

Investment Performance Review  
Period Ending March 31, 2020

# Employees' Retirement System of the City of Norfolk

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## **Executive Summary**

HIGHLIGHTS

Winners for the recent quarter

- Blmb. Barclays US Govt +8.1%
- Blmb. Barclays US Agg +3.1%
- Blmb. Barclays MBS +2.8%

Losers for the recent quarter

- Russell 2000 -30.6%
- Russell MidCap -27.1%
- MSCI Emerging Markets -23.6%

Areas of strength for the recent quarter

- US Government Bonds
- Mortgage Backed Securities

Winners for the trailing year

- Blmb. Barclays US Govt +13.1%
- Blmb. Barclays US Agg +8.9%
- Blmb. Barclays MBS +7.0%

Losers for the trailing year

- Russell 2000 -24.0%
- Russell MidCap -18.3%
- MSCI Emerging Markets -17.7%

Areas of strength for the trailing year

- US Government Bonds

COMMENTARY

- Allocation to equities ended the quarter at 52%, inside the target range of 45%-65%. Market value for the **Total Fund** was \$949 million by quarter-end versus \$ 1.140 billion in the previous quarter. The Total Fund posted an -15.1% return for the trailing quarter and -8.1% for the trailing 12 months. The Total Fund underperformed the Policy Index by 176 bps for the quarter and underperformed its Policy Index by 354 bps over the trailing year.
- The **Total Fund** ranked in the 78<sup>th</sup> percentile in the peer universe for the quarter and 93<sup>rd</sup> percentile over the last 12 months.
- The **Global Equity Composite** returned -22.3% for the quarter, overperforming the index by 13 bps and ranking in the 62<sup>nd</sup> percentile versus peers. Over the trailing 12 months, the portfolio returned -12.3%, outperforming the benchmark by 43 bps and ranking in the 61<sup>st</sup> 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 21<sup>st</sup> percentile versus universe peers. Over the trailing 12 months, the composite returned 8.3% and underperformed the Index by 59 bps and ranked in the 32<sup>nd</sup> percentile of the peer universe.
- The **Real Estate Composite** returned 1.0% for the quarter and 1.6% for the trailing 12 months.
- The **MLP Composite** returned -49% for the quarter, outperforming the index by 816 bps and ranking in the 37<sup>th</sup> percentile versus peers. For the trailing year, the composite has returned -52.7% and has outperformed the benchmark by 829 bps, ranking in the 38<sup>th</sup> percentile versus peers. Since inception, the MLP Composite is ahead of its Alerian MLP Index benchmark by 582 bps and has returned -7.9%.



REBALANCING ACTIVITY FOR THE QUARTER

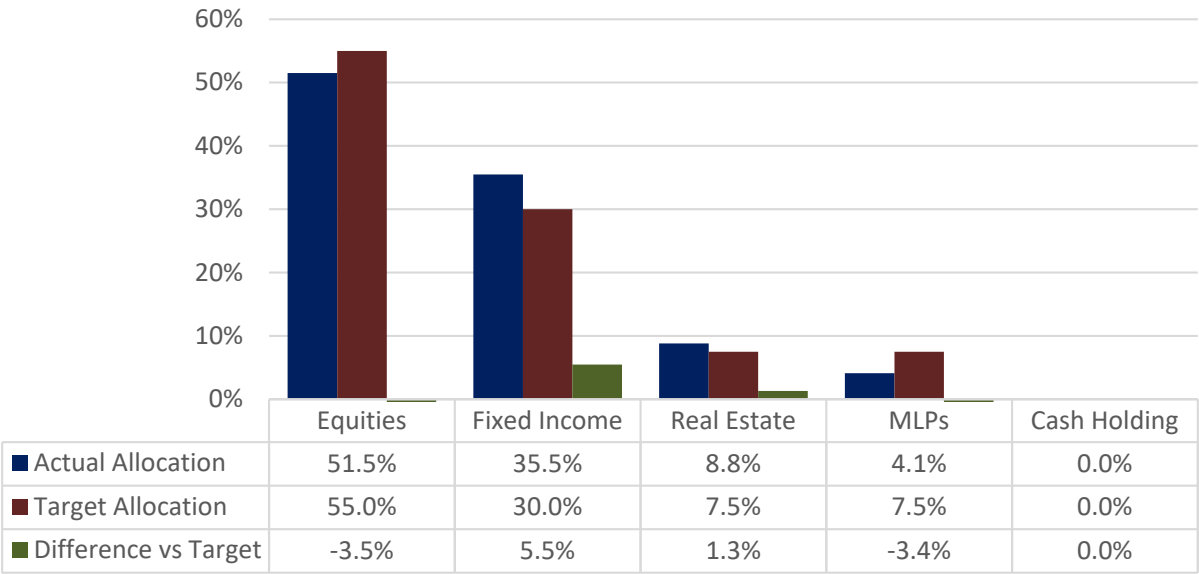
Raise cash for benefit payments:

State Street ACWI IMI  
To cash \$7,300,000  
January 2020

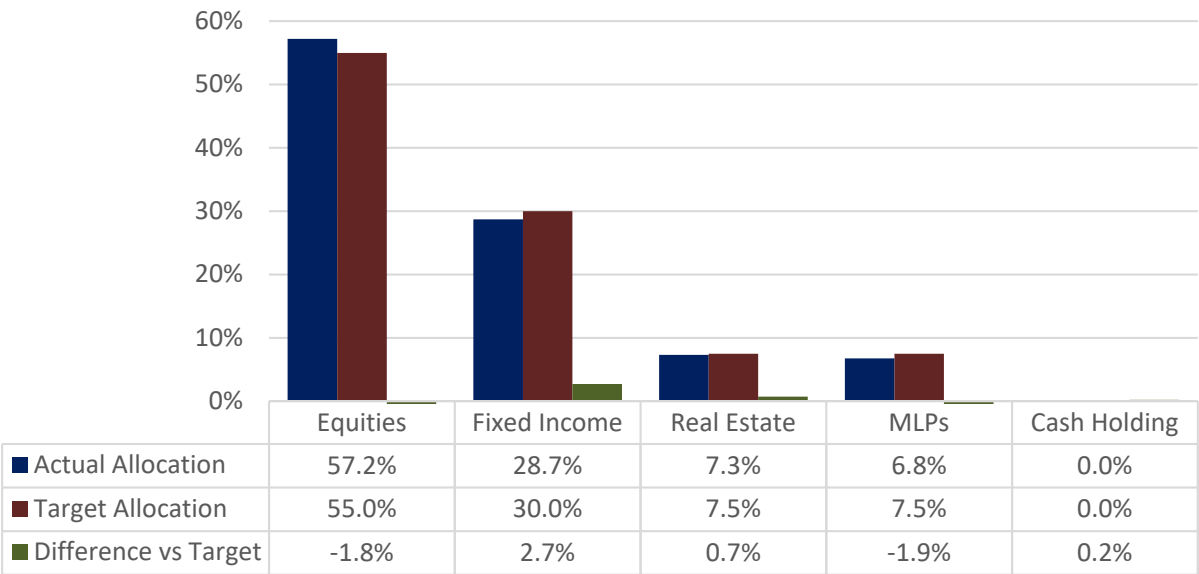
State Street ACWI IMI  
To cash \$7,000,000  
February 2020

State Street ACWI IMI  
To cash \$6,800,000  
March 2020

Asset Allocation – March 31, 2020



Asset Allocation – December 31, 2019



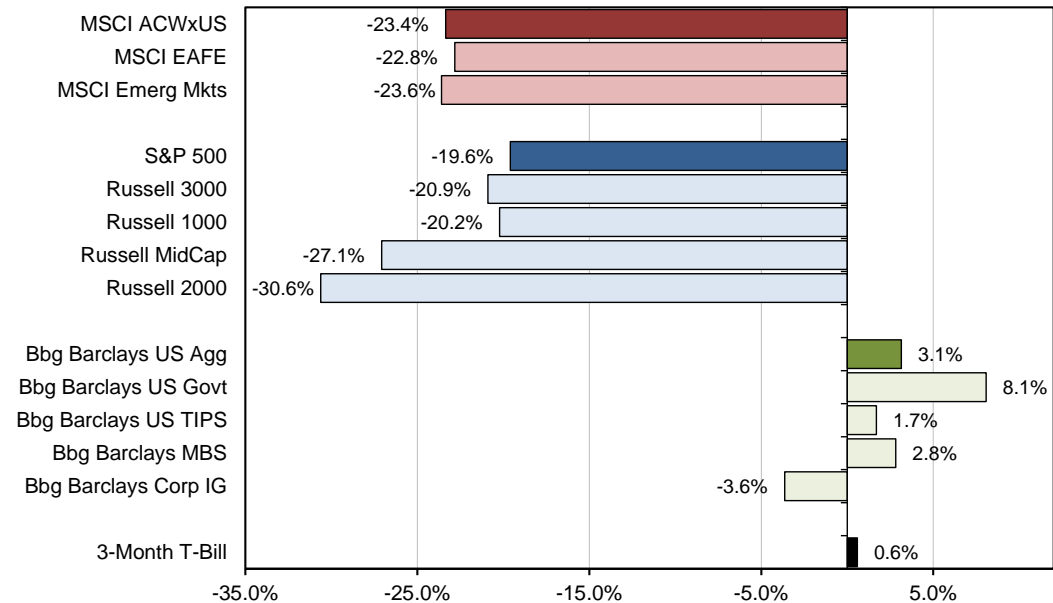
## **1st Quarter 2020 Market Environment**



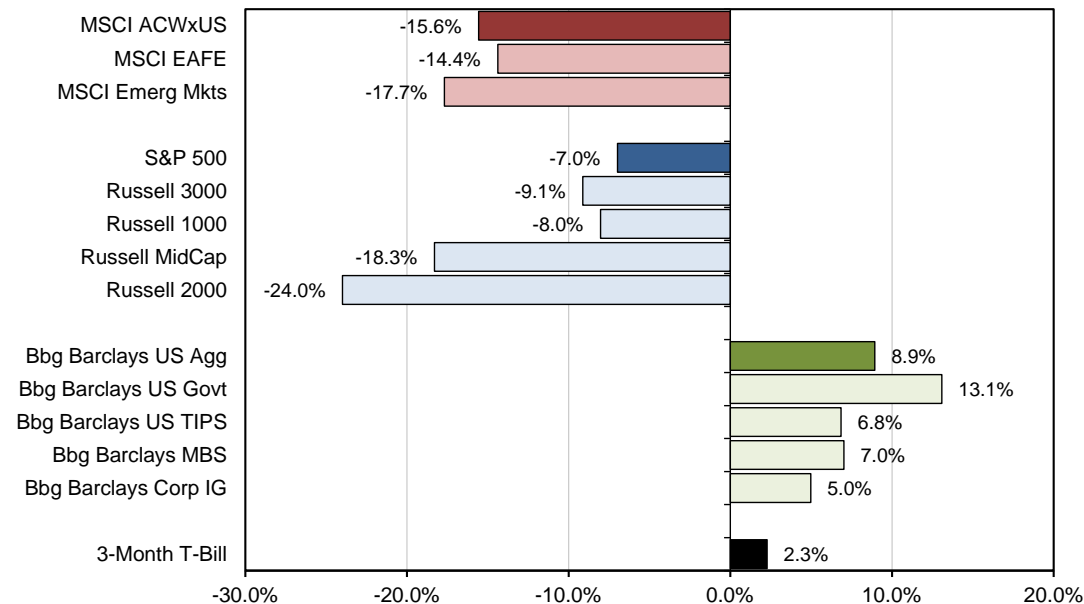
- Global risk asset class returns declined significantly during the 1st quarter of 2020 due primarily to the COVID-19 (Coronavirus) pandemic. Both domestic and international equities experienced significant drawdowns as investors moved into perceived haven assets such as US Treasury bonds. Equity market volatility, as measured by the VIX Index, reached its highest level since the Financial Crisis in 2008. Through the quarter, global economic growth turned negative as countries responded to the pandemic by shuttering their economies. In the US, as a result of the decision to institute social distancing and shelter-in-place orders, labor markets suffered significant losses as businesses closed or furloughed employees. Rising economic concerns resulted in swift action by the Federal Reserve (Fed) which cut its overnight lending rate to between 0% to 0.25%. Importantly, the US government responded with a stimulus package consisting of forgivable loans and other short-term benefits, that is designed to act as a bridge for the economy until businesses can reopen. Within domestic equity markets, large cap stocks outperformed small cap equities during the quarter with the S&P 500 Index returning -19.6% versus a -30.6% return for the small cap Russell 2000 Index. US equity returns over the 1-year period turned negative as a result of the drawdown with large and mid-cap stocks returning -7.0% and -18.3% respectively, while small cap stocks fell -24.0%.
- International markets also posted negative returns for the 1st quarter. Similar to US markets, international returns were impacted by the Coronavirus and deteriorating economic fundamentals. International returns also faced headwinds from a strengthening US dollar (USD) which appreciated against most major currencies during the period. Developed markets outpaced emerging markets during the period with the MSCI EAFE Index falling -22.8% versus a -23.6% decline for the MSCI Emerging Markets Index. Both developing and emerging markets posted losses over the 1-year period, returning -14.4% and -17.7% respectively.
- As expected during periods of rising volatility, high quality fixed income outperformed equities during the 1st quarter as investors looked for relative safety amid the equity market drawdown. The broad market Bloomberg Barclays Aggregate Index gained 3.1% as interest rates fell following rising concerns related to the Coronavirus and central bank stimulus from the Fed and other global central banks. US Government bonds were the best performing securities for the 1st quarter returning 8.1%. Investment grade corporate bonds suffered negative returns on concerns about economic growth prospects in the future. The bond market has meaningfully outperformed the equity market over the trailing 1-year period with the Bloomberg Barclays Aggregate posting a solid 8.9% return.

