System of the City of Norfolk

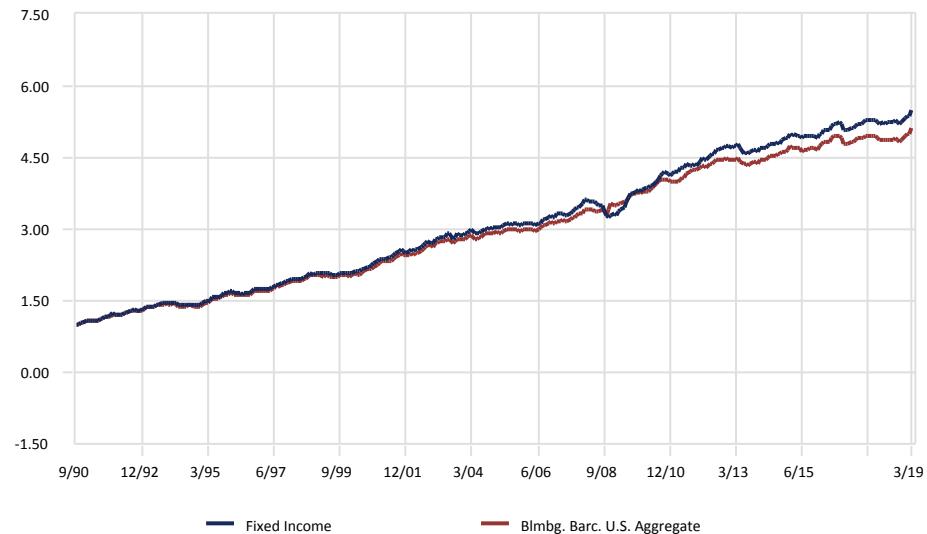
Fixed Income

March 31, 2019

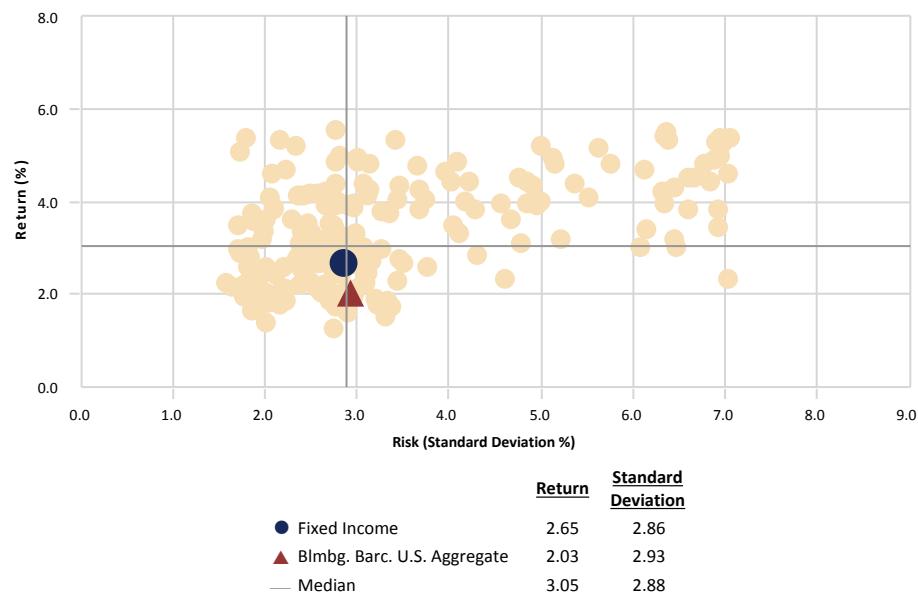
3 Year Rolling Return Rank



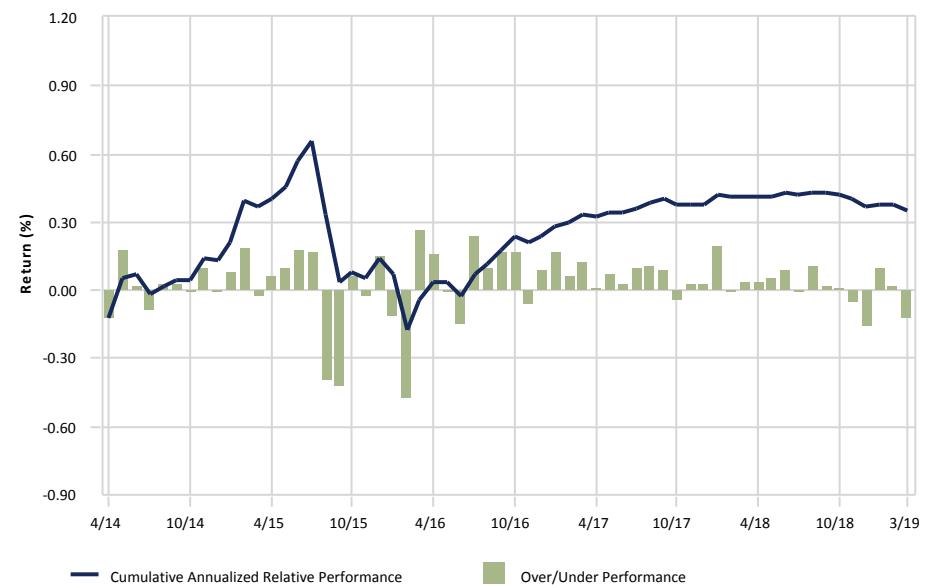
Growth of \$1 - Since Inception (10/01/90)



Risk vs. Return (04/01/16 - 03/31/19)



Relative Performance vs. Blmbg. Barc. U.S. Aggregate

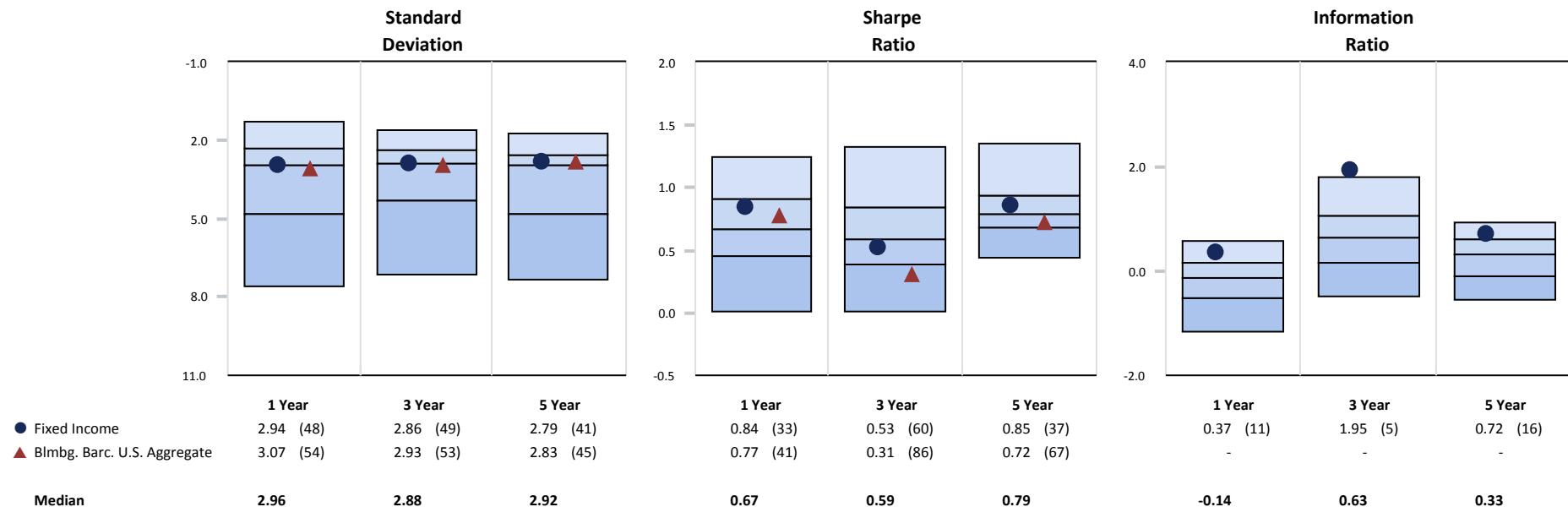


Employees' Retirement System of the City of Norfolk

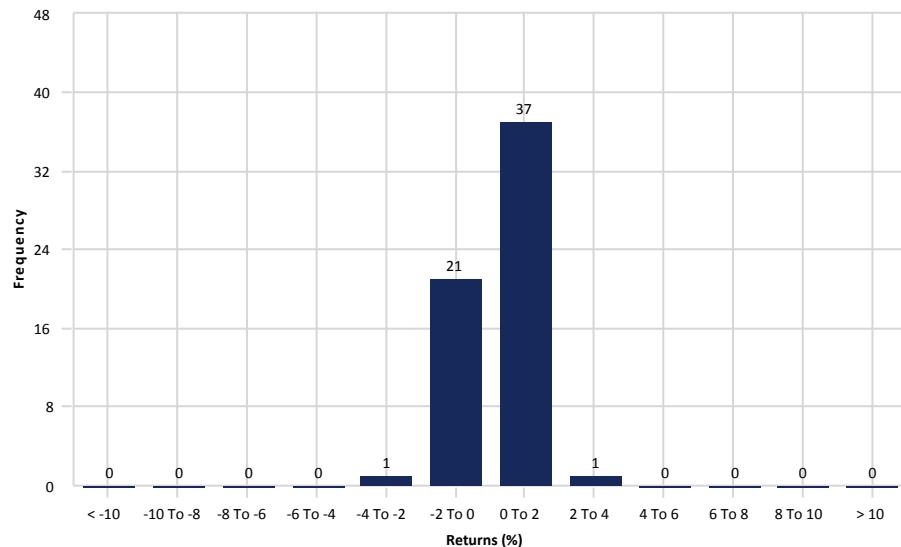
Fixed Income

March 31, 2019

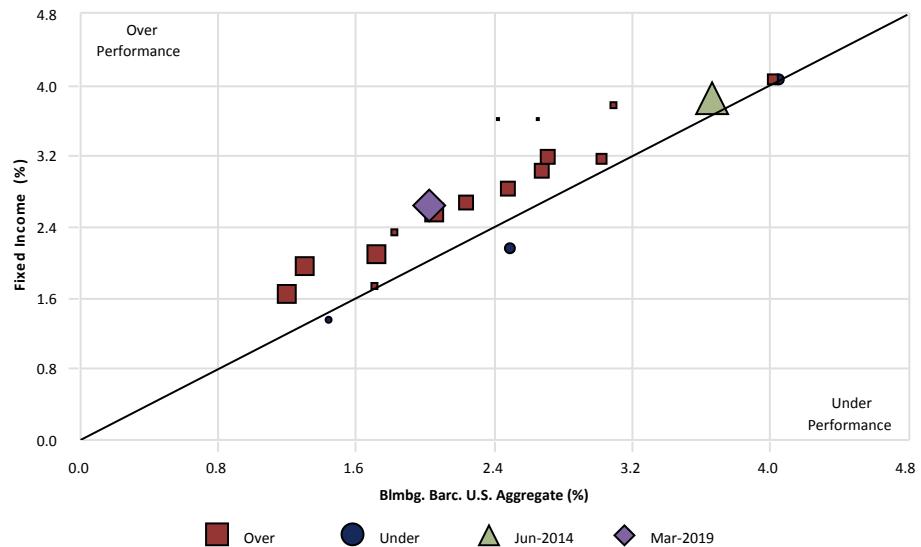
Peer Group Analysis: All Master Trust-US Fixed Income Segment