Source: Investment Metrics

### Quarter Performance

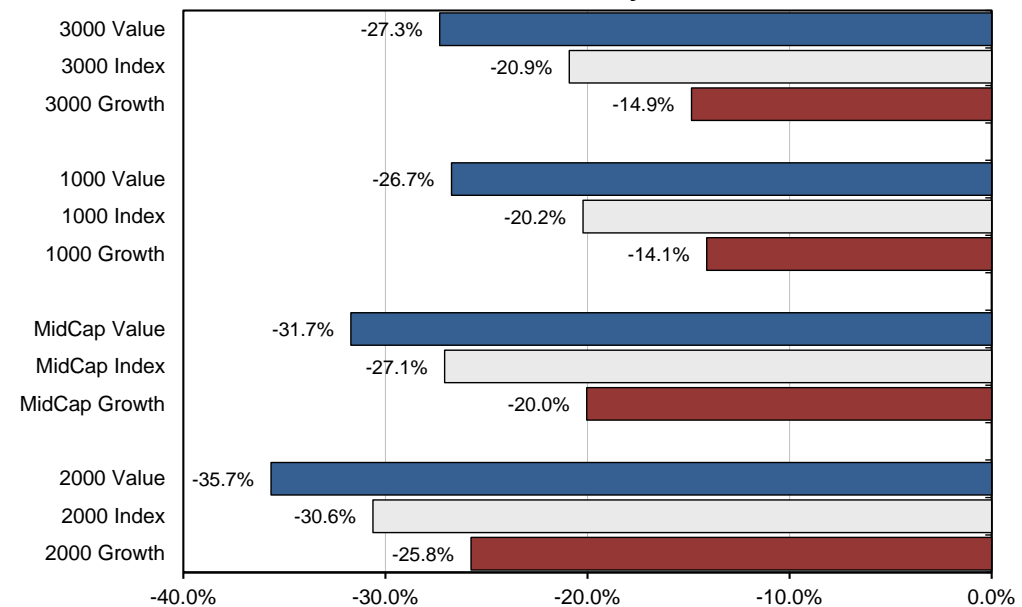


### 1-Year Performance

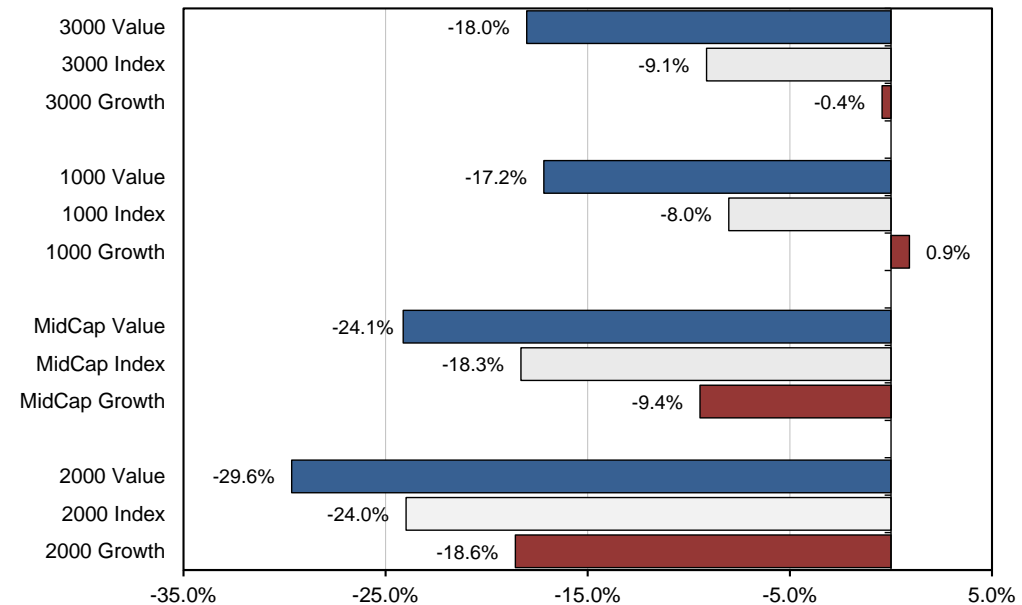


- US equity returns were significantly lower during the 1st quarter with varied results across both style and market capitalization. Concerns related to the Coronavirus, in combination with signs that the US economy could be entering into recession weighed on equities. Labor markets came under significant pressure during the quarter as companies began laying off employees in response to the government's decision to mandate a shelter-in-place approach to dealing with the pandemic. In response to the deteriorating economic conditions, the Fed took unprecedented action on March 15th and lowered the Fed Fund's rate to between 0% to 0.25%. The Fed also announced that it would be purchasing up to \$500 billion in US Treasury bonds and \$200 billion in mortgage-backed bonds. Subsequently, the Fed announced on March 23rd that it would begin purchasing unlimited amounts of US Treasury and mortgage-backed bonds. This announcement was well received by investors and marked the recent low in equity markets.
- During the quarter, higher market capitalization stocks were down less than lower market capitalization stocks across the style spectrum. The large cap Russell 1000 Index lost -20.2% during the period versus a -30.6% return for the small cap Russell 2000 Index. Investors preferred large cap stocks relative to small cap stocks as they are typically viewed as less risky during periods of rising market volatility given the size of their balance sheets and ability to generate cash flow. When viewed over the most recent 1-year period, large cap stocks significantly outpaced small cap stocks with the Russell 1000 posting a -8.0% loss compared to the -24.0% drawdown in the Russell 2000.
- In general, value stocks underperformed growth stocks across market capitalizations during the 1st quarter despite value stocks trading near all-time lows based on valuation metrics. Importantly, value indexes contain large exposures to such sectors as energy, consumer durables and financials, all of which came under pressure during the quarter. Large cap growth stocks held up better than large cap value stocks due to larger weightings in the technology and industrials sectors as well as a smaller exposure to the underperforming energy sector. The Russell 1000 Growth Index was the least negative style index for the period, returning -14.1%. Results over the 1-year period were mixed with value stocks underperforming across market capitalizations while large cap stocks outpaced both mid and small cap stocks due in large part to the exposure to technology stocks and relative underweights to both energy and financial stocks.

### Quarter Performance - Russell Style Series



### 1-Year Performance - Russell Style Series

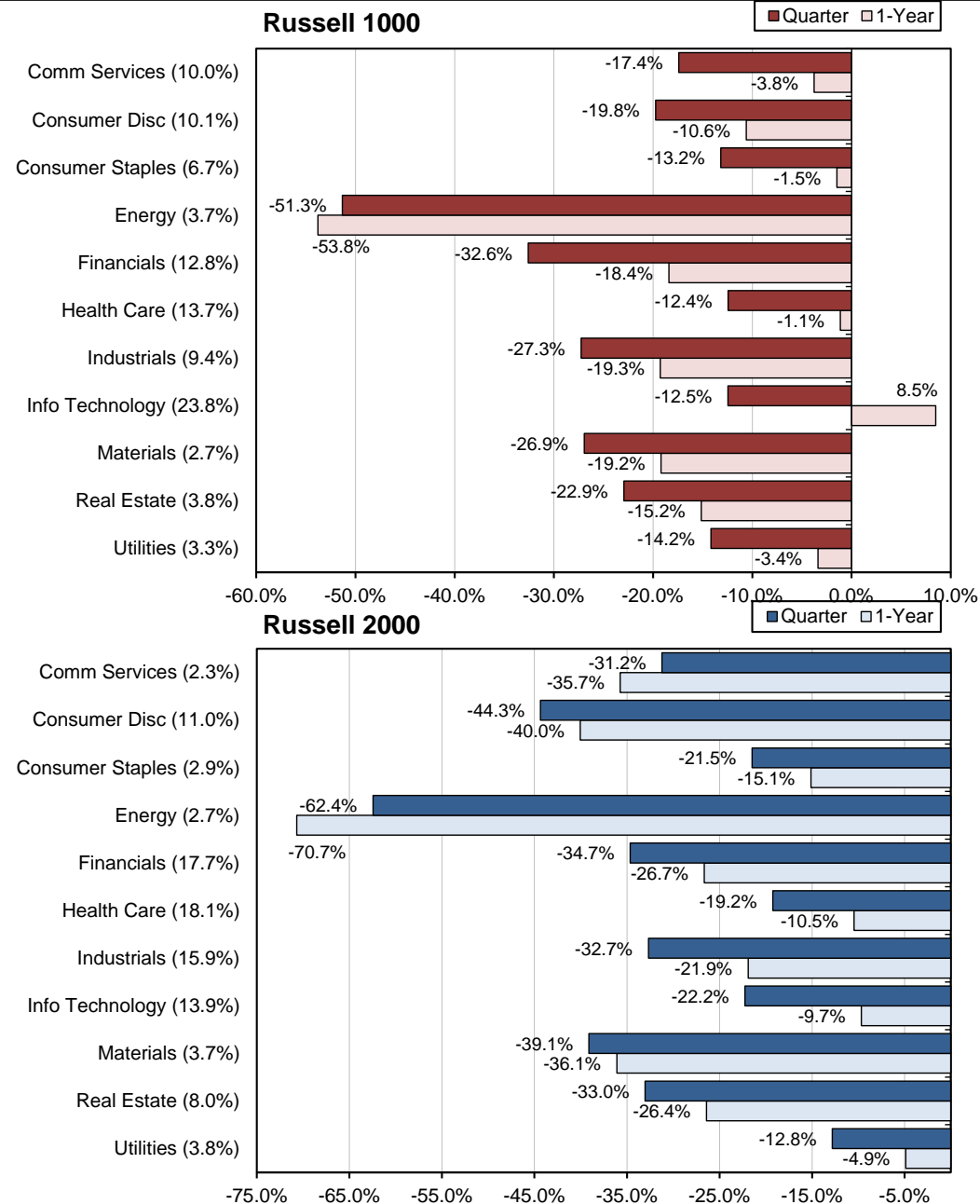


Source: Investment Metrics





- Generally, sector performance was negative across large cap sectors for the 1st quarter. The outlier during the period was the energy sector which saw significant losses due primarily to the drop in oil prices as a result of demand destruction related to the Coronavirus and the inability of OPEC to agree on production cuts. Health care and technology were the two of the least negative during the quarter returning -12.4% and -12.5%. Energy stocks fell a staggering -51.3% during the quarter as crude oil prices fell as global economic growth receded during the period. Financial stocks also lagged, declining -32.6%, as interest rates fell and a flat yield curve, in combination with fewer borrowers, increased pressure on financial stocks. Returns over the 1-year period were also generally negative with only the technology sector showing a positive return (+8.5%). Similar to the quarter's results, energy stocks underperformed by a considerable margin relative to other sectors. Industrials, materials, and financials also lagged for the year returning -19.3%, -19.2% and -18.4% respectively.
- Quarterly results for small capitalization sectors were generally worse than their large capitalization counterparts with only utilities outperforming during the period. All eleven economic sectors saw substantial losses during the period with only three of eleven sectors outpacing the Russell 2000 Index return for the quarter. Similar to large capitalization sectors, defensive sectors were less negative as investors gravitated toward their relative safety and higher yields. Utilities was the least negative sector, returning -12.8%, while healthcare and consumer staples returned -19.2% and -21.5%, respectively. The cyclically oriented energy sector was the largest detractor for the period, posting a disconcerting loss of -62.4% as global energy prices collapsed. Consumer discretionary stocks also fell substantially during the quarter returning -44.3% as consumer activity fell sharply following the decision to impose shelter-in-place orders. Financial stocks, which were down -34.7% for the quarter, were negatively impacted by the Fed's decision to lower interest rates and the significant decline in lending activity. Similar to quarterly performance, the trailing 1-year period returns were broadly negative. Utilities, technology and health care sectors were the down the least, returning -4.9%, -9.7% and -10.5%, respectively.



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, 2020

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Microsoft Corp	5.09%	0.3%	35.5%	Information Technology
Apple Inc	4.47%	-13.2%	35.6%	Information Technology
Amazon.com Inc	3.48%	5.5%	9.5%	Consumer Discretionary
Facebook Inc A	1.70%	-18.7%	0.1%	Communication Services
Berkshire Hathaway Inc B	1.53%	-19.3%	-9.0%	Financials
Alphabet Inc Class C	1.49%	-13.0%	-0.9%	Communication Services
Johnson & Johnson	1.49%	-9.5%	-3.6%	Health Care
Alphabet Inc A	1.48%	-13.2%	-1.3%	Communication Services
JPMorgan Chase & Co	1.20%	-35.0%	-8.4%	Financials
Visa Inc Class A	1.18%	-14.1%	3.8%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Moderna Inc	0.03%	53.1%	47.2%	Health Care
Legg Mason Inc	0.02%	37.2%	86.1%	Financials
Taubman Centers Inc	0.01%	36.6%	-15.3%	Real Estate
Virtu Financial Inc A	0.00%	31.9%	-7.8%	Financials
Zscaler Inc	0.02%	30.9%	-14.2%	Information Technology
Regeneron Pharmaceuticals Inc	0.17%	30.0%	18.9%	Health Care
Citrix Systems Inc	0.07%	28.0%	44.0%	Information Technology
RingCentral Inc Class A	0.07%	25.6%	96.6%	Information Technology
NortonLifeLock Inc	0.04%	25.4%	40.9%	Information Technology
Tesla Inc	0.32%	25.3%	87.2%	Consumer Discretionary

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Centennial Resource Dev. Inc A	0.00%	-94.3%	-97.0%	Energy
Kosmos Energy Ltd	0.00%	-84.0%	-85.0%	Energy
Apache Corp	0.01%	-83.5%	-87.5%	Energy
Transocean Ltd	0.00%	-83.1%	-86.7%	Energy
Apergy Corp	0.00%	-83.0%	-86.0%	Energy
Targa Resources Corp	0.01%	-82.7%	-81.7%	Energy
Norwegian Cruise Line Holdings Ltd	0.01%	-81.2%	-80.1%	Consumer Discretionary
MFA Financial Inc	0.00%	-79.7%	-76.9%	Financials
Chesapeake Energy Corp	0.00%	-79.1%	-94.4%	Energy
Macerich Co	0.00%	-78.4%	-85.6%	Real Estate

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Teladoc Health Inc	0.77%	85.2%	178.8%	Health Care
NovoCure Ltd	0.40%	-20.1%	39.8%	Health Care
Amedisys Inc	0.40%	10.0%	48.9%	Health Care
Generac Holdings Inc	0.39%	-7.4%	81.9%	Industrials
Lumentum Holdings Inc	0.38%	-7.1%	30.4%	Information Technology
Repligen Corp	0.35%	4.4%	63.4%	Health Care
Haemonetics Corp	0.35%	-13.3%	13.9%	Health Care
ACADIA Pharmaceuticals Inc	0.33%	-1.2%	57.4%	Health Care
Trex Co Inc	0.32%	-10.8%	30.3%	Industrials
Rexford Industrial Realty Inc	0.32%	-9.7%	16.6%	Real Estate

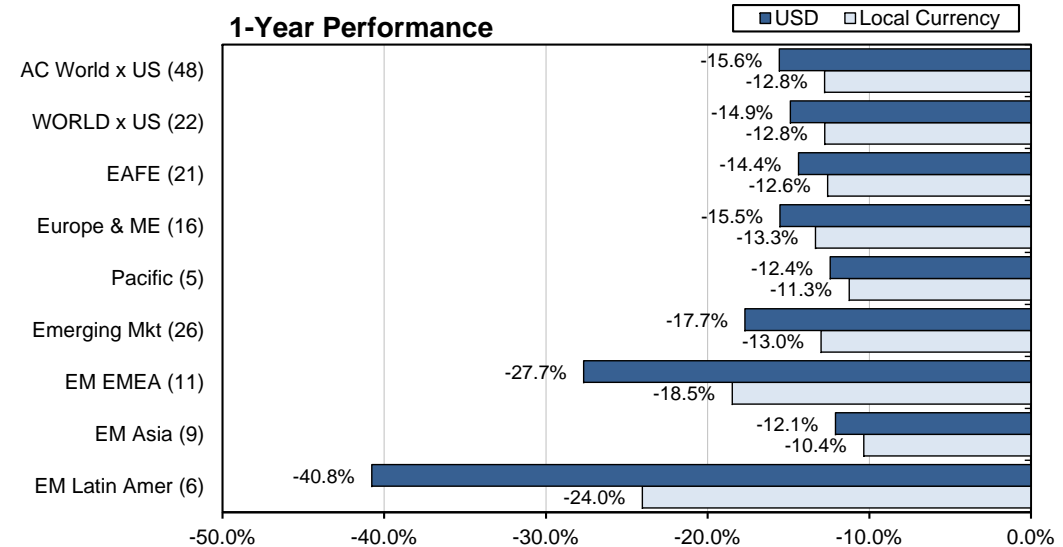
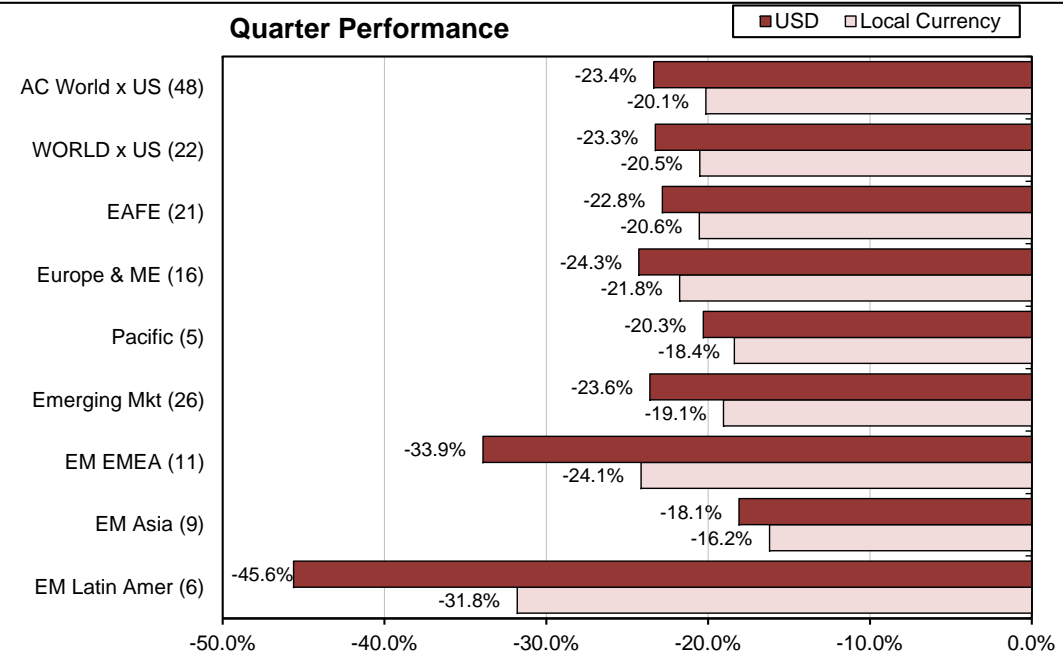
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Waitr Holdings Inc Class A	0.00%	282.0%	-90.0%	Consumer Discretionary
Novavax Inc	0.03%	241.2%	23.3%	Health Care
Vir Biotechnology Inc	0.02%	172.5%	N/A	Health Care
Athersys Inc	0.03%	143.9%	100.0%	Health Care
Forty Seven Inc	0.17%	142.4%	490.5%	Health Care
Kala Pharmaceuticals Inc	0.01%	138.2%	6.3%	Health Care
Aduro Biotech Inc	0.01%	132.2%	-31.2%	Health Care
Tocagen Inc	0.00%	128.8%	-88.8%	Health Care
Inovio Pharmaceuticals Inc	0.05%	125.5%	99.5%	Health Care
Neon Therapeutics Inc	0.00%	123.7%	-59.1%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Independence Contract Drilling Inc	0.00%	-93.0%	-97.5%	Energy
QEP Resources Inc	0.01%	-92.5%	-95.6%	Energy
Whiting Petroleum Corp	0.00%	-90.9%	-97.4%	Energy
Amplify Energy Corp	0.00%	-90.4%	-93.0%	Energy
Penn Virginia Corp	0.00%	-89.8%	-93.0%	Energy
Pacific Drilling SA	0.00%	-89.8%	-97.1%	Energy
Nine Energy Service Inc	0.00%	-89.7%	-96.4%	Energy
Forum Energy Technologies Inc	0.00%	-89.4%	-96.5%	Energy
Oasis Petroleum Inc	0.01%	-89.3%	-94.2%	Energy
SM Energy Co	0.01%	-89.1%	-93.0%	Energy

Source: Morningstar Direct



- International equity returns were negative in USD terms for the 1st quarter as markets were negatively impacted by the Coronavirus. In local currency terms, developed and emerging markets performed slightly better due to US dollar (USD) strength against most major currencies which created a significant headwind for US investors. The MSCI ACWI ex US Index lost -20.1% in local currency terms while a USD investor experienced a loss of -23.4% due to the aforementioned currency effect. Similar to US markets, international equity markets were severely impacted by concerns regarding headwinds from slowing economic data. Global central banks reacted by providing additional stimulus measures which are designed to provide the market with liquidity and restore confidence. The European Central Bank (ECB) and the Japanese Central Bank (JCB) announced new programs to purchase securities in an effort to boost markets while the Bank of England (BOE) cut its policy rate to 0.1% and announced additional quantitative easing in an effort to counteract a deterioration in the economy.
- Results for developed market international indices were negative in both local currency terms and USD terms for the 1st quarter. Prior to the onset of the Coronavirus, there were notable developments within the political sphere. The UK formally withdrew from the EU in January. While there remains much uncertainty surrounding what the relationship between the UK and the EU will look like, both sides are continuing to negotiate for a final withdrawal later this year. In Europe, Italy and Spain were hard hit by the Coronavirus. Already beset by relatively low GDP growth in historical terms, the region is expected to experience recession. In Japan, the economy was already under pressure as a result of declining trade with China prior to the onset of the Coronavirus. The Olympics were also rescheduled to 2021 in an effort to reduce the number of potential infections.
- Emerging markets continued their trend from 2019, underperforming relative to developed markets during the 1st quarter. The MSCI Emerging Markets Index fell -23.6% and -19.1% in USD and local currency terms, respectively. The US and China made headway in resolving their trade war by signing the Phase One trade deal in January. Countries with greater sensitivities to commodity prices or a strong USD tended to underperform during the period. Regionally, Asian countries outperformed both EMEA and Latin America, primarily due to their aggressive response to the Coronavirus. Within Latin America, Brazil and Mexico were hard hit as a result of the selloff in oil prices. Argentina underperformed as the country considered delaying the payment of interest on its sovereign debt.



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of March 31, 2020

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	-18.0%	-11.5%
Consumer Discretionary	11.1%	-26.8%	-15.0%
Consumer Staples	12.6%	-13.5%	-8.5%
Energy	4.0%	-36.2%	-37.9%
Financials	16.5%	-31.6%	-24.7%
Health Care	14.3%	-8.9%	7.1%
Industrials	14.2%	-26.4%	-16.0%
Information Technology	7.6%	-17.7%	-1.7%
Materials	6.7%	-26.8%	-20.5%
Real Estate	3.3%	-27.6%	-27.1%
Utilities	4.2%	-13.2%	-5.1%
<b>Total</b>	<b>100.0%</b>	<b>-22.8%</b>	<b>-14.4%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.5%	-14.1%	-9.9%
Consumer Discretionary	11.8%	-24.1%	-12.9%
Consumer Staples	10.5%	-14.7%	-9.9%
Energy	5.2%	-38.5%	-37.1%
Financials	19.2%	-31.0%	-24.9%
Health Care	10.5%	-9.2%	4.6%
Industrials	11.4%	-26.2%	-17.1%
Information Technology	10.2%	-17.5%	1.3%
Materials	7.0%	-27.5%	-22.8%
Real Estate	3.0%	-27.6%	-25.9%
Utilities	3.7%	-15.9%	-8.7%
<b>Total</b>	<b>100.0%</b>	<b>-23.4%</b>	<b>-15.6%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	13.1%	-9.6%	-8.2%
Consumer Discretionary	15.4%	-18.1%	-8.3%
Consumer Staples	6.6%	-19.8%	-15.7%
Energy	5.9%	-39.9%	-35.8%
Financials	21.6%	-31.1%	-27.6%
Health Care	3.6%	-8.5%	-8.5%
Industrials	4.9%	-28.0%	-26.5%
Information Technology	16.9%	-17.8%	3.2%
Materials	6.7%	-30.7%	-31.3%
Real Estate	2.9%	-26.7%	-21.5%
Utilities	2.5%	-26.0%	-23.4%
<b>Total</b>	<b>100.0%</b>	<b>-23.6%</b>	<b>-17.7%</b>

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1- Year Return
Japan	26.3%	17.4%	-16.8%	-6.7%
United Kingdom	15.1%	10.0%	-28.8%	-23.0%
France	10.8%	7.1%	-27.6%	-17.7%
Switzerland	10.7%	7.1%	-11.5%	3.5%
Germany	8.3%	5.5%	-27.0%	-17.5%
Australia	5.9%	3.9%	-33.3%	-26.3%
Netherlands	4.2%	2.7%	-20.7%	-7.7%
Hong Kong	3.8%	2.5%	-17.3%	-21.1%
Sweden	2.8%	1.8%	-21.4%	-11.2%
Spain	2.6%	1.7%	-29.8%	-26.5%
Denmark	2.2%	1.4%	-8.0%	4.5%
Italy	2.2%	1.4%	-29.3%	-21.4%
Singapore	1.2%	0.8%	-28.2%	-22.3%
Finland	1.0%	0.7%	-19.1%	-18.0%
Belgium	0.9%	0.6%	-32.6%	-30.2%
Israel	0.6%	0.4%	-18.1%	-18.4%
Ireland	0.6%	0.4%	-25.7%	-8.3%
Norway	0.5%	0.4%	-33.4%	-31.3%
New Zealand	0.3%	0.2%	-16.4%	-1.0%
Portugal	0.2%	0.1%	-13.1%	-2.5%
Austria	0.2%	0.1%	-42.9%	-39.7%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>66.0%</b>	<b>-22.8%</b>	<b>-14.4%</b>
Canada		6.3%	-27.5%	-19.9%
<b>Total Developed Countries</b>		<b>72.3%</b>	<b>-23.3%</b>	<b>-14.9%</b>
China		11.3%	-10.2%	-5.8%
Taiwan		3.4%	-19.1%	1.3%
Korea		3.3%	-22.5%	-16.8%
India		2.1%	-31.1%	-30.9%
Brazil		1.4%	-50.2%	-41.9%
South Africa		1.0%	-40.3%	-37.1%
Russia		0.9%	-36.4%	-14.4%
Saudi Arabia		0.7%	-24.0%	-28.9%
Thailand		0.6%	-33.8%	-32.5%
Mexico		0.5%	-35.5%	-31.9%
Malaysia		0.5%	-19.2%	-21.1%
Indonesia		0.4%	-39.6%	-36.8%
Qatar		0.3%	-17.3%	-15.1%
Philippines		0.2%	-32.2%	-30.5%
Poland		0.2%	-36.5%	-39.9%
Chile		0.2%	-33.6%	-47.1%
United Arab Emirates		0.2%	-27.1%	-30.3%
Turkey		0.1%	-30.1%	-19.8%
Peru		0.1%	-35.8%	-39.4%
Colombia		0.1%	-49.7%	-47.3%
Hungary		0.1%	-39.0%	-31.3%
Greece		0.1%	-45.2%	-30.4%
Argentina		0.0%	-39.3%	-51.0%
Egypt		0.0%	-27.1%	-10.8%
Czech Republic		0.0%	-38.5%	-38.3%
Pakistan		0.0%	-39.7%	-39.0%
<b>Total Emerging Countries</b>		<b>27.7%</b>	<b>-23.6%</b>	<b>-17.7%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>-23.4%</b>	<b>-15.6%</b>

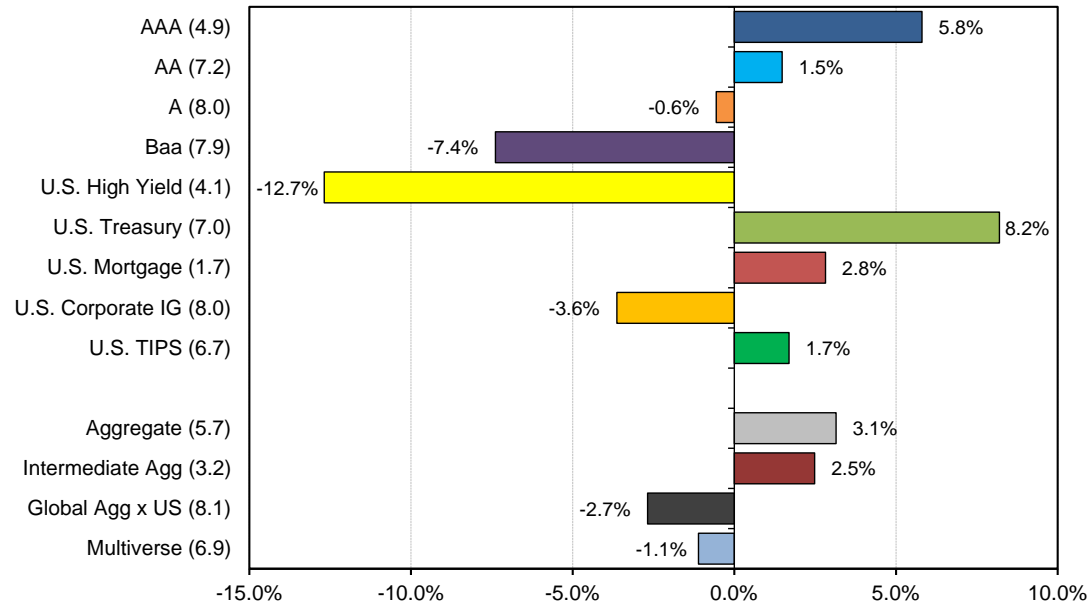
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

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.