Monthly Distribution of Returns



3 Year Rolling Under/Over Performance

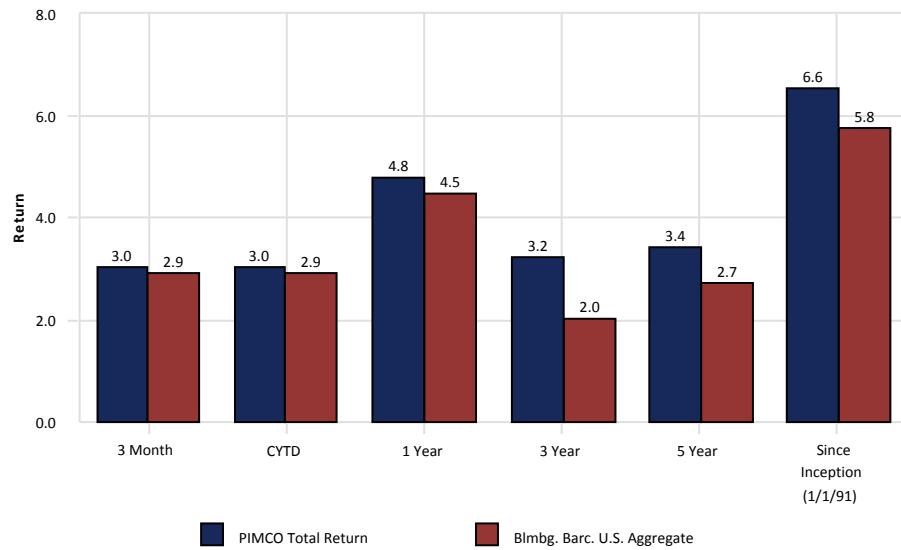


Employees' Retirement System of the City of Norfolk

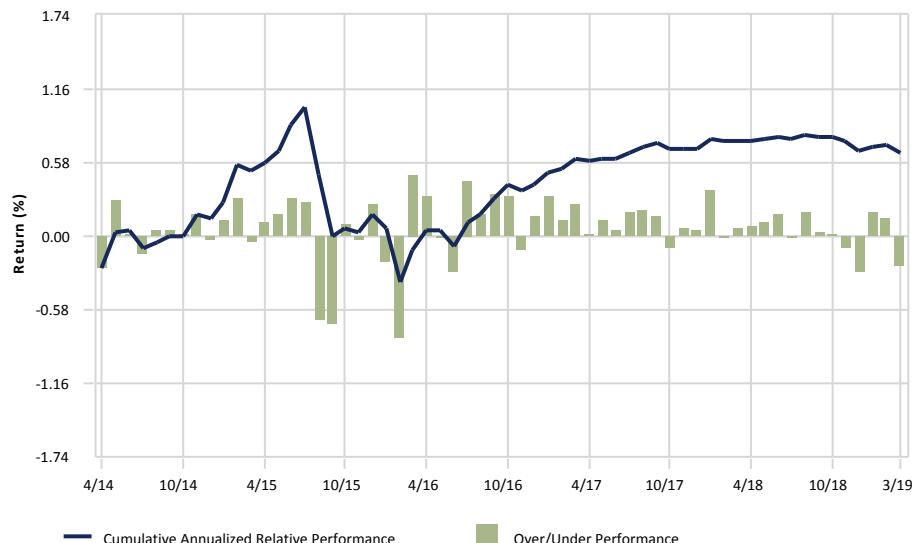
PIMCO Total Return vs. IM U.S. Broad Market Core Fixed Income (SA+CF)

March 31, 2019

Comparative Performance

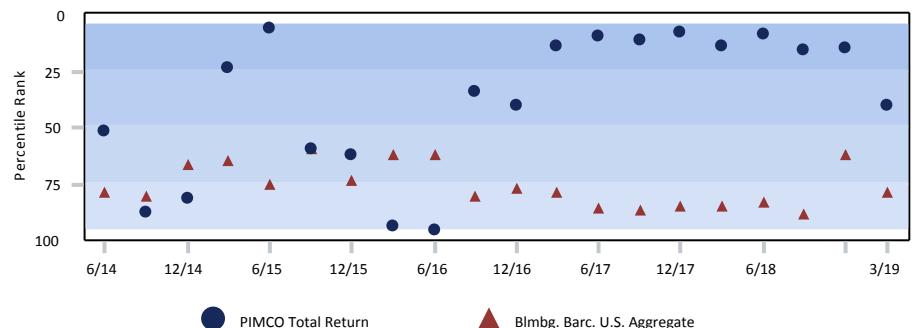


Relative Performance vs Blmbg. Barc. U.S. Aggregate

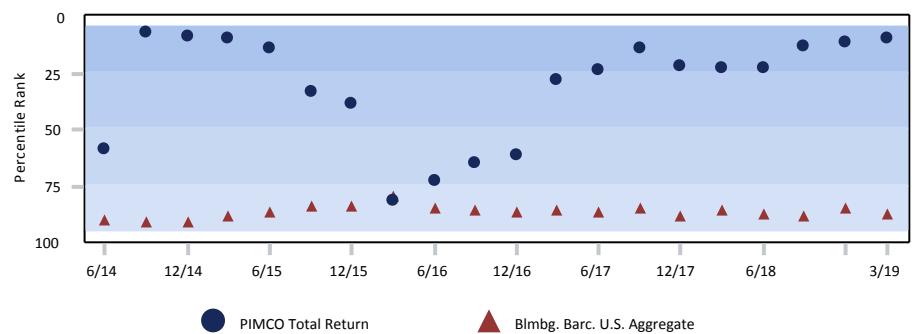


gross of fees

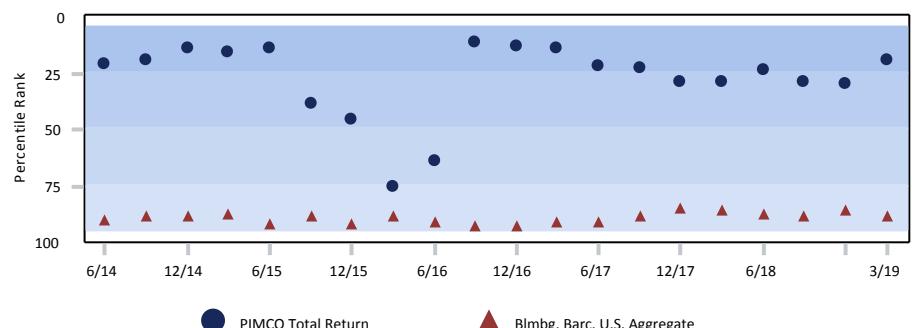
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Employees' Retirement System of the City of Norfolk

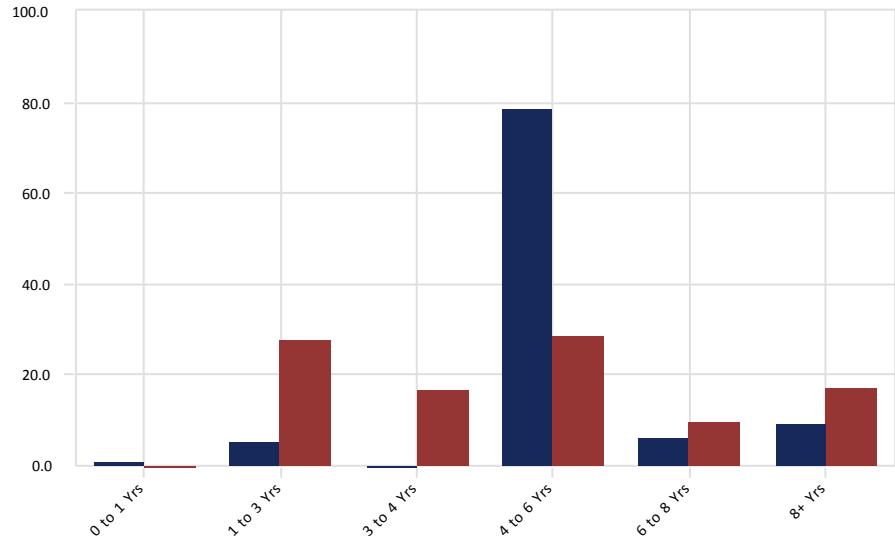
PIMCO Total Return vs. Blmbg. Barc. U.S. Aggregate

March 31, 2019

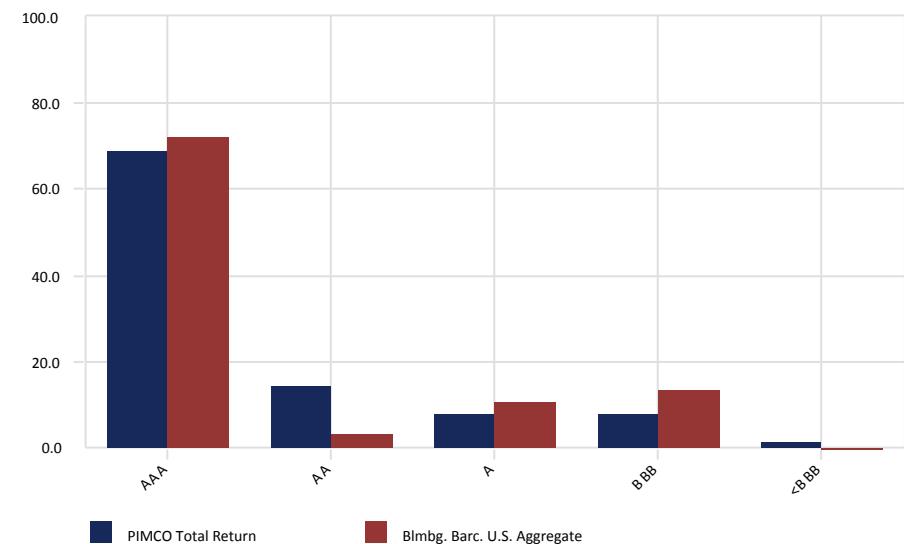
Portfolio Characteristics

	<u>Portfolio</u>	<u>Benchmark</u>
Avg. Maturity	6.53	8.02
Avg. Quality	AA	AA/AA-
Coupon Rate (%)	3.01	3.28
Convexity	-	-
Effective Duration	4.52	5.82