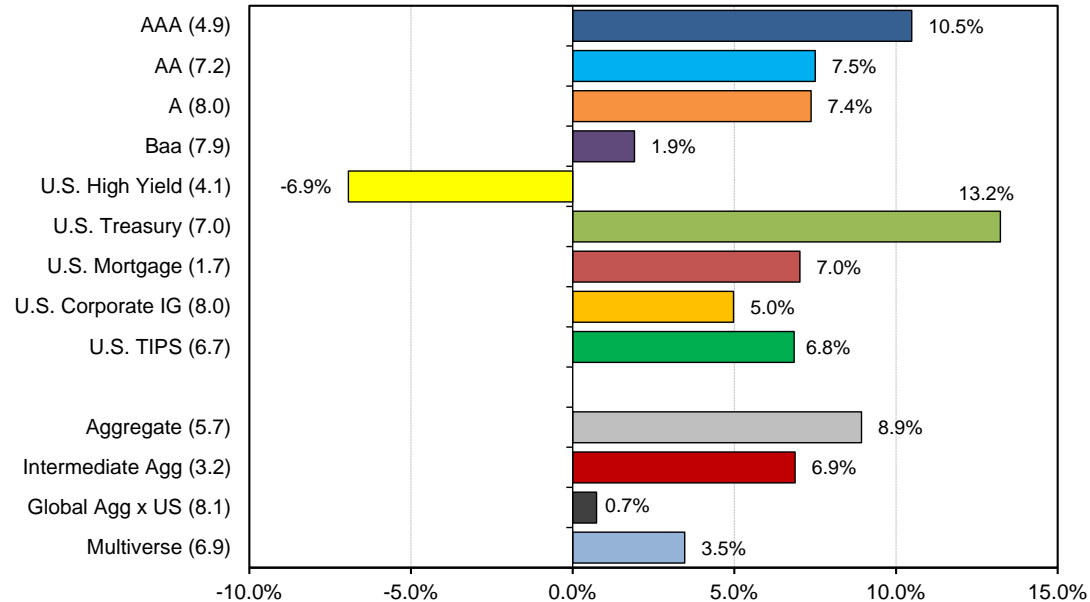


- Fixed income market returns during the 1st quarter were bifurcated between high- and low-quality bonds. Interest rates fell across the US Treasury Yield Curve through the quarter as investors sought safety and lower volatility assets. As a result of the deterioration of the US economy, the Fed took unprecedented action and lowered interest rates to between 0% to 0.25%. As a result, short term interest rates fell dramatically. The benchmark US Treasury 10-Year bond yield fell by more than 120 basis points during the quarter ending the period at a yield of 0.70%. In addition to lowering interest rates, the Fed committed to purchasing near unlimited US Treasury bonds and Agency mortgage bonds while implementing additional programs that allow for the purchase of corporate bonds. The bellwether Bloomberg Barclays US Aggregate Index posted positive returns for both the 1st quarter and the 1-year period, returning 3.1% and 8.9%, respectively.
- Within investment grade credit, higher quality issues outperformed lower quality issues during the quarter. More specifically, investors rotated out of lower quality issues due to the expectation for deterioration in the economy as a result of shelter-in-place protection measures. On an absolute basis, without negating the duration differences in the sub-indices, high yield credit was the worst performing sector returning -12.7% for the quarter, while AAA was the best performing, returning 5.8%. High yield spreads relative to comparable US Treasury issues widened to their highest levels since the 2008 Financial Crisis at nearly 1,100 basis points. Within investment grade bonds, Baa also underperformed, returning -7.4%. Much has been made in recent years about the growth of Baa bond issues outstanding and the potential for downgrades should a recession ensue. Returns over the 1-year period show generally positive returns with only high yield bonds posting a negative result. Within investment grade bonds, AAA bonds outperformed returning 10.5% compared to 7.5%, 7.4% and 1.9%, respectively, for AA, A and Baa rated issues.
- Within the Bloomberg Barclays US Aggregate Bond Index, defensive US Treasury, government agency and mortgage backed sectors outperformed investment grade corporate issues over the 1-year period. The defensive sectors benefited from the flight to quality as investors preferred lower volatility issues despite their lower relative yields. Over the 1-year period, US Treasury bonds returned 13.2% while US mortgage backed and investment grade corporate issues returned 7.0% versus a 5.0%, respectively. High yield bonds were the only negative performer for the year in the chart primarily due to the quarter's dramatic spread widening and resulting weak performance. Additionally, commodity-related lower quality issues were negatively impacted with the significant decline in oil prices.

### Quarter Performance



### 1-Year Performance



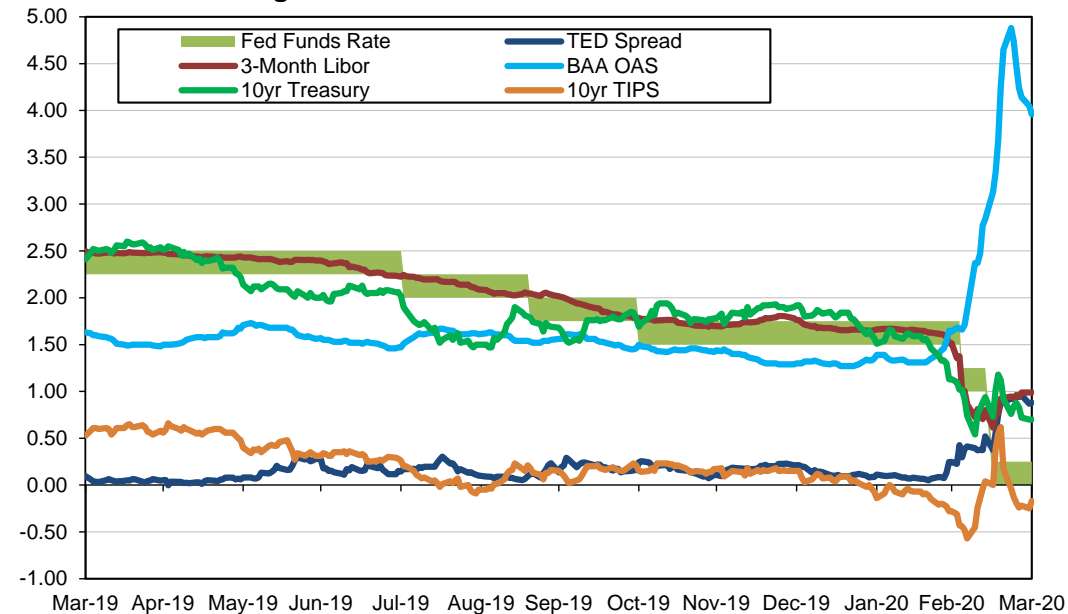
Source: Bloomberg



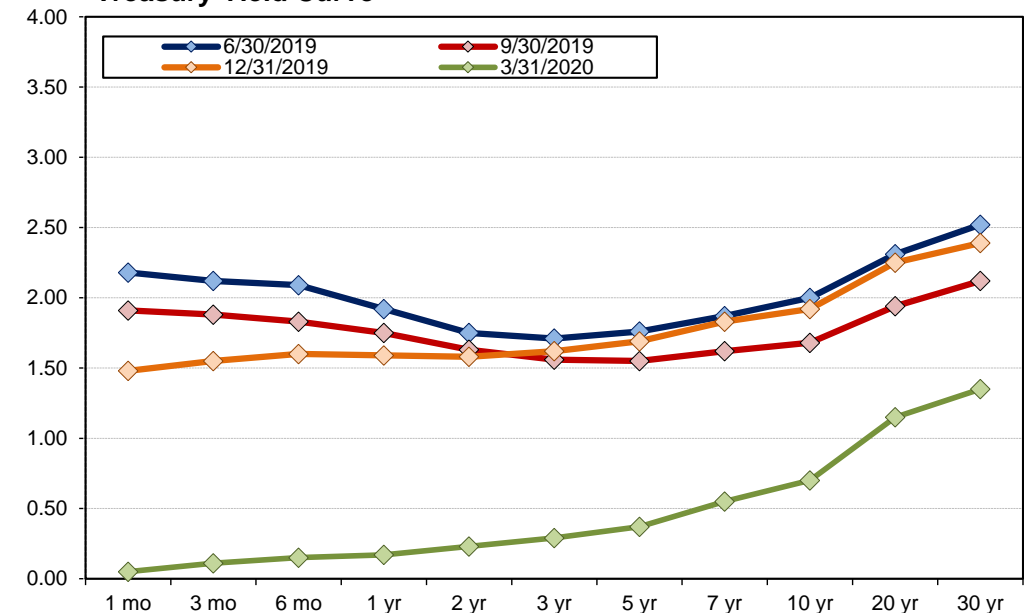


- Global fixed income returns continued their relative underperformance when compared to their domestic counterparts during the 1st quarter. Yields across developed markets fell in the first quarter following the onset of the Coronavirus. While the number of negative yielding bonds has recently subsided, countries such as Germany, Sweden and Switzerland continue to have lower, or in some cases negative yields. As mentioned, the USD appreciated against most developed currencies during the quarter, acting as a headwind to global bond index performance. The return on global bonds, as represented by the Bloomberg Barclays Global Aggregate ex US Index, was -2.7% for the period. Global bonds also trailed over the 1-year period with the Global Aggregate ex US Index returning 0.7% versus 8.9% return for the domestic Bloomberg Barclays Aggregate Index. Global growth is expected to slow considerably in the 1st and 2nd quarters as countries continue to manage through the Coronavirus pandemic. Importantly, global central banks are acting in coordination to provide sufficient liquidity in an effort to calm markets. As a result, interest rates, and bond returns, are expected to remain low until economic activity resumes.
- 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 over the last year, the 10-year Treasury yield (green line) has fallen from roughly 2.5% to roughly 0.7%. 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 an abrupt increase in credit spreads during the 1st quarter of 2020 as investors moved to higher quality assets during the quarter's risk-off environment. Prior to that, spreads had remained relatively range bound over the previous three quarters as investors sought out higher relative yields in corporate bonds. The orange line illustrates US Treasury TIPS which reflect investor expectations of future inflation. Over the trailing year, TIPS yields had already been trending generally lower due to concerns about the sustainability of global economic growth. Following the drawdown in the 1st quarter, TIPS yields were negative as investors believed that the US economy would enter a recession.
- 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 in US interest rates is clearly visible over the last quarter. The primary driver of this change in the curve was due to the supportive actions taken by the Fed, which reversed recent interest rate increases, and a broad flight to the perceived safety of US Treasury securities.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



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



# Employees' Retirement System of the City of Norfolk

## Annual Asset Class Performance

March 31, 2020

	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 %	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 %	Blmbg Barc US Agg 3.1 %
	NCREIF ODCE (EW) (Net) 19.0 %	MSCI EAFE (Net) 26.3 %	NCREIF 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 %	NCREIF ODCE (EW) (Net) 0.7 %
	MSCI EAFE (Net) 13.5 %	Russell 2000 Value 23.5 %	Russell 1000 Growth 11.8 %	NCREIF 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 %	Blmbg Barc Global Agg Ex USD -2.7 %
	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 %	NCREIF 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 %	Blmbg Barc US Corp High Yield -12.7 %
	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 1000 Growth -14.1 %
	S&P 500 4.9 %	NCREIF 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 %	Strategic Policy -16.5 %
	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 %	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 %	S&P 500 -19.6 %
	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 %	NCREIF 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 %	MSCI EAFE (Net) -22.8 %
	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 %	MSCI Emerging Mkts (Net) -23.6 %
	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 %	NCREIF 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 Agg 2.6 %	Blmbg Barc US Corp High Yield 7.5 %	Russell 2000 Value -12.9 %	Russell 2000 Growth -25.8 %
Worst ↓	Blmbg Barc US Agg 2.4 %	Blmbg Barc Global Agg Ex USD 8.2 %	Russell 1000 Value -0.2 %	MSCI EAFE (Net) -43.4 %	Blmbg Barc US Agg 5.9 %	Blmbg Barc US Agg 6.5 %	MSCI EAFE (Net) -12.1 %	Blmbg Barc US Agg 4.2 %	MSCI Emerging Mkts (Net) -2.6 %	Blmbg Barc Global Agg Ex USD -3.1 %	Russell 2000 Value -7.5 %	Blmbg Barc Global Agg Ex USD 1.5 %	NCREIF ODCE (EW) (Net) 6.9 %	MSCI EAFE (Net) -13.8 %	Russell 1000 Value -26.7 %
	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 %	NCREIF 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 %	Russell 2000 Value -35.7 %



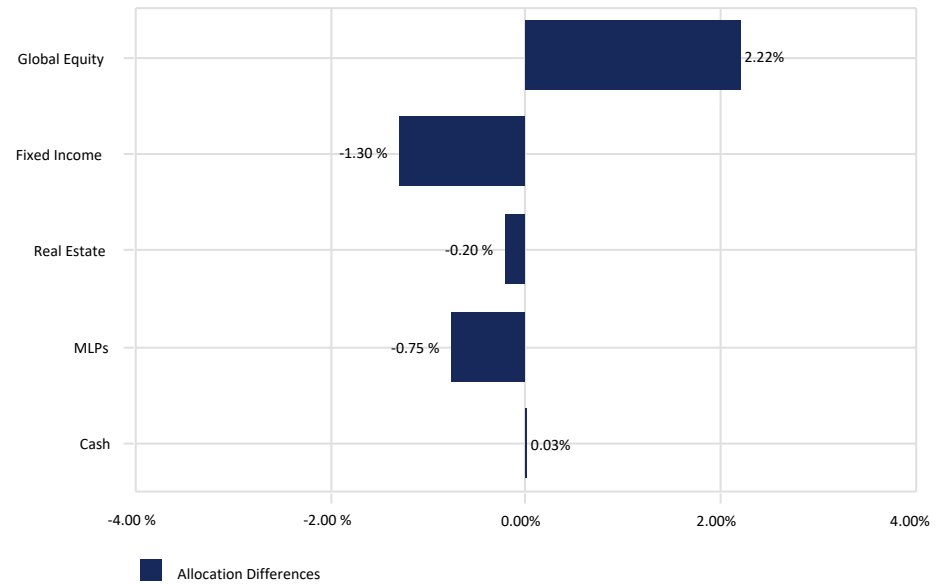
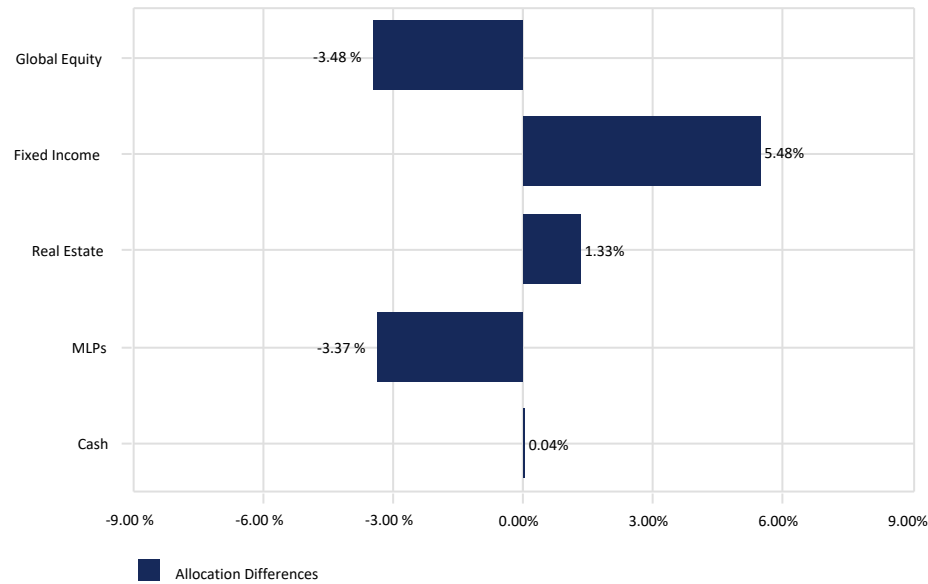
**Total Fund**



# Employees' Retirement System of the City of Norfolk

## Asset Allocation vs. Target Allocation

March 31, 2020



March 31, 2020

	Market Value (\$)	Allocation (%)	Target (%)
Global Equity	488,955,908	51.52	55.00
Fixed Income	336,660,936	35.48	30.00
Real Estate	83,816,713	8.83	7.50
MLPs	39,223,572	4.13	7.50
Cash	345,909	0.04	0.00
Total Fund	949,003,038	100.00	100.00

December 31, 2019

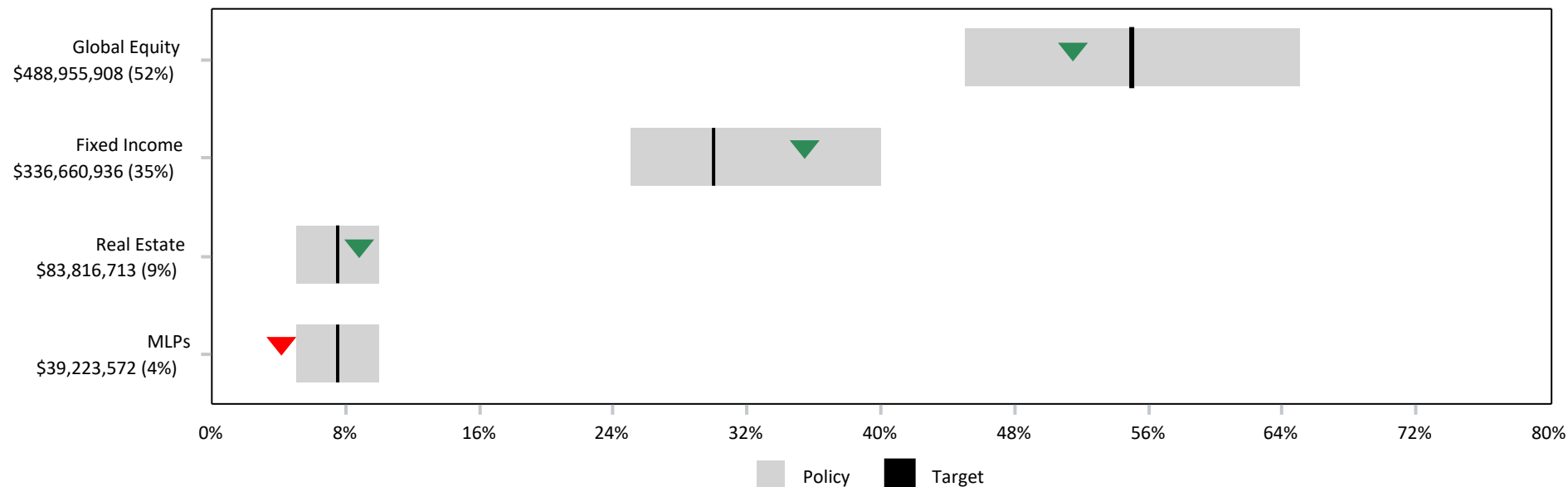
	Market Value (\$)	Allocation (%)	Target (%)
Global Equity	652,198,055	57.22	55.00
Fixed Income	327,169,943	28.70	30.00
Real Estate	83,154,542	7.30	7.50
MLPs	76,948,958	6.75	7.50
Cash	342,965	0.03	0.00
Total Fund	1,139,814,463	100.00	100.00

# Employees' Retirement System of the City of Norfolk

Asset Allocation Compliance

March 31, 2020

## Executive Summary



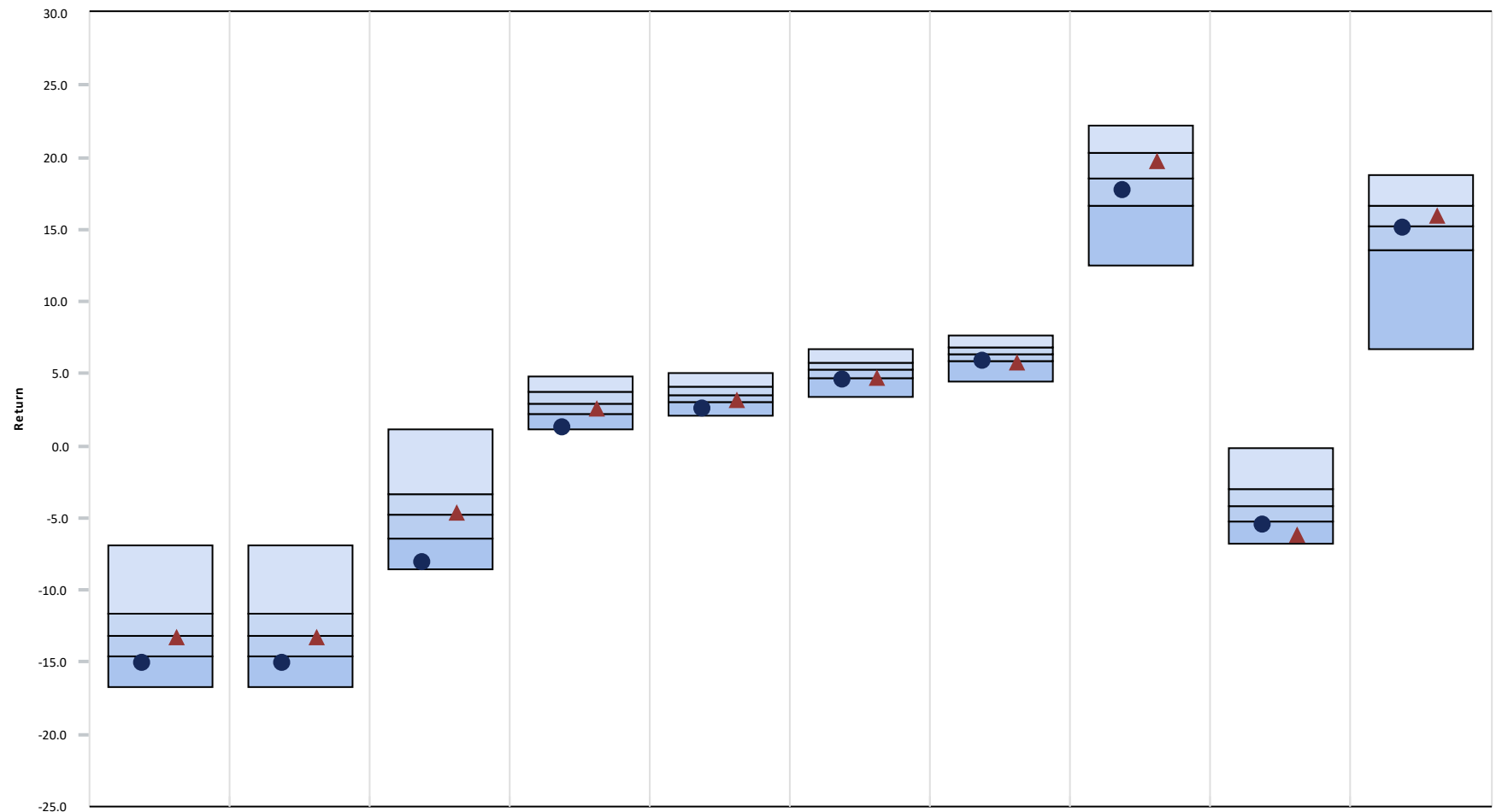
	Asset Allocation \$ (\$)	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Rebalance (\$)
<b>Total Fund</b>	<b>949,003,038</b>	<b>100.00</b>	<b>100.00</b>			
<b>Global Equity</b>	<b>488,955,908</b>	<b>51.52</b>	<b>55.00</b>	<b>45.00</b>	<b>65.00</b>	<b>32,995,763</b>
SSgA MSCI ACWI IMI Index Fund	488,955,908	51.52				
<b>Fixed Income</b>	<b>336,660,936</b>	<b>35.48</b>	<b>30.00</b>	<b>25.00</b>	<b>40.00</b>	<b>(51,960,024)</b>
PIMCO Total Return	168,020,061	17.70				
SSgA Bond Market Index	168,640,875	17.77				
<b>Real Assets</b>	<b>123,040,285</b>	<b>12.97</b>	<b>15.00</b>			<b>19,310,171</b>
<b>Real Estate</b>	<b>83,816,713</b>	<b>8.83</b>	<b>7.50</b>	<b>5.00</b>	<b>10.00</b>	<b>(12,641,485)</b>
JP Morgan Asset Management Strategic Property Fund	43,869,511	4.62				
UBS Trumbull Property Fund	39,947,201	4.21				
<b>MLPs</b>	<b>39,223,572</b>	<b>4.13</b>	<b>7.50</b>	<b>5.00</b>	<b>10.00</b>	<b>31,951,656</b>
Harvest MLP	19,926,029	2.10				
Tortoise Capital Advisors	19,297,543	2.03				
Cash	345,909	0.04				



# 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, 2020



	<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>2019</u>	<u>2018</u>	<u>2017</u>
● Total Fund Composite	-15.10 (78)	-15.10 (78)	-8.14 (93)	1.27 (94)	2.59 (90)	4.52 (81)	5.83 (76)	17.67 (61)	-5.43 (81)	15.10 (54)
▲ Total Fund Policy	-13.34 (54)	-13.34 (54)	-4.60 (47)	2.58 (62)	3.11 (72)	4.67 (78)	5.75 (79)	19.72 (33)	-6.19 (90)	15.91 (38)
5th Percentile	-6.86	-6.86	1.09	4.80	5.01	6.66	7.66	22.13	-0.16	18.72
1st Quartile	-11.66	-11.66	-3.31	3.69	4.13	5.76	6.83	20.26	-2.96	16.60
<b>Median</b>	<b>-13.13</b>	<b>-13.13</b>	<b>-4.73</b>	<b>2.89</b>	<b>3.52</b>	<b>5.22</b>	<b>6.36</b>	<b>18.52</b>	<b>-4.15</b>	<b>15.23</b>
3rd Quartile	-14.62	-14.62	-6.42	2.20	3.06	4.70	5.83	16.61	-5.20	13.52
95th Percentile	-16.69	-16.69	-8.51	1.17	2.10	3.33	4.50	12.44	-6.76	6.71

Parentheses contain percentile rankings.