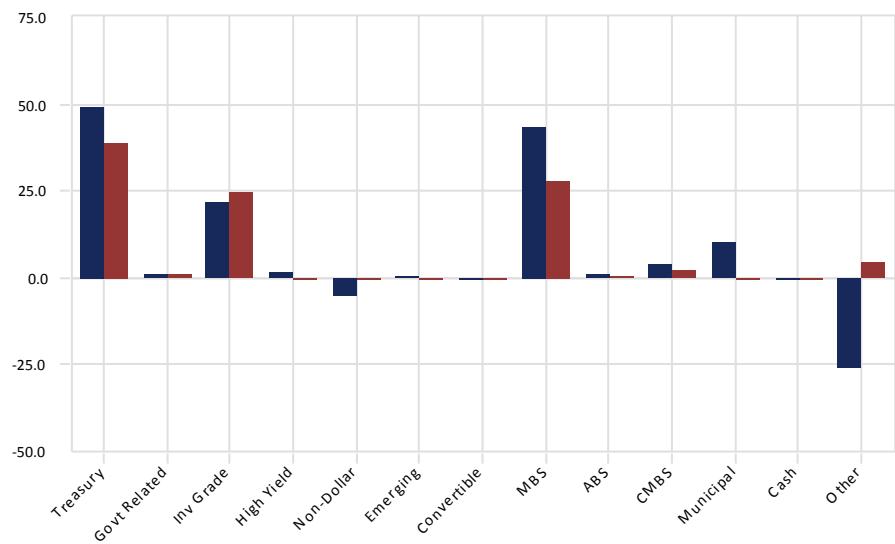
Duration Distribution (%)



Credit Quality Distribution (%)



Sector Distribution (%)

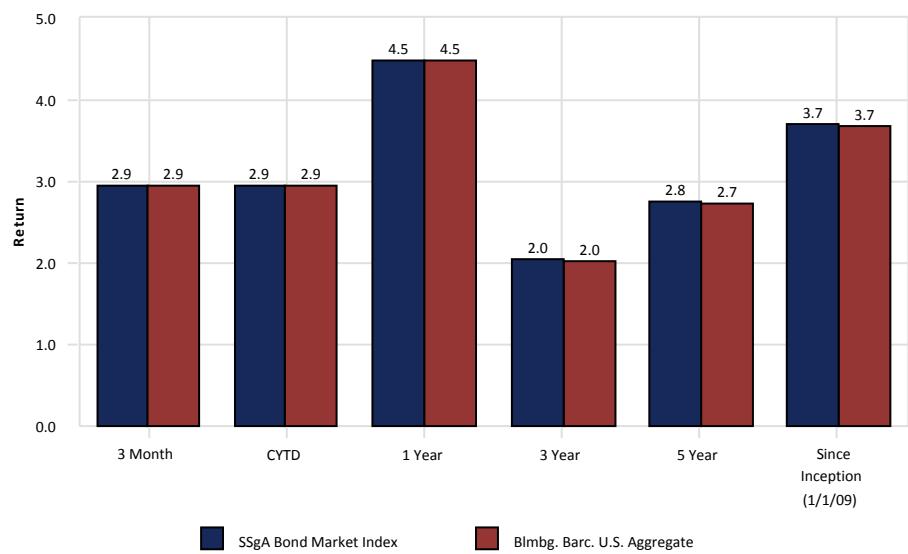


Employees' Retirement System of the City of Norfolk

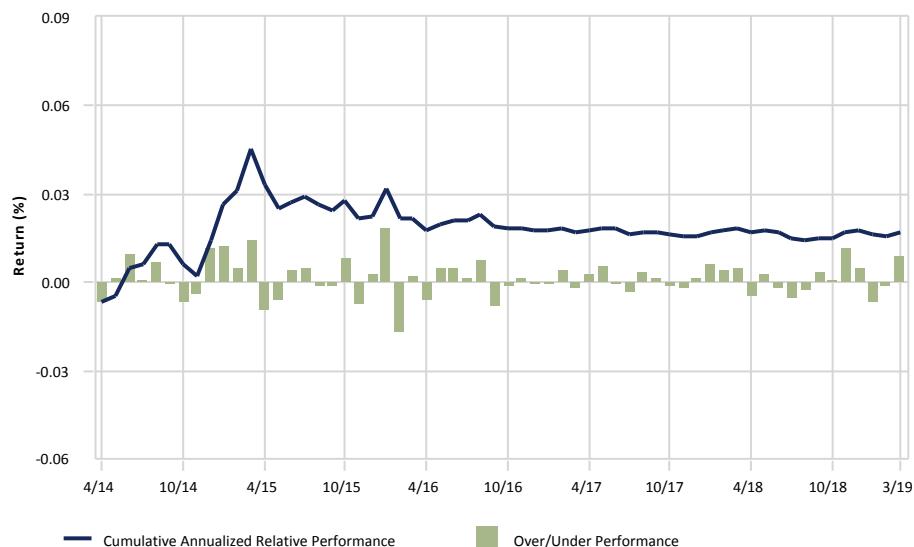
SSgA Bond Market Index vs. IM U.S. Broad Market Core Fixed Income (SA+CF)

March 31, 2019

Comparative Performance

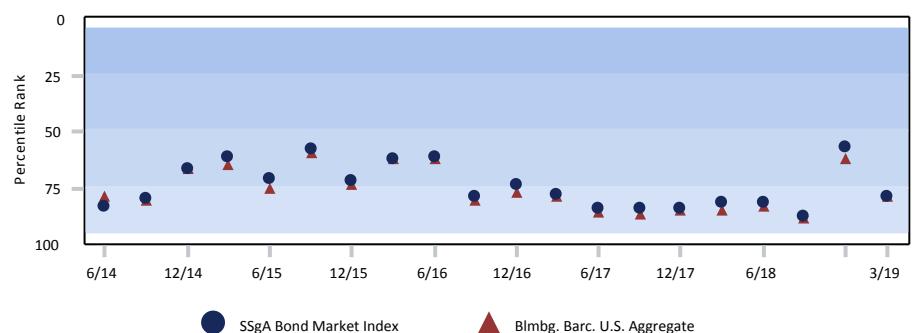


Relative Performance vs Blmbg. Barc. U.S. Aggregate

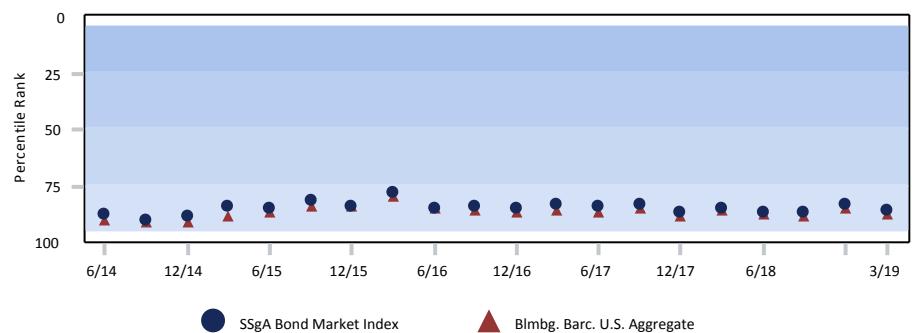


gross of fees

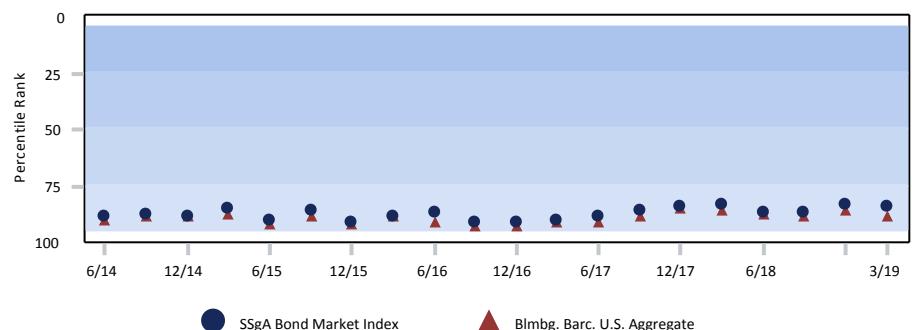
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Employees' Retirement System of the City of Norfolk

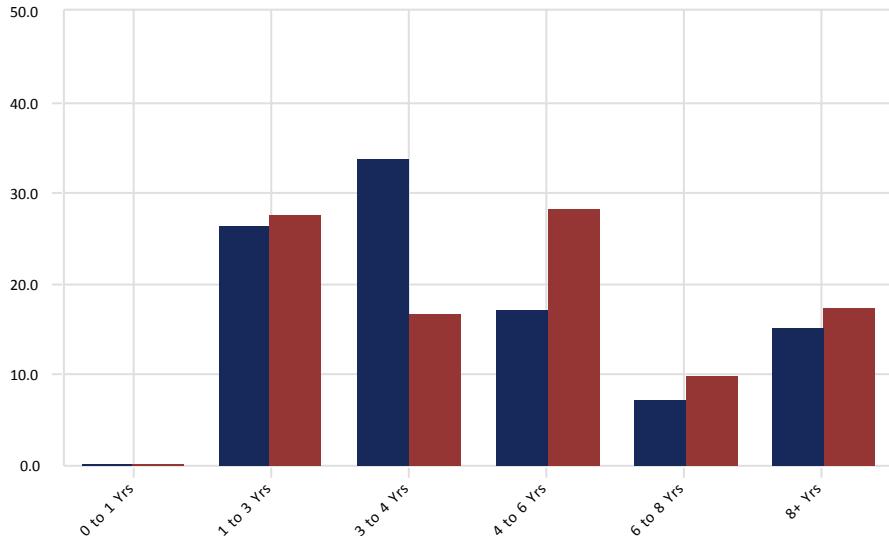
SSgA Bond Market Index vs. Blmbg. Barc. U.S. Aggregate

March 31, 2019

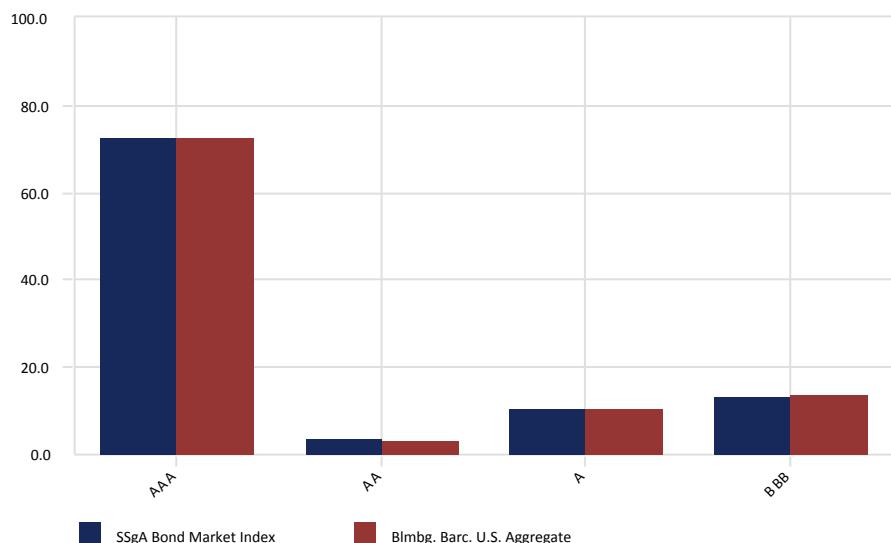
Portfolio Characteristics

	<u>Portfolio</u>	<u>Benchmark</u>
Avg. Maturity	8.05	8.02
Avg. Quality	Aa2	AA/AA-
Yield To Maturity (%)	2.94	2.94
Modified Duration	5.84	-
Convexity	0.13	-

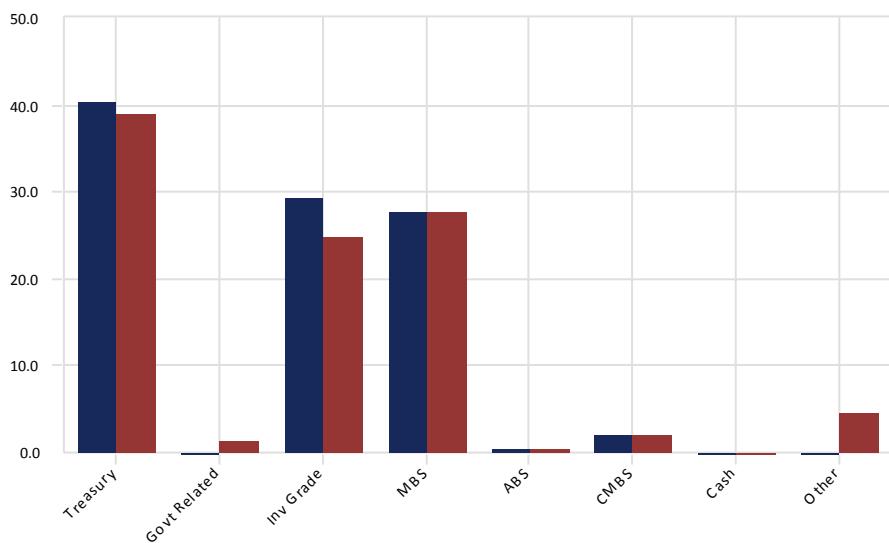
Duration Distribution (%)



Credit Quality Distribution (%)



Sector Distribution (%)



Real Estate

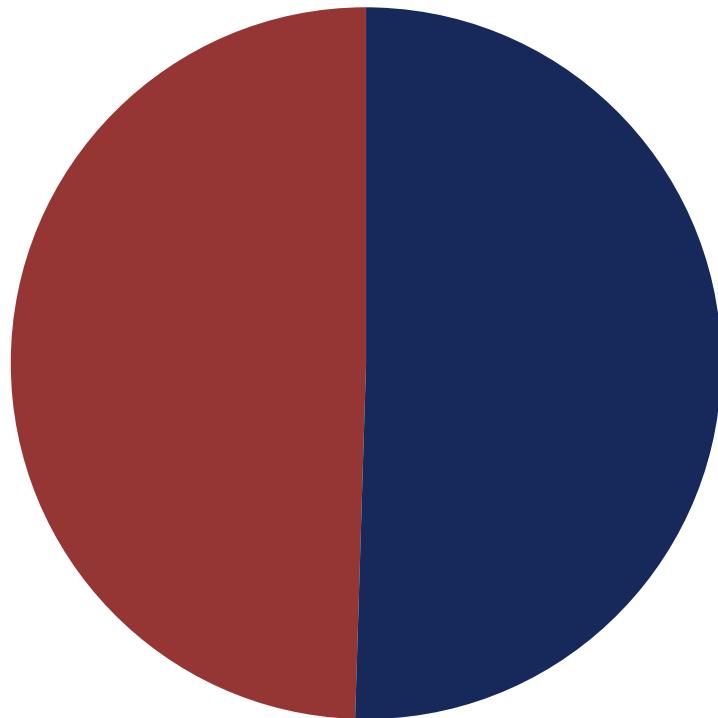
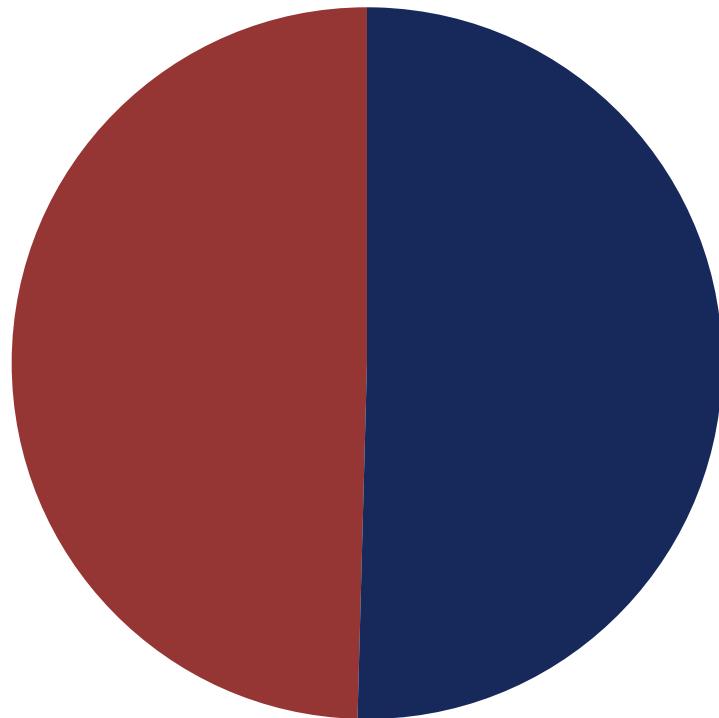
Employees' Retirement System of the City of Norfolk

Asset Allocation By Manager - Real Estate

March 31, 2019

March 31, 2019 : \$83,229,012

December 31, 2018 : \$82,948,272



	Market Value (\$)	Allocation (%)
JP Morgan Asset Management Strategic Property Fund	41,970,859	50.43
UBS Trumbull Property Fund	41,258,153	49.57

	Market Value (\$)	Allocation (%)
JP Morgan Asset Management Strategic Property Fund	41,884,538	50.49
UBS Trumbull Property Fund	41,063,734	49.51

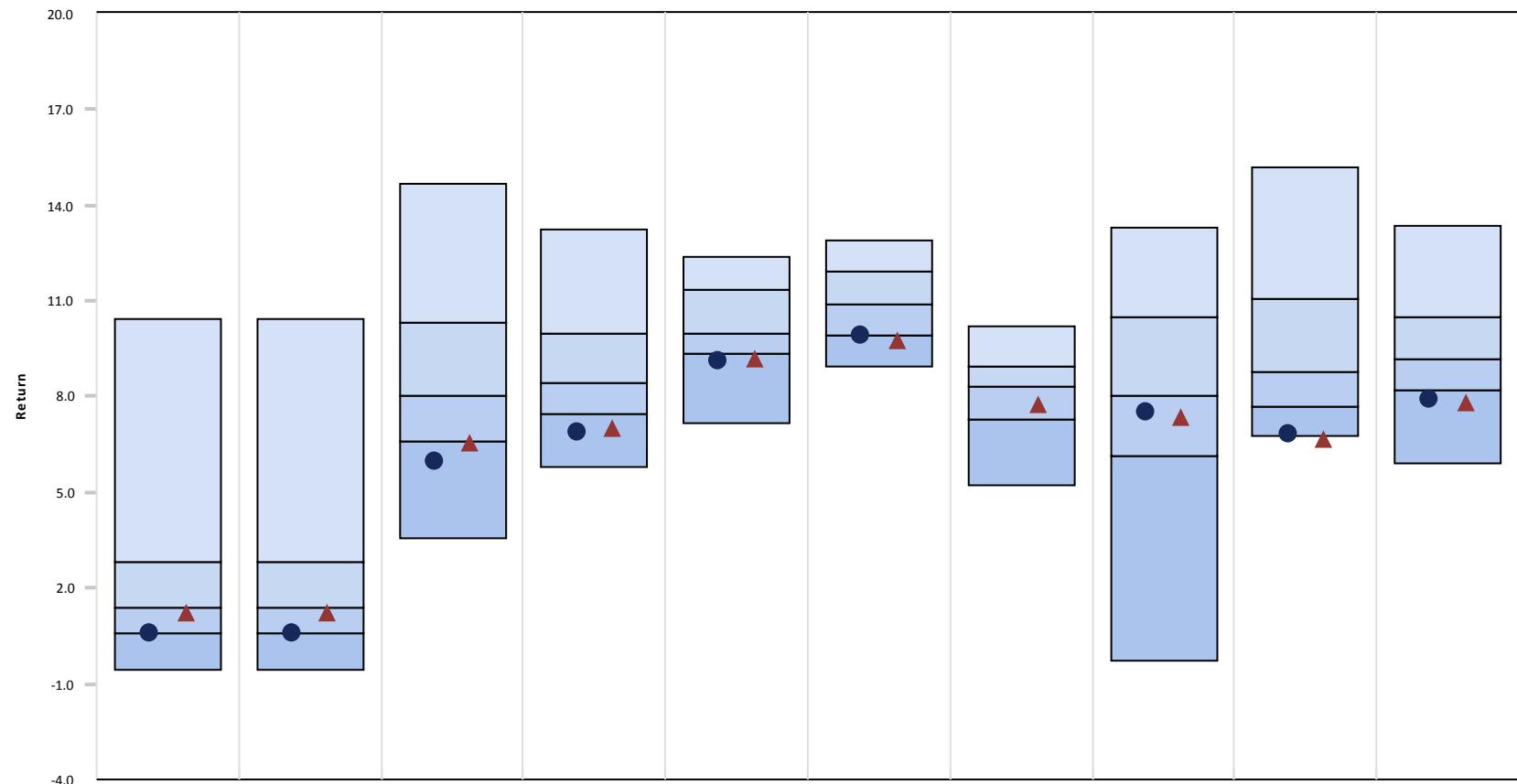
	Market Value (\$)	Allocation (%)
JP Morgan Asset Management Strategic Property Fund	41,884,538	50.49
UBS Trumbull Property Fund	41,063,734	49.51



Employees' Retirement System of the City of Norfolk

Plan Sponsor Peer Group Analysis - All Master Trust-Real Estate Segment

March 31, 2019



	<u>3 Month</u>	<u>CYTD</u>	<u>1 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>7 Year</u>	<u>10 Year</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
● Real Estate	0.57 (76)	0.57 (76)	5.97 (88)	6.90 (86)	9.12 (77)	9.93 (76)	-	7.52 (66)	6.81 (95)	7.90 (80)
▲ NCREIF Fund Index-ODCE (Net)	1.20 (58)	1.20 (58)	6.55 (76)	7.01 (86)	9.18 (77)	9.75 (80)	7.73 (70)	7.36 (67)	6.66 (98)	7.79 (81)
5th Percentile	10.44	10.44	14.66	13.23	12.40	12.92	10.20	13.33	15.21	13.37
1st Quartile	2.79	2.79	10.30	9.97	11.37	11.94	8.95	10.47	11.05	10.48
Median	1.41	1.41	8.03	8.43	9.99	10.87	8.34	8.03	8.77	9.16
3rd Quartile	0.58	0.58	6.60	7.46	9.37	9.94	7.28	6.12	7.71	8.19
95th Percentile	-0.57	-0.57	3.58	5.82	7.17	8.93	5.24	-0.26	6.79	5.92
Population	137	137	96	64	48	33	21	92	77	62

gross of fees

Parentheses contain percentile rankings.