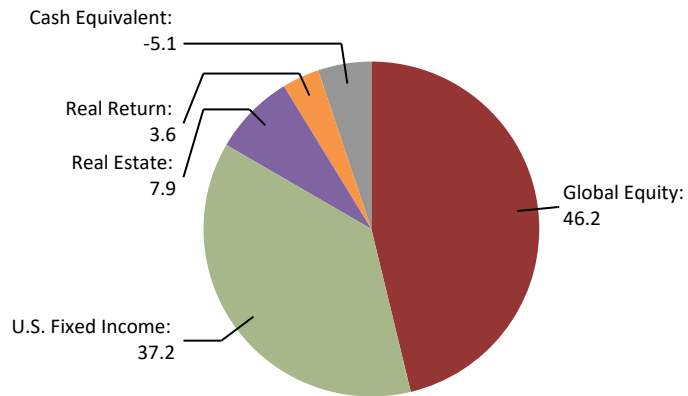


# Employees' Retirement System of the City of Norfolk

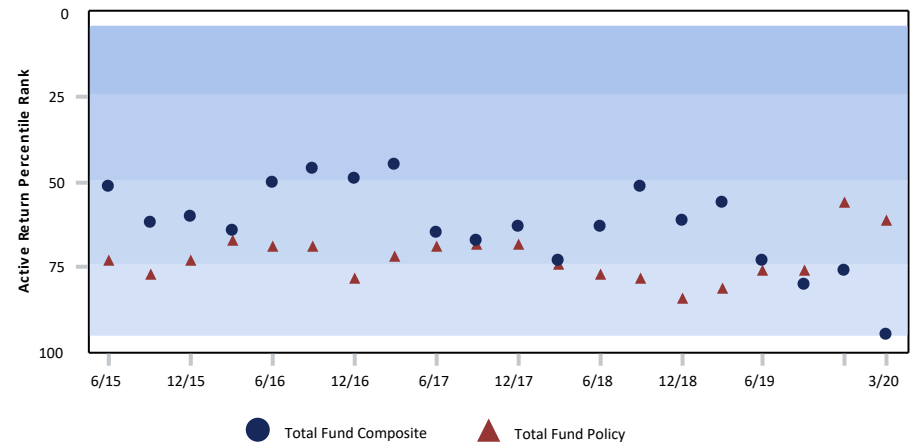
Total Fund Composite

March 31, 2020

## Asset Allocation by Segment

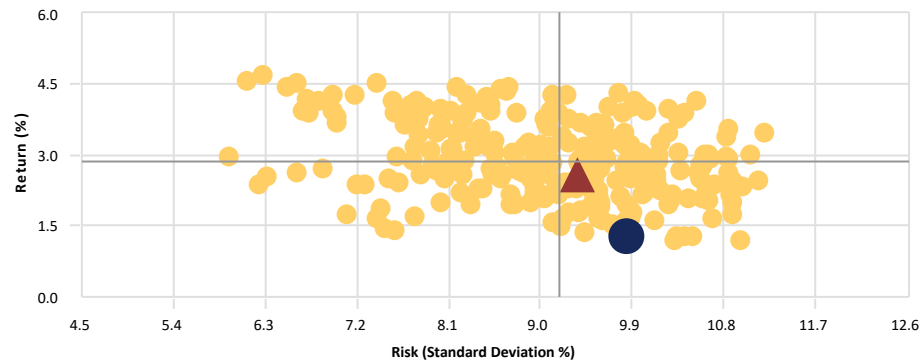


## 3 Year Rolling Return Rank



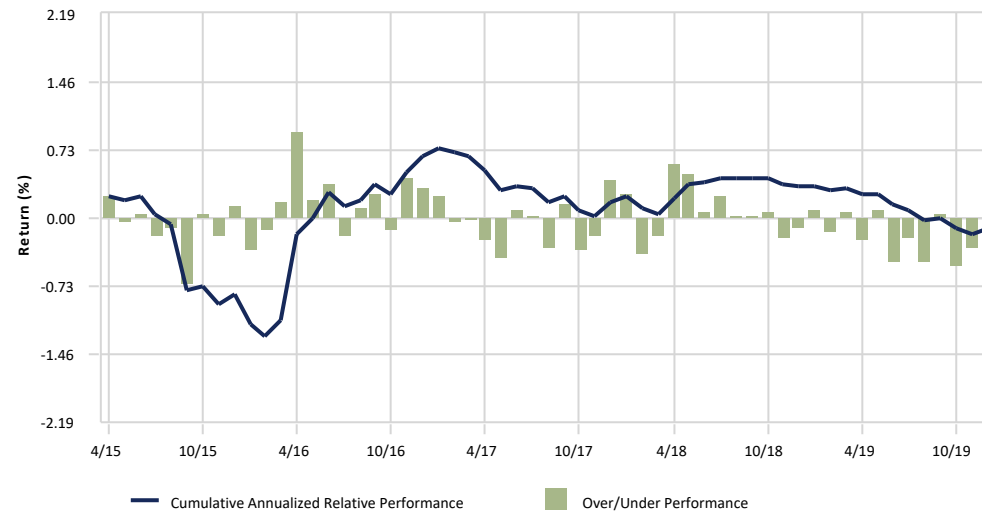
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Total Fund Composite	20	0 (0%)	4 (20%)	13 (65%)	3 (15%)
▲ Total Fund Policy	20	0 (0%)	0 (0%)	12 (60%)	8 (40%)

## Risk vs. Return (04/01/17 - 03/31/20)



	Return	Standard Deviation
● Total Fund Composite	1.27	9.86
▲ Total Fund Policy	2.58	9.36
— Median	2.89	9.20

## Relative Performance vs. Total Fund Policy



Note: Cash Equivalent allocation includes manager cash.



## Global Equity

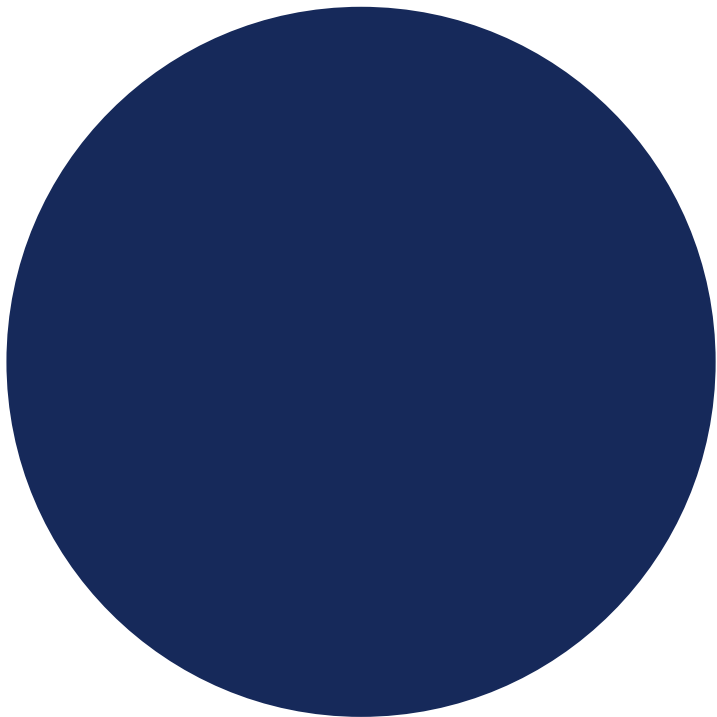
Employees' Retirement System of the City of Norfolk

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

March 31, 2020

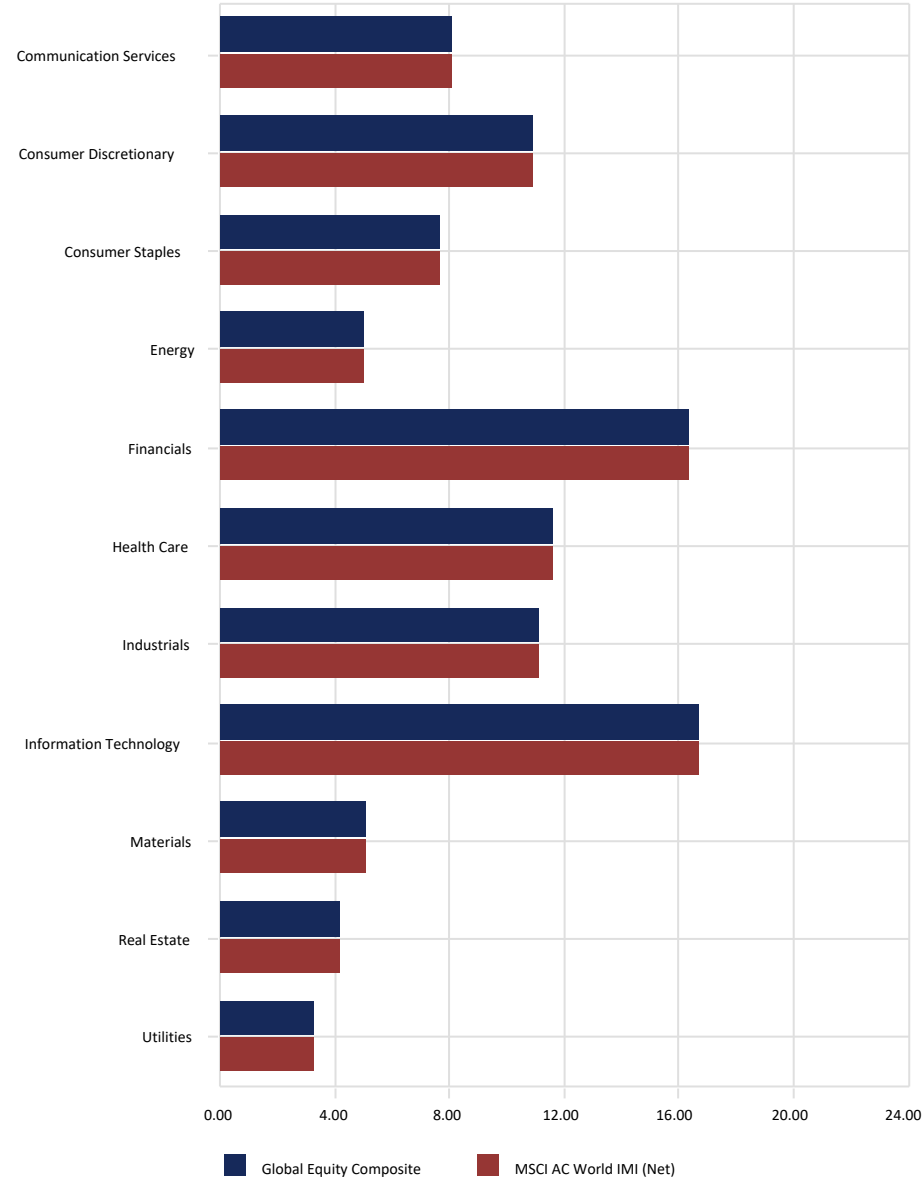
Manager Allocation

March 31, 2020 : \$488,955,908

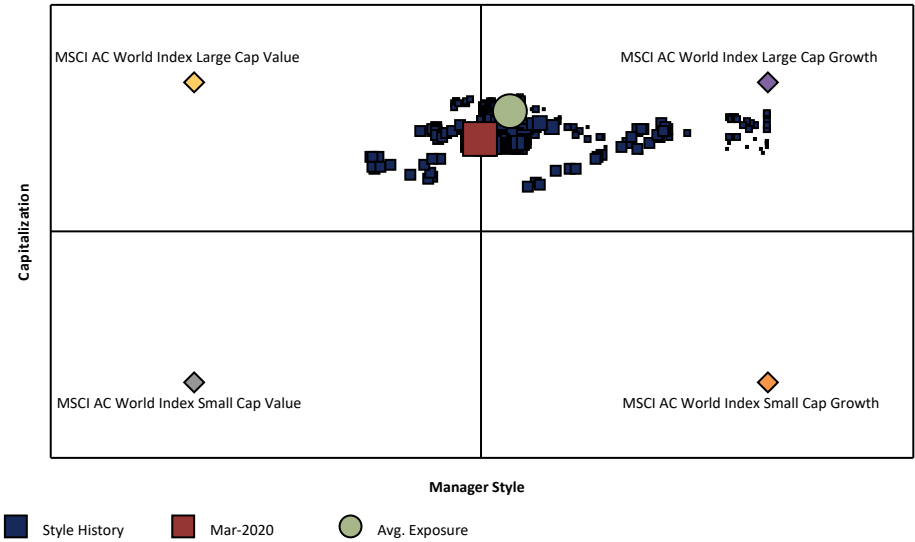


	Market Value (\$)	Allocation (%)
■ SSgA MSCI ACWI IMI Index Fund	488,955,908	100.00