Master Limited Partnerships

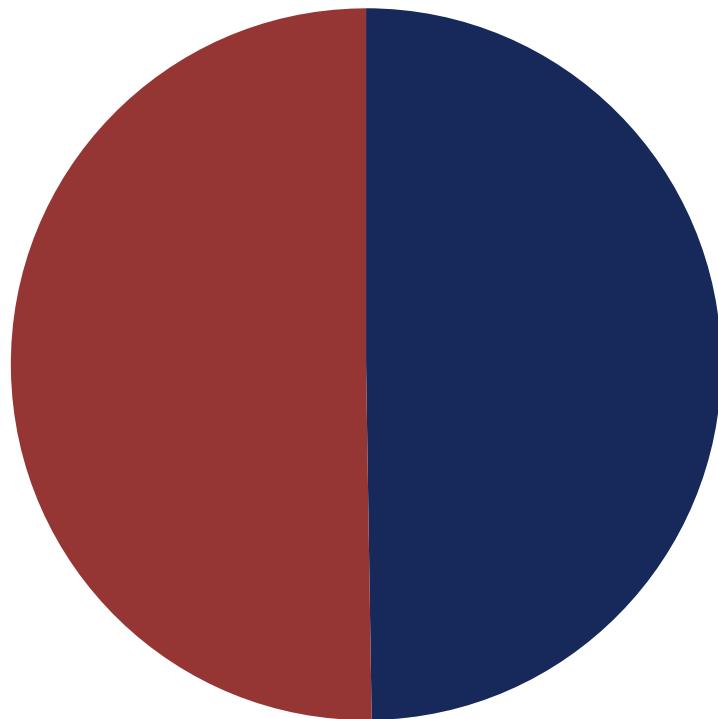
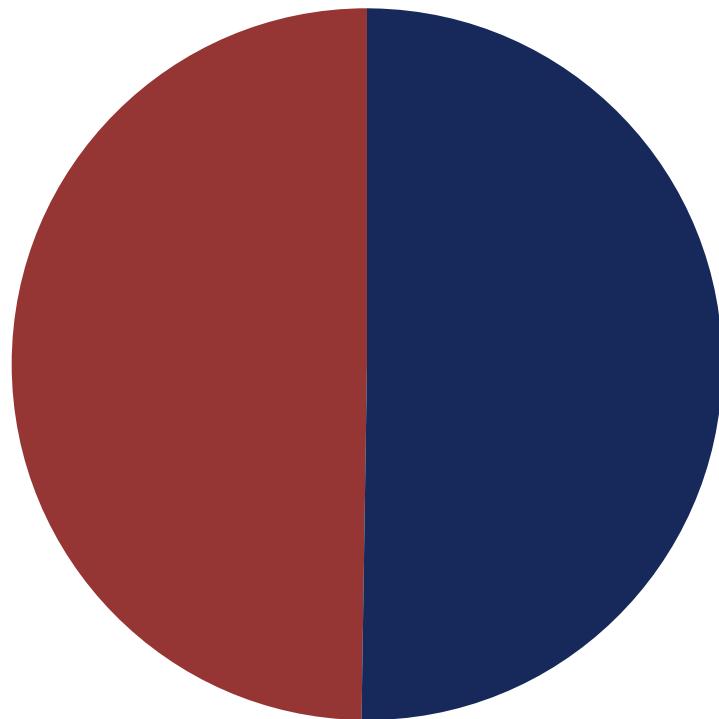
Employees' Retirement System of the City of Norfolk

Asset Allocation By Manager - MLPs

March 31, 2019

March 31, 2019 : \$68,282,862

December 31, 2018 : \$57,042,763



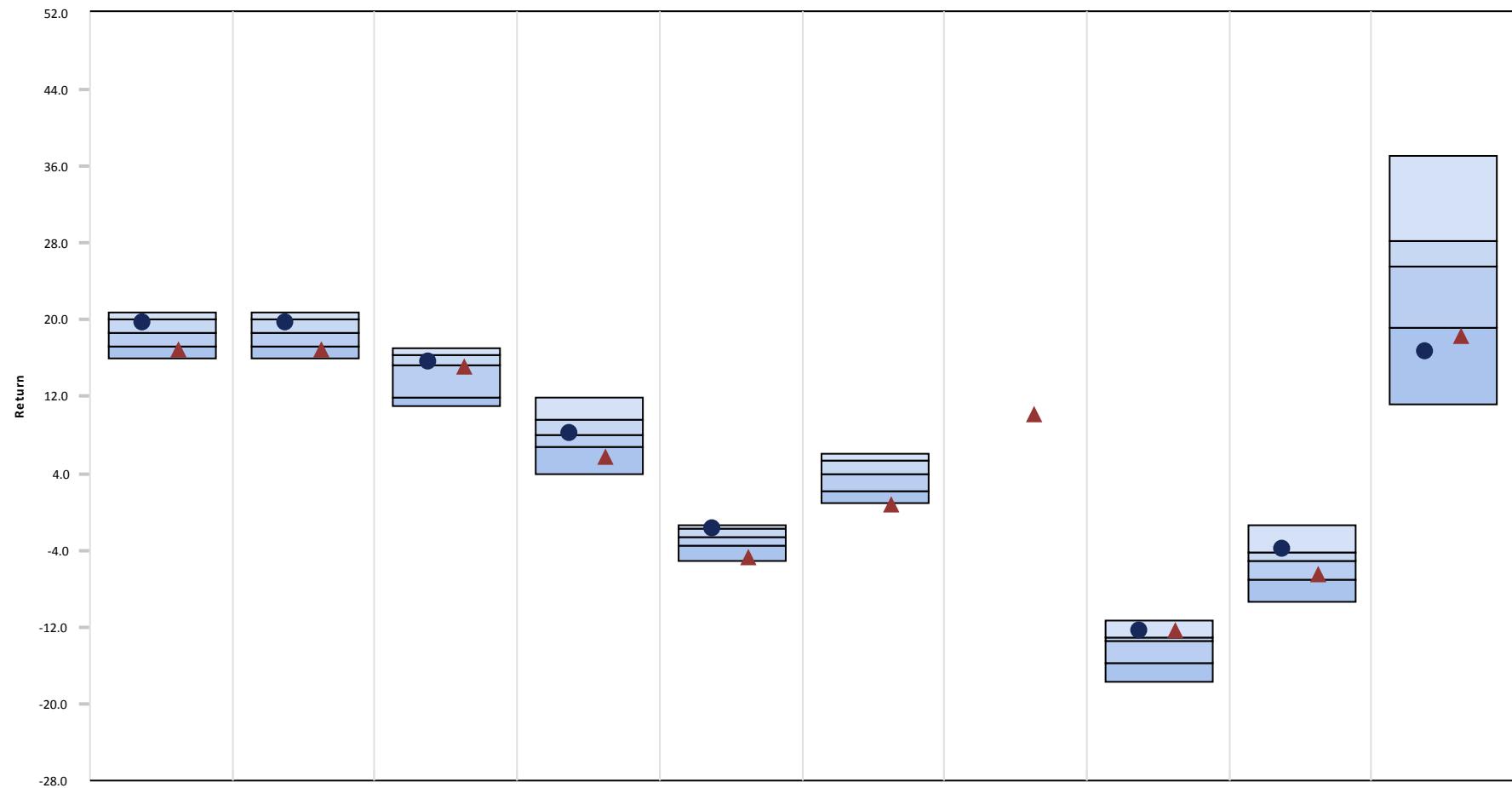
	Market Value (\$)	Allocation (%)
■ Harvest MLP	34,312,647	50.25
■ Tortoise Capital Advisors	33,970,215	49.75

	Market Value (\$)	Allocation (%)
■ Harvest MLP	28,380,741	49.75
■ Tortoise Capital Advisors	28,662,023	50.25

Employees' Retirement System of the City of Norfolk

MLPs vs. Master Limited Partnerships (SA+CF)

March 31, 2019



	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2018	2017	2016
● MLPs	19.70 (38)	19.70 (38)	15.71 (48)	8.14 (46)	-1.72 (23)	-	-	-12.45 (9)	-3.96 (20)	16.68 (85)
▲ Alerian MLP Index	16.82 (85)	16.82 (85)	15.11 (51)	5.69 (88)	-4.73 (88)	0.67 (99)	10.12 (-)	-12.42 (9)	-6.52 (63)	18.31 (79)
5th Percentile	20.73	20.73	17.02	11.84	-1.31	6.09	-	-11.38	-1.40	37.03
1st Quartile	20.02	20.02	16.33	9.63	-1.72	5.35	-	-13.06	-4.17	28.24
Median	18.72	18.72	15.24	7.98	-2.63	3.89	-	-13.48	-5.10	25.56
3rd Quartile	17.31	17.31	11.97	6.69	-3.53	2.17	-	-15.77	-7.14	19.24
95th Percentile	16.00	16.00	10.95	4.00	-5.16	0.90	-	-17.66	-9.41	11.22

gross of fees

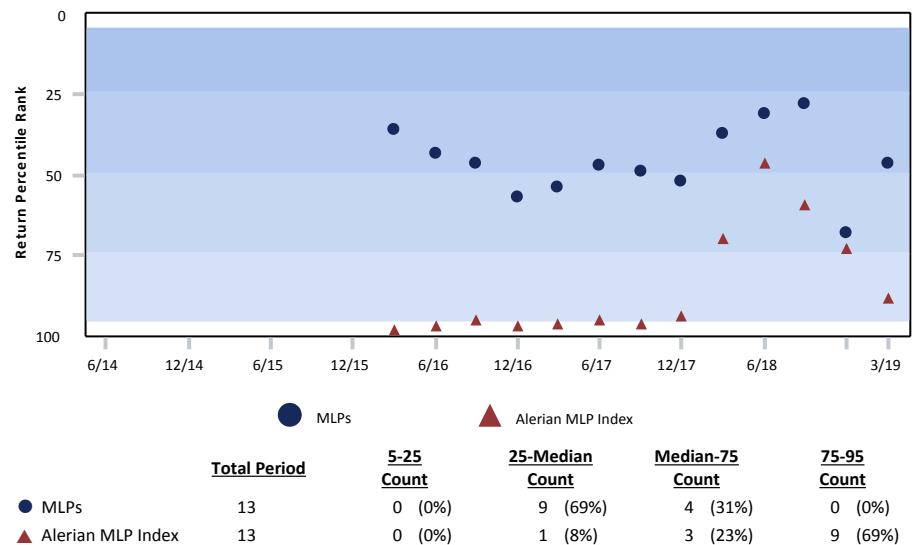


Employees' Retirement System of the City of Norfolk

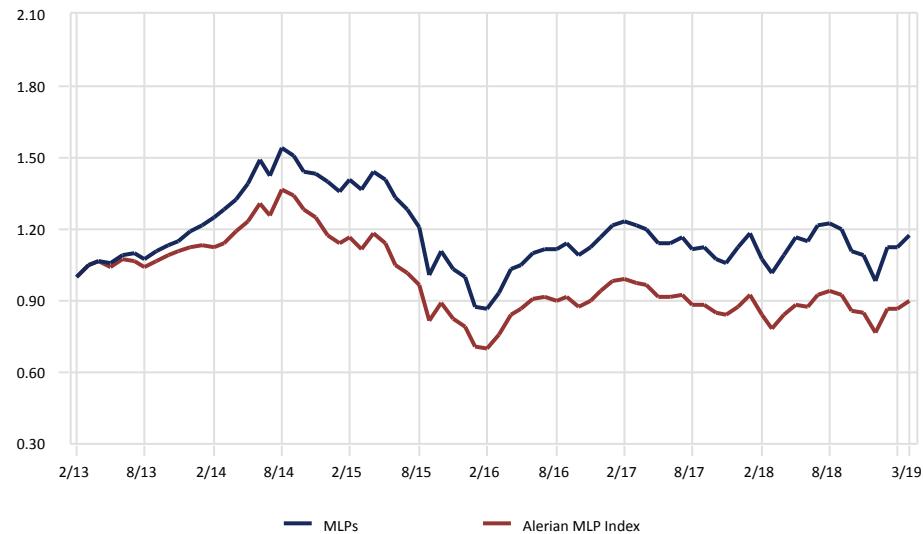
MLPs

March 31, 2019

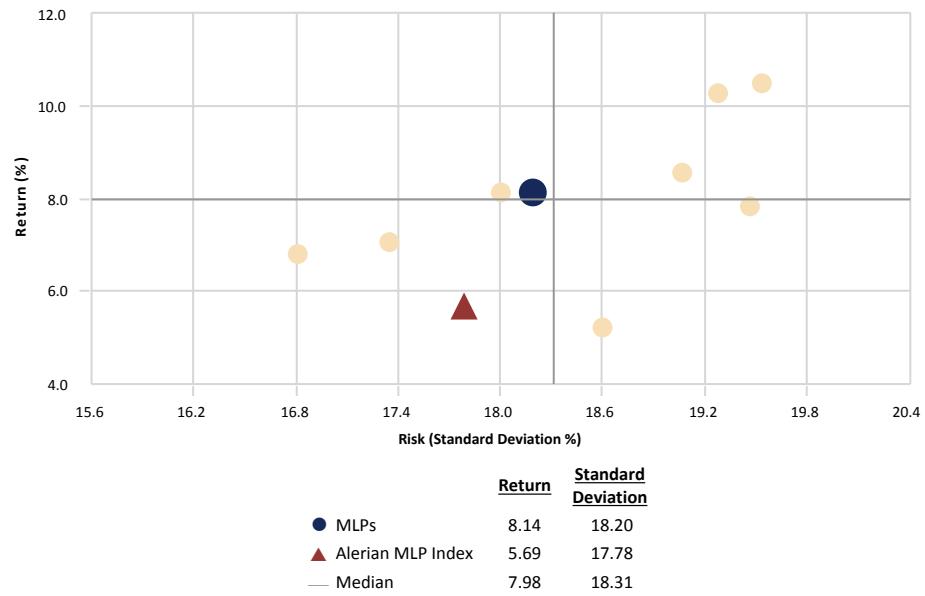
3 Year Rolling Return Rank



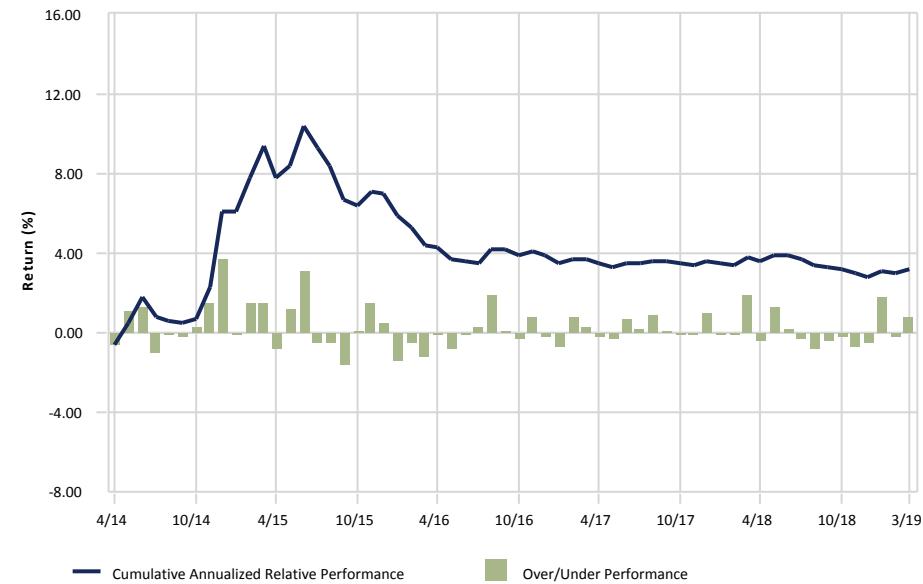
Growth of \$1 - Since Inception (03/01/13)



Risk vs. Return (04/01/16 - 03/31/19)