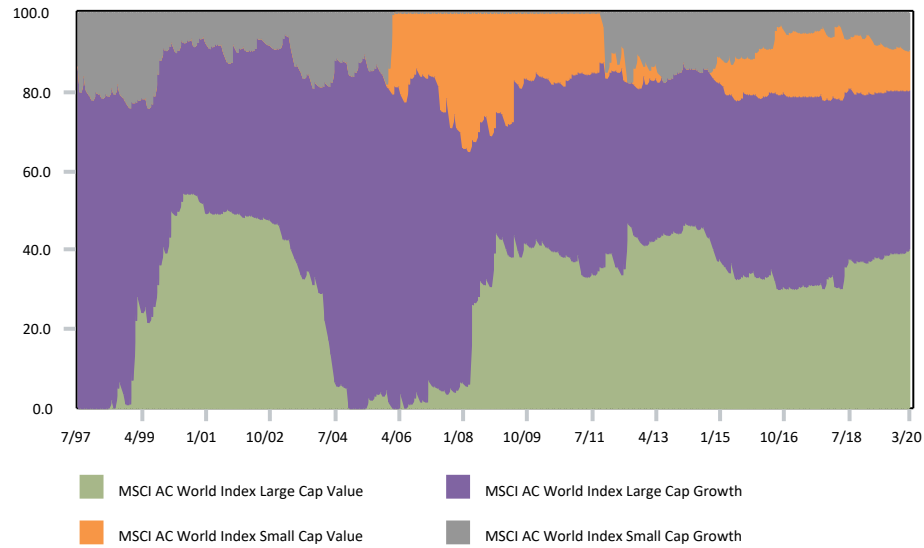
Sector Allocation - Holdings Based



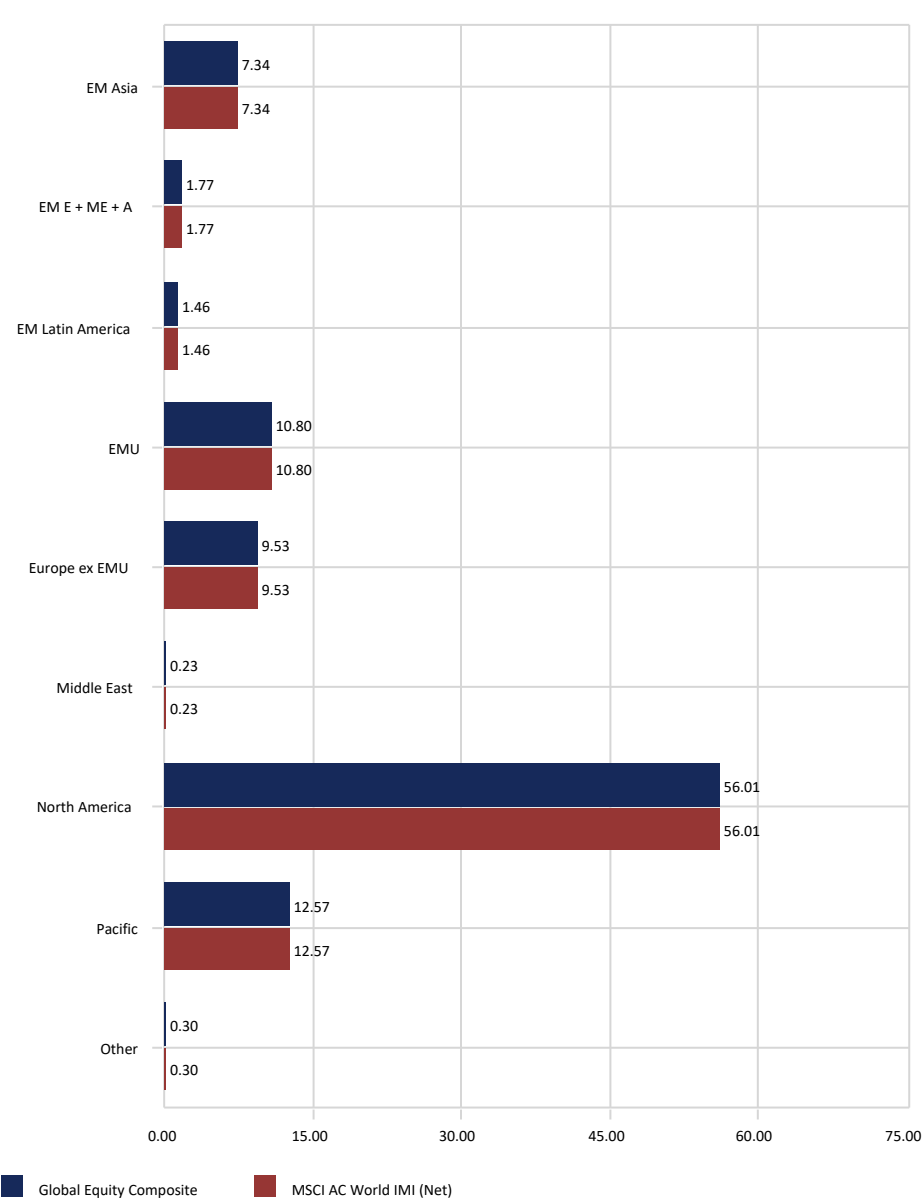
Style Analysis - Returns Based



3 Year Style Analysis



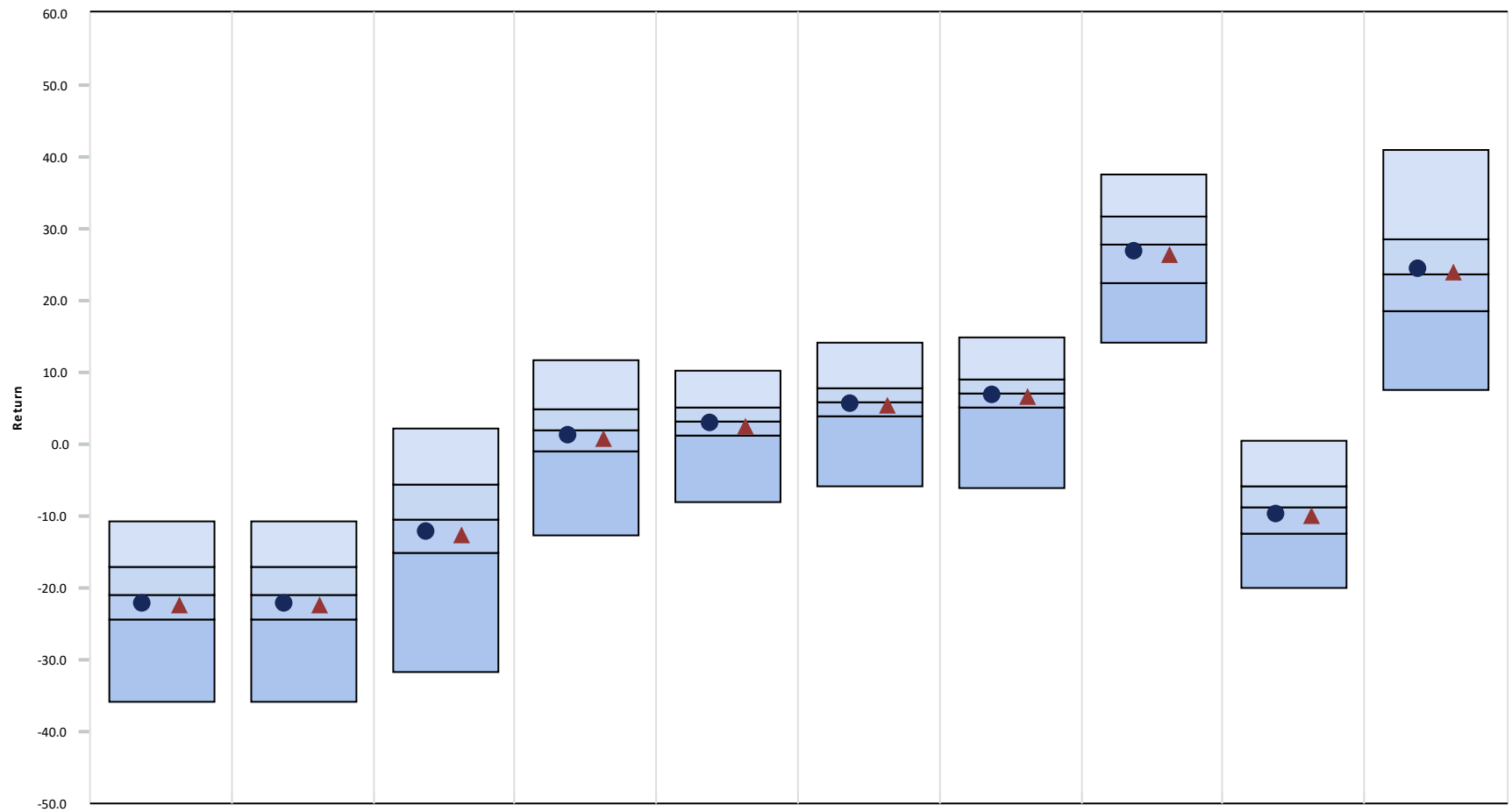
Region Allocation - Holdings Based



# Employees' Retirement System of the City of Norfolk

Global Equity Composite vs. IM Global Equity (MF)

March 31, 2020



● Global Equity Composite  
▲ Global Equity Policy

	3 Month	CYTD	1 Year	3 Year	5 Year	7 Year	10 Year	2019	2018	2017
Global Equity Composite	-22.31 (62)	-22.31 (62)	-12.30 (61)	1.20 (57)	2.96 (53)	5.66 (55)	6.85 (52)	26.92 (55)	-9.73 (62)	24.48 (48)
Global Equity Policy	-22.44 (65)	-22.44 (65)	-12.73 (63)	0.76 (63)	2.51 (57)	5.28 (58)	6.55 (61)	26.35 (58)	-10.08 (65)	23.95 (49)
5th Percentile	-10.61	-10.61	2.08	11.61	10.30	14.12	14.76	37.55	0.46	40.96
1st Quartile	-17.05	-17.05	-5.65	4.95	5.21	7.82	9.05	31.60	-5.81	28.57
<b>Median</b>	<b>-20.91</b>	<b>-20.91</b>	<b>-10.49</b>	<b>1.87</b>	<b>3.28</b>	<b>5.84</b>	<b>6.97</b>	<b>27.71</b>	<b>-8.75</b>	<b>23.73</b>
3rd Quartile	-24.33	-24.33	-15.18	-1.01	1.11	3.94	5.14	22.51	-12.46	18.60
95th Percentile	-35.83	-35.83	-31.78	-12.76	-8.10	-5.75	-6.01	14.08	-19.95	7.57

gross of fees



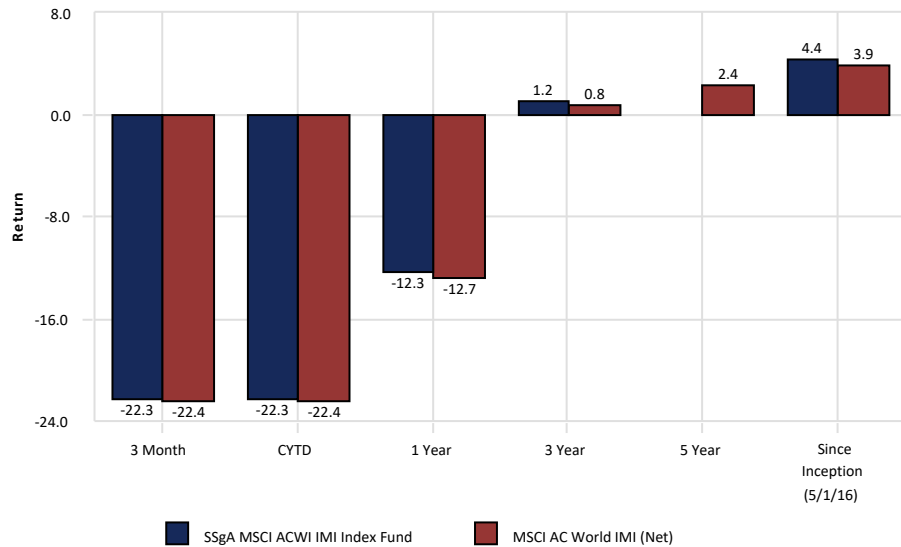


# Employees' Retirement System of the City of Norfolk

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

March 31, 2020

## Comparative Performance

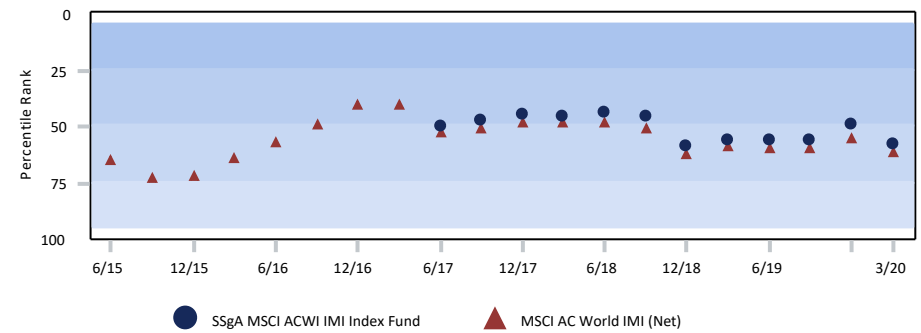


## Relative Performance vs MSCI AC World IMI (Net)

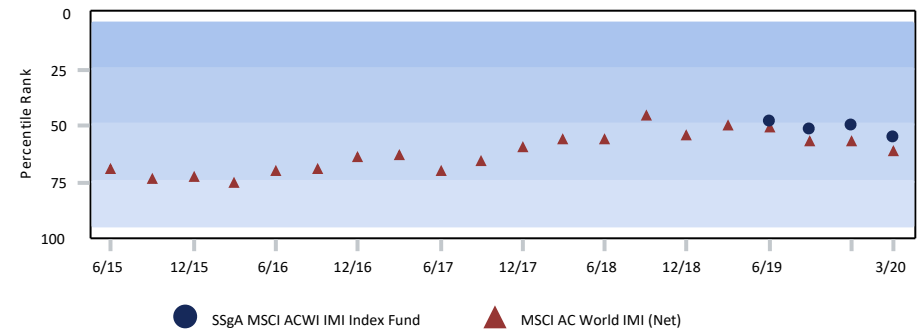


gross of fees

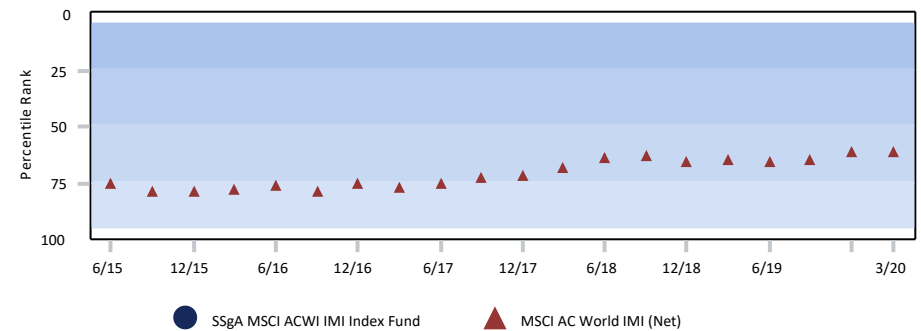
## 1 Year Rolling Percentile Ranking



## 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, 2020

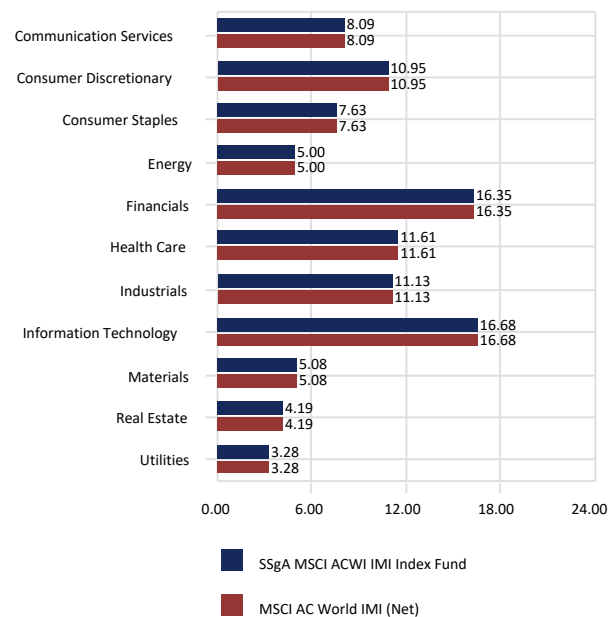
## Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$000)	161,991,820	161,991,820
Median Mkt. Cap (\$000)	1,239,405	1,239,405
Price/Earnings ratio	14.93	14.93
Price/Book ratio	3.04	3.04
5 Yr. EPS Growth Rate (%)	13.10	13.10
Current Yield (%)	3.01	3.01
Beta (3 Years, Monthly)	1.00	1.00
Number of Stocks	8,976	8,976