Relative Performance vs. Alerian MLP Index

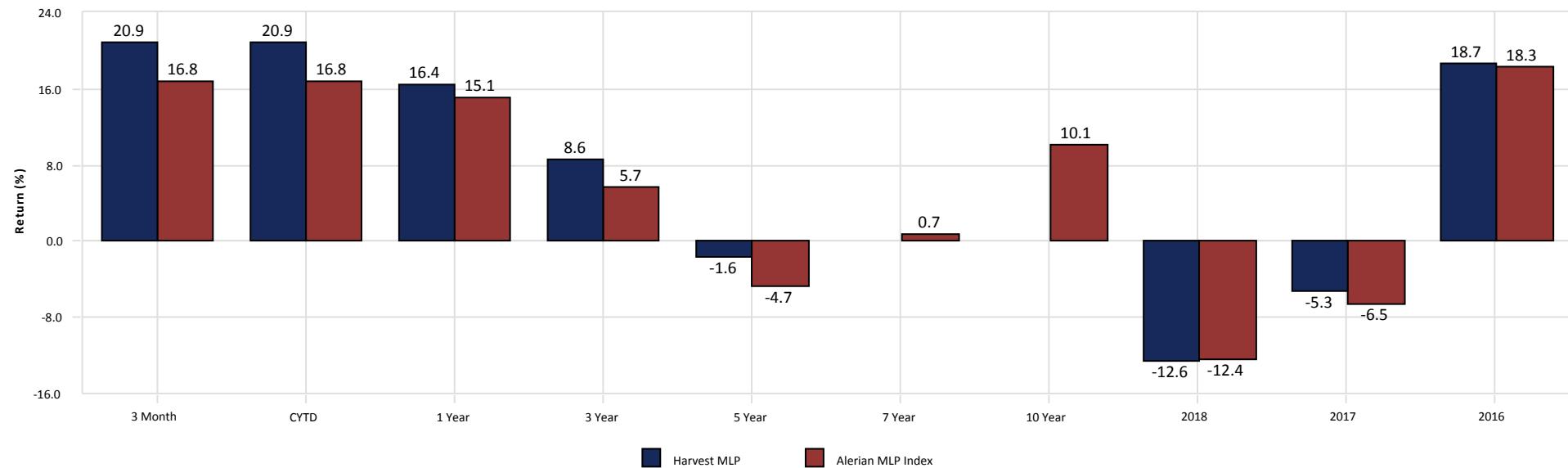


Employees' Retirement System of the City of Norfolk

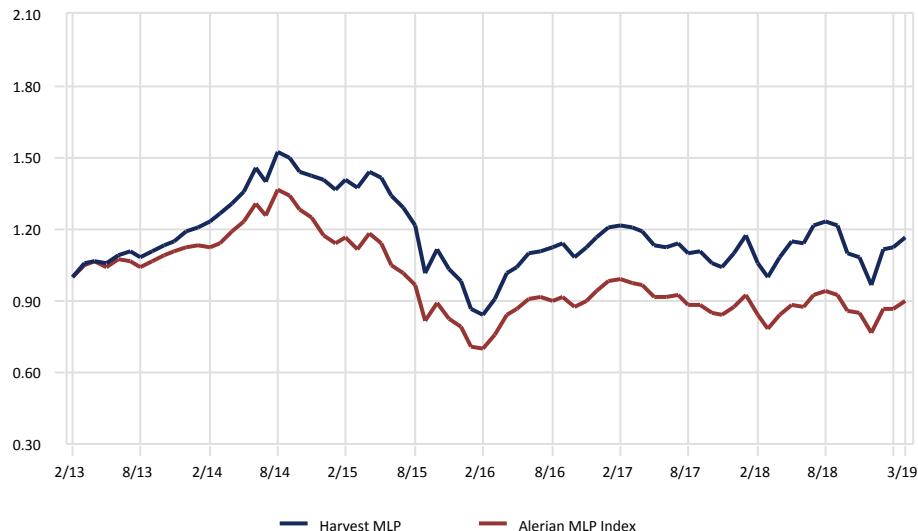
Harvest MLP

March 31, 2019

Comparative Performance



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



gross of fees

Relative Performance vs. Alerian MLP Index

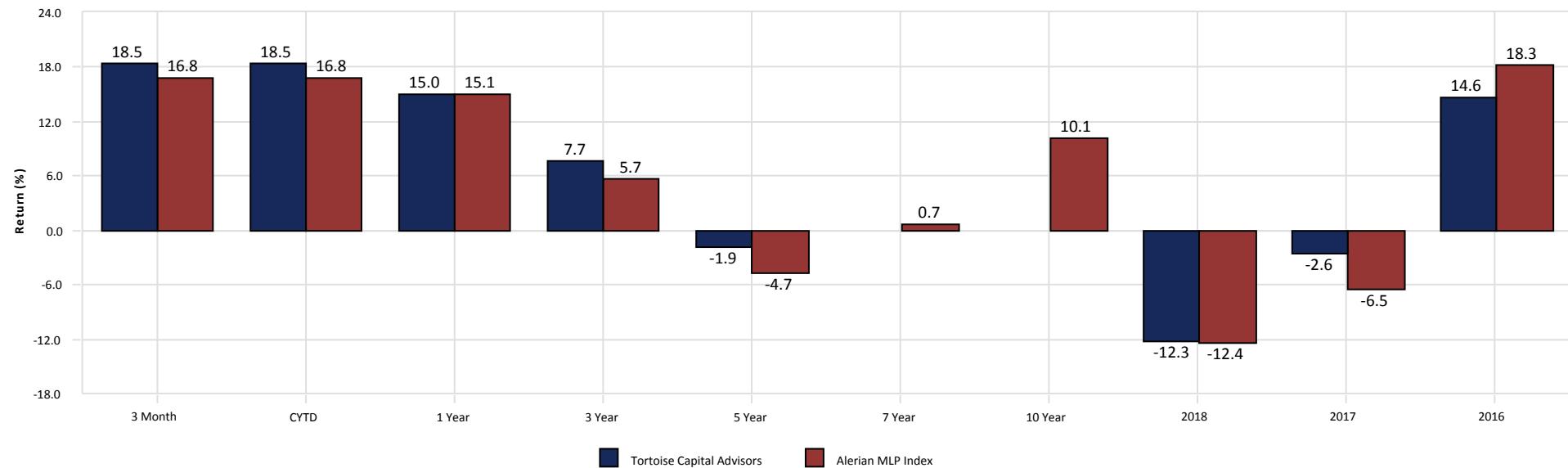


Employees' Retirement System of the City of Norfolk

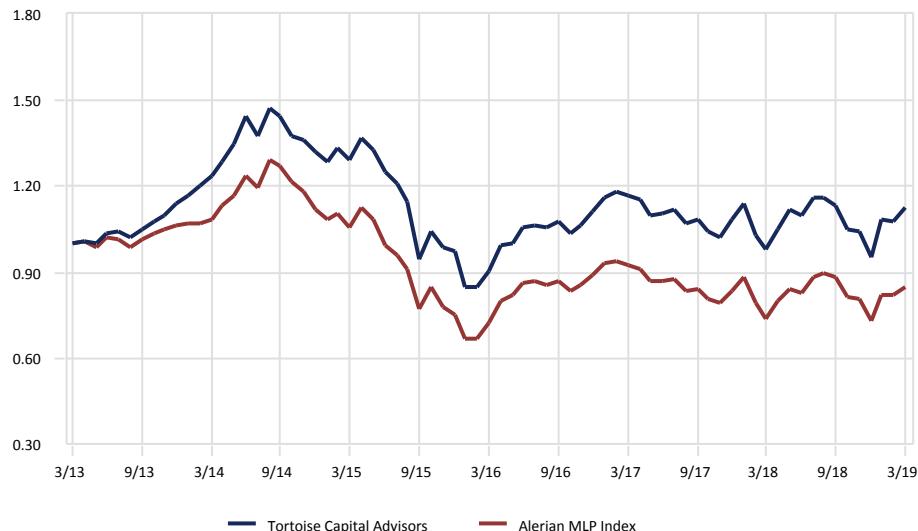
Tortoise Capital Advisors

March 31, 2019

Comparative Performance



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



gross of fees

Relative Performance vs. Alerian MLP Index



Appendix

Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance (gross of fees)

March 31, 2019

	Asset \$	Asset %	3 Month	CYTD	1 Year	2 Year	3 Year	5 Year	Since Inception	Inception Date
Total Fund	1,079,415,145	100.00	8.76 (41)	8.76 (41)	4.28 (46)	6.33 (73)	8.24 (56)	5.78 (63)	8.22 (64)	Oct-1990
<i>Total Fund Policy</i>			8.76	8.76	3.10	6.37	7.39	5.41	8.07	
Excess Return			0.00	0.00	1.18	-0.04	0.85	0.37	0.15	
<i>Total Fund Strategy Index</i>			8.97	8.97	4.28	5.79	7.50	5.26	8.08	
Excess Return			-0.21	-0.21	0.00	0.54	0.74	0.52	0.14	
Global Equity	604,392,483	55.99	12.43 (57)	12.43 (57)	2.30 (56)	8.71 (52)	11.05 (44)	7.17 (45)	9.12 (70)	Oct-1990
<i>Global Equity Policy</i>			12.29	12.29	1.89	8.26	10.52	6.75	9.23	
Excess Return			0.14	0.14	0.41	0.45	0.53	0.42	-0.11	
Fixed Income	321,105,176	29.75	2.94 (67)	2.94 (67)	4.59 (36)	3.21 (48)	2.65 (65)	3.10 (57)	6.15 (-)	Oct-1990
<i>Blmbg. Barc. U.S. Aggregate</i>			2.94	2.94	4.48	2.83	2.03	2.74	5.89	
Excess Return			0.00	0.00	0.11	0.38	0.62	0.36	0.26	
Real Estate	83,229,012	7.71	0.57 (76)	0.57 (76)	5.97 (88)	6.61 (93)	6.90 (86)	9.12 (77)	10.56 (68)	Apr-2011
<i>NCREIF Fund Index-ODCE (Net)</i>			1.20	1.20	6.55	6.83	7.01	9.18	10.22	
Excess Return			-0.63	-0.63	-0.58	-0.22	-0.11	-0.06	0.34	
MLPs	68,282,862	6.33	19.70 (38)	19.70 (38)	15.71 (48)	-1.80 (15)	8.14 (46)	-1.72 (23)	2.70 (35)	Mar-2013
<i>Alerian MLP Index</i>			16.82	16.82	15.11	-4.08	5.69	-4.73	-1.76	
Excess Return			2.88	2.88	0.60	2.28	2.45	3.01	4.46	
Cash	2,401,284	0.22	4.09	4.09	8.91	4.93	3.46	2.13	1.88	Jul-2003
<i>FTSE 3 Month T-Bill</i>			0.60	0.60	2.11	1.59	1.17	0.72	1.27	
Excess Return			3.49	3.49	6.80	3.34	2.29	1.41	0.61	

Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance (gross of fees)

March 31, 2019

	Asset \$	3 Month	CYTD	1 Year	2 Year	3 Year	5 Year	Since Inception	Inception Date
Global Equity									
SSgA MSCI ACWI IMI Index Fund	604,392,483	12.43 (57)	12.43 (57)	2.30 (56)	8.71 (52)	-	-	10.76 (45)	May-2016
<i>MSCI AC World IMI (Net)</i>		12.29	12.29	1.89	8.26	-	-	10.30	
Excess Return		0.14	0.14	0.41	0.45	-	-	0.46	
Fixed Income									
PIMCO Total Return	163,921,003	3.05 (65)	3.05 (65)	4.79 (40)	3.59 (15)	3.22 (10)	3.42 (19)	6.56 (7)	Jan-1991
<i>Blmbg. Barc. U.S. Aggregate</i>		2.94	2.94	4.48	2.83	2.03	2.74	5.76	
Excess Return		0.11	0.11	0.31	0.76	1.19	0.68	0.80	
SSgA Bond Market Index	157,184,173	2.94 (82)	2.94 (82)	4.49 (79)	2.85 (87)	2.04 (86)	2.76 (84)	3.70 (94)	Jan-2009
<i>Blmbg. Barc. U.S. Aggregate</i>		2.94	2.94	4.48	2.83	2.03	2.74	3.68	
Excess Return		0.00	0.00	0.01	0.02	0.01	0.02	0.02	
Real Assets									
JP Morgan Asset Management Strategic Property Fund	41,970,859	0.45 (100)	0.45 (100)	6.18 (98)	6.84 (90)	7.36 (87)	9.54 (86)	11.27 (68)	Apr-2011
<i>NCREIF Fund Index-ODCE (Net)</i>		1.20	1.20	6.55	6.83	7.01	9.18	10.22	
Excess Return		-0.75	-0.75	-0.37	0.01	0.35	0.36	1.05	
UBS Trumbull Property Fund	41,258,153	0.69 (100)	0.69 (100)	5.75 (100)	6.38 (100)	6.32 (100)	8.54 (100)	8.96 (-)	Dec-2011
<i>NCREIF Fund Index-ODCE (Net)</i>		1.20	1.20	6.55	6.83	7.01	9.18	9.83	
Excess Return		-0.51	-0.51	-0.80	-0.45	-0.69	-0.64	-0.87	
MLPs									
Harvest MLP	34,312,647	20.90 (1)	20.90 (1)	16.44 (23)	-1.87 (16)	8.57 (37)	-1.59 (10)	2.55 (38)	Mar-2013
<i>Alerian MLP Index</i>		16.82	16.82	15.11	-4.08	5.69	-4.73	-1.76	
Excess Return		4.08	4.08	1.33	2.21	2.88	3.14	4.31	
Tortoise Capital Advisors	33,970,215	18.52 (57)	18.52 (57)	14.99 (52)	-1.74 (14)	7.71 (56)	-1.87 (38)	2.01 (16)	Apr-2013
<i>Alerian MLP Index</i>		16.82	16.82	15.11	-4.08	5.69	-4.73	-2.64	
Excess Return		1.70	1.70	-0.12	2.34	2.02	2.86	4.65	

Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance - (net of fees)

March 31, 2019

	Asset \$	Asset %	3 Month	CYTD	FYTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
Total Fund Composite	1,079,415,145	100.00	8.71	8.71	2.59	4.08	8.05	5.62	8.02	Oct -1990
<i>Total Fund Policy</i>			8.76	8.76	2.70	3.10	7.39	5.41	8.07	
Excess Return			-0.05	-0.05	-0.11	0.98	0.66	0.21	-0.05	
<i>Total Fund Strategy Index</i>			8.97	8.97	2.88	4.28	7.50	5.26	8.08	
Excess Return			-0.26	-0.26	-0.29	-0.20	0.55	0.36	-0.06	
Global Equity	604,392,483	55.99	12.42	12.42	1.40	2.25	11.01	7.14	8.94	Oct -1990
<i>Global Equity Policy</i>			12.29	12.29	1.15	1.89	10.52	6.75	9.23	
Excess Return			0.13	0.13	0.25	0.36	0.49	0.39	-0.29	
Fixed Income	321,105,176	29.75	2.90	2.90	4.45	4.40	2.52	2.98	5.96	Oct -1990
<i>Blmbg. Barc. U.S. Aggregate</i>			2.94	2.94	4.65	4.48	2.03	2.74	5.89	
Excess Return			-0.04	-0.04	-0.20	-0.08	0.49	0.24	0.07	
Real Estate	83,229,012	7.71	0.34	0.34	3.43	5.15	5.94	8.09	9.54	Apr -2011
<i>NCREIF Fund Index-ODCE (VW) (Net)</i>			1.20	1.20	4.66	6.55	7.01	9.18	10.22	
Excess Return			-0.86	-0.86	-1.23	-1.40	-1.07	-1.09	-0.68	
MLPs	68,282,862	6.33	19.50	19.50	1.87	14.84	7.35	-2.40	2.01	Mar -2013
<i>Alerian MLP Index</i>			16.82	16.82	2.96	15.11	5.69	-4.73	-1.76	
Excess Return			2.68	2.68	-1.09	-0.27	1.66	2.33	3.77	
Cash	2,405,611	0.22	0.56	0.56	2.39	2.98	1.55	0.99	1.52	Jul -2003
<i>FTSE 3 Month T-Bill</i>			0.60	0.60	1.67	2.11	1.17	0.72	1.27	
Excess Return			-0.04	-0.04	0.72	0.87	0.38	0.27	0.25	



Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance - (net of fees)

March 31, 2019

	Asset \$	Asset %	3 Month	CYTD	FYTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
Global Equity										
SSgA MSCI ACWI IMI Index Fund	604,392,483	55.99	12.42	12.42	1.40	2.25	-	-	10.73	May -2016
<i>MSCI AC World IMI (Net)</i>			12.29	12.29	1.15	1.89	-	-	10.30	
Excess Return			0.13	0.13	0.25	0.36	-	-	0.43	
Fixed Income										
PIMCO Total Return	163,921,003	15.19	2.97	2.97	4.39	4.45	3.00	3.21	6.31	Jan -1991
<i>Blmbg. Barc. U.S. Aggregate</i>			2.94	2.94	4.65	4.48	2.03	2.74	5.76	
Excess Return			0.03	0.03	-0.26	-0.03	0.97	0.47	0.55	
SSgA Bond Market Index	157,184,173	14.56	2.94	2.94	4.65	4.47	2.03	2.75	3.69	Jan -2009
<i>Blmbg. Barc. U.S. Aggregate</i>			2.94	2.94	4.65	4.48	2.03	2.74	3.68	
Excess Return			0.00	0.00	0.00	-0.01	0.00	0.01	0.01	
Real Estate										
JP Morgan Asset Management Strategic Property Fund	41,970,859	3.89	0.21	0.21	3.64	5.41	6.40	8.53	10.29	Apr -2011
<i>NCREIF Fund Index-ODCE (VW) (Net)</i>			1.20	1.20	4.66	6.55	7.01	9.18	10.22	
Excess Return			-0.99	-0.99	-1.02	-1.14	-0.61	-0.65	0.07	
UBS Trumbull Property Fund	41,258,153	3.82	0.47	0.47	3.22	4.87	5.36	7.49	7.96	Jan -2012
<i>NCREIF Fund Index-ODCE (VW) (Net)</i>			1.20	1.20	4.66	6.55	7.01	9.18	9.78	
Excess Return			-0.73	-0.73	-1.44	-1.68	-1.65	-1.69	-1.82	
MLPs										
Harvest MLP	34,312,647	3.18	20.69	20.69	1.62	15.54	7.77	-2.27	1.86	Mar -2013
<i>Alerian MLP Index</i>			16.82	16.82	2.96	15.11	5.69	-4.73	-1.76	
Excess Return			3.87	3.87	-1.34	0.43	2.08	2.46	3.62	
Tortoise Capital Advisors	33,970,215	3.15	18.32	18.32	2.13	14.16	6.92	-2.54	1.32	Apr -2013
<i>Alerian MLP Index</i>			16.82	16.82	2.96	15.11	5.69	-4.73	-2.64	
Excess Return			1.50	1.50	-0.83	-0.95	1.23	2.19	3.96	



Employees' Retirement System of the City of Norfolk

Fee Schedule

March 31, 2019

	Fee Schedule	Market Value As of 03/31/2019 (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Fund		1,079,415,145	2,209,228	0.20
Global Equity		604,392,483	241,757	0.04
SSgA MSCI ACWI IMI Index Fund	0.04 % of Assets	604,392,483	241,757	0.04
Fixed Income		321,105,176	703,513	0.22
PIMCO Total Return	0.41 % of Assets	163,921,003	672,076	0.41
SSgA Bond Market Index	0.02 % of Assets	157,184,173	31,437	0.02
Real Assets		151,511,874	1,263,958	0.83
Real Estate		83,229,012	751,837	0.90
JP Morgan Strategic Property Fund	1.00 % of Assets	41,970,859	419,709	1.00
UBS Trumbull Property Fund	0.81 % of Assets	41,258,153	332,128	0.81
MLPs		68,282,862	512,121	0.75
Harvest MLP	0.75 % of Assets	34,312,647	257,345	0.75
Tortoise Capital Advisors	0.75 % of Assets	33,970,215	254,777	0.75
Cash		2,405,611	-	-

Pimco has a minimum base fee of 15 bps. The maximum fee includes the base fee of 15 bps and a performance fee of 26 bps, with a total cap of 0.41%. UBS Trumbull has waived the TPF Variable fee (0-25 bps) through March 2020.



Employees' Retirement System of the City of Norfolk

Financial Reconciliation

1 Quarter Ending March 31, 2019

	Market Value As of 01/01/2019	Net Transfers	Contributions	Distributions	Mgmt Fees	Income	Apprec./ Deprec.	Market Value As of 03/31/2019
Total Fund Composite	1,013,822,346	-	-	-22,300,000	-489,406	2,056,329	86,325,876	1,079,415,145
Global Equity	539,745,314	-2,400,000	-	-	-60,441	-	67,107,610	604,392,483
SSgA MSCI ACWI IMI Index	539,745,314	-2,400,000	-	-	-60,441	-	67,107,610	604,392,483
Fixed Income	331,649,951	-19,880,834	-	-	-126,694	788,286	8,674,467	321,105,176
PIMCO Total Return	178,953,845	-19,880,834	-	-	-119,166	788,286	4,178,872	163,921,003
SSgA Bond Market Index	152,696,106	-	-	-	-7,528	-	4,495,595	157,184,173
Real Estate	82,948,272	-	-	-	-190,196	-	470,936	83,229,012
JP Morgan Strategic Property	41,884,538	-	-	-	-103,009	-	189,329	41,970,859
UBS Trumbull Property	41,063,734	-	-	-	-87,187	-	281,607	41,258,153
MLPs	57,042,763	112,076	-	-	-112,076	1,166,392	10,073,707	68,282,862
Harvest MLP	28,380,741	58,337	-	-	-58,337	580,766	5,351,140	34,312,647
Tortoise Capital Advisors	28,662,023	53,739	-	-	-53,739	585,626	4,722,567	33,970,215
Cash	2,436,046	22,168,758	-	-22,300,000	-	101,651	-843	2,405,611

Employees' Retirement System of the City of Norfolk

Financial Reconciliation

Year To Date Ending March 31, 2019

	Market Value As of 01/01/2019	Net Transfers	Contributions	Distributions	Mgmt Fees	Income	Apprec./ Deprec.	Market Value As of 03/31/2019
Total Fund Composite	1,013,822,346	-	-	-22,300,000	-489,406	2,056,329	86,325,876	1,079,415,145
Global Equity	539,745,314	-2,400,000	-	-	-60,441	-	67,107,610	604,392,483
SSgA MSCI ACWI IMI Index	539,745,314	-2,400,000	-	-	-60,441	-	67,107,610	604,392,483
Fixed Income	331,649,951	-19,880,834	-	-	-126,694	788,286	8,674,467	321,105,176
PIMCO Total Return	178,953,845	-19,880,834	-	-	-119,166	788,286	4,178,872	163,921,003
SSgA Bond Market Index	152,696,106	-	-	-	-7,528	-	4,495,595	157,184,173
Real Estate	82,948,272	-	-	-	-190,196	-	470,936	83,229,012
JP Morgan Strategic Property	41,884,538	-	-	-	-103,009	-	189,329	41,970,859
UBS Trumbull Property	41,063,734	-	-	-	-87,187	-	281,607	41,258,153
MLPs	57,042,763	112,076	-	-	-112,076	1,166,392	10,073,707	68,282,862
Harvest MLP	28,380,741	58,337	-	-	-58,337	580,766	5,351,140	34,312,647
Tortoise Capital Advisors	28,662,023	53,739	-	-	-53,739	585,626	4,722,567	33,970,215
Cash	2,436,046	22,168,758	-	-22,300,000	-	101,651	-843	2,405,611



Employees' Retirement System of the City of Norfolk

Historical Hybrid Composition

March 31, 2019

	<u>(%)</u>		<u>(%)</u>
Total Fund Policy : May-2016		Total Fund Strategy Index : Jul-2016	
MSCI AC World IMI (Net)	62.50	MSCI AC World IMI (Net)	55.00
Bloomberg Barc. U.S. Aggregate	37.50	Bloomberg Barc. U.S. Aggregate	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.



Employees' Retirement System of the City of Norfolk

Historical Hybrid Composition

March 31, 2019

Global Equity Policy

	(%)
May-2016	
MSCI AC World IMI (Net)	100.00
Sep-2009	
Russell 3000 Index	60.00
MSCI AC World ex USA (Net)	40.00
Jun-2009	
Russell 3000 Index	70.00
MSCI AC World ex USA (Net)	30.00
Jun-2006	
Russell 3000 Index	70.00
MSCI EAFE Index	30.00
Oct-1990	
S&P 500	100.00



Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- 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.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- 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.
Distributed to Paid In (DPI)	- 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.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- 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.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- 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.
Public Market Equivalent (PME)	- 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.
R-Squared	- 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.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- 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.
Standard Deviation	- 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.
Total Value to Paid In (TVPI)	- 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
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- 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.
Up Market Capture	- 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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