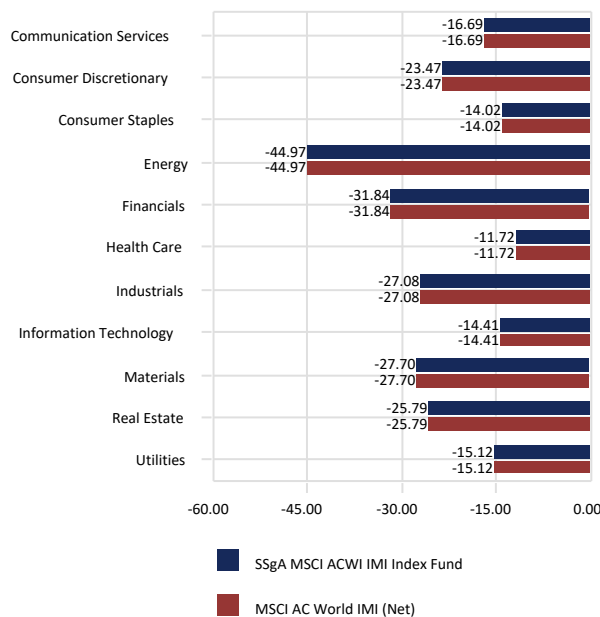
## Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	2.56	2.56	0.00	0.28
Apple Inc	2.53	2.53	0.00	-13.19
Amazon.com Inc	1.84	1.84	0.00	5.51
Facebook Inc	0.90	0.90	0.00	-18.73
Alphabet Inc	0.80	0.80	0.00	-13.03
Alphabet Inc Class A	0.78	0.78	0.00	-13.25
Johnson & Johnson	0.77	0.77	0.00	-9.52
Alibaba Group Holding Ltd	0.76	0.76	0.00	-8.31
Nestle SA, Cham Und Vevey	0.69	0.69	0.00	-4.60
JPMorgan Chase & Co	0.63	0.63	0.00	-35.00
% of Portfolio	12.26	12.26	0.00	

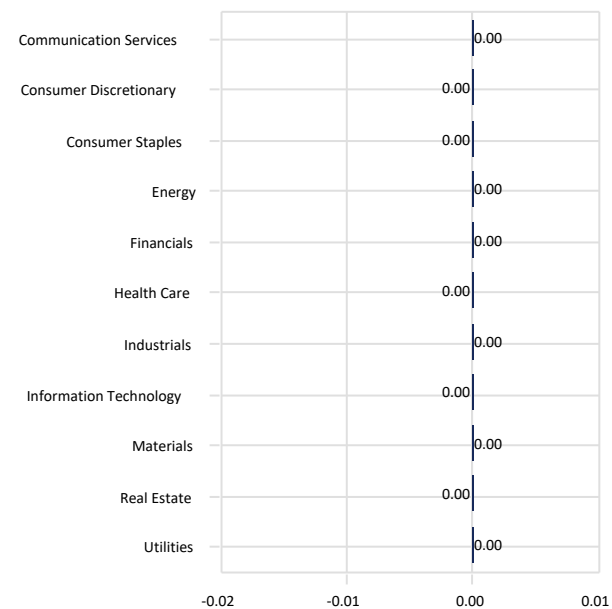
## Sector Allocation



## Sector Performance



## Total Sector Attribution

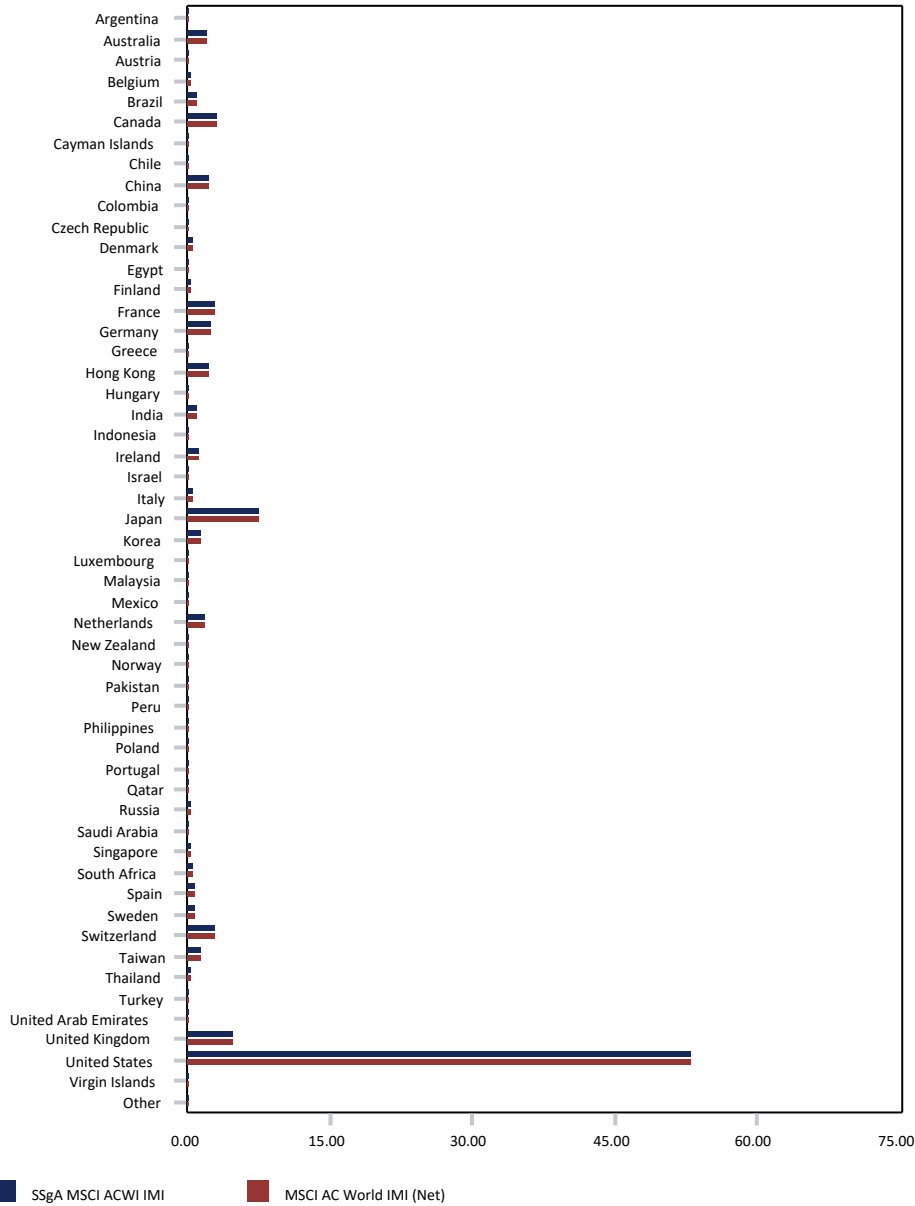


# Employees' Retirement System of the City of Norfolk

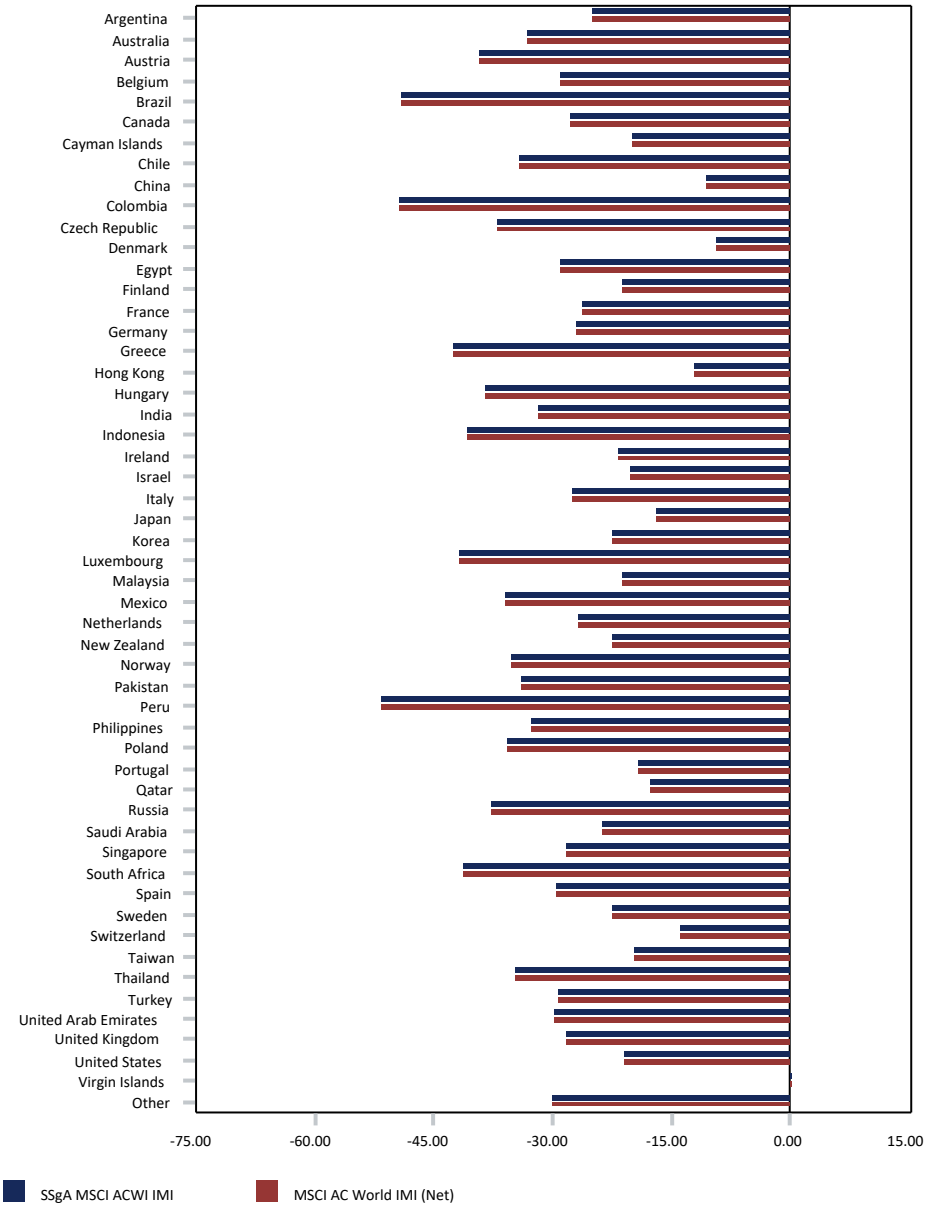
SSgA MSCI ACWI IMI vs. MSCI AC World IMI (Net)

March 31, 2020

## Country Allocation



## Country Performance



## Fixed Income

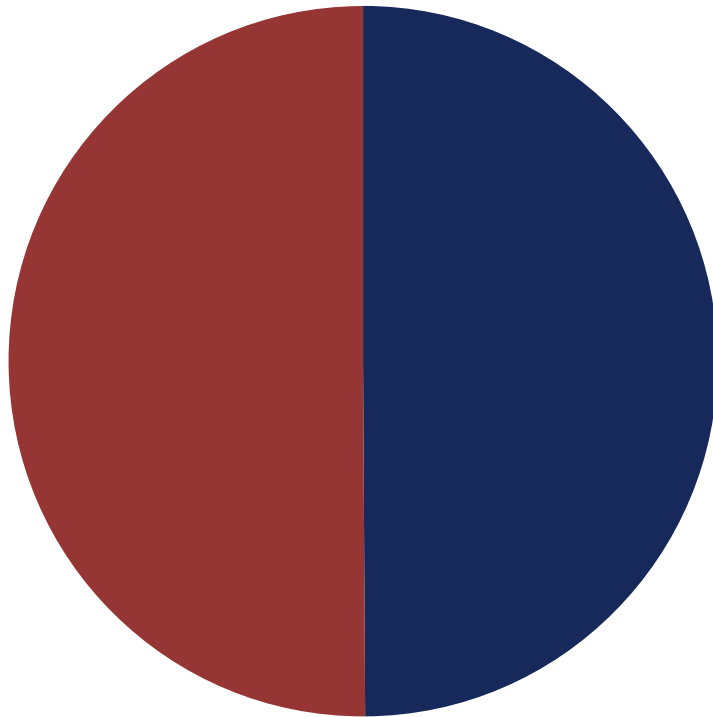
# Employees' Retirement System of the City of Norfolk

Fixed Income

March 31, 2020

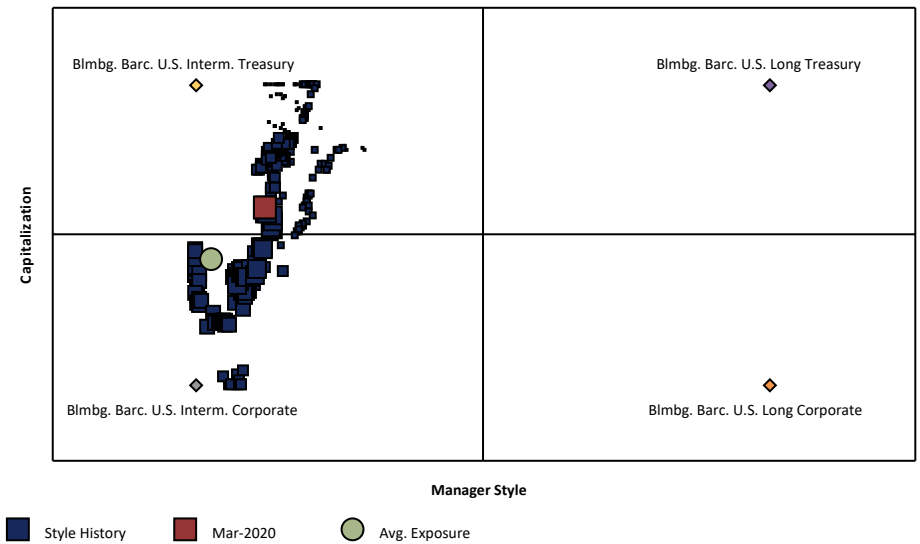
## Manager Allocation

March 31, 2020 : \$336,660,936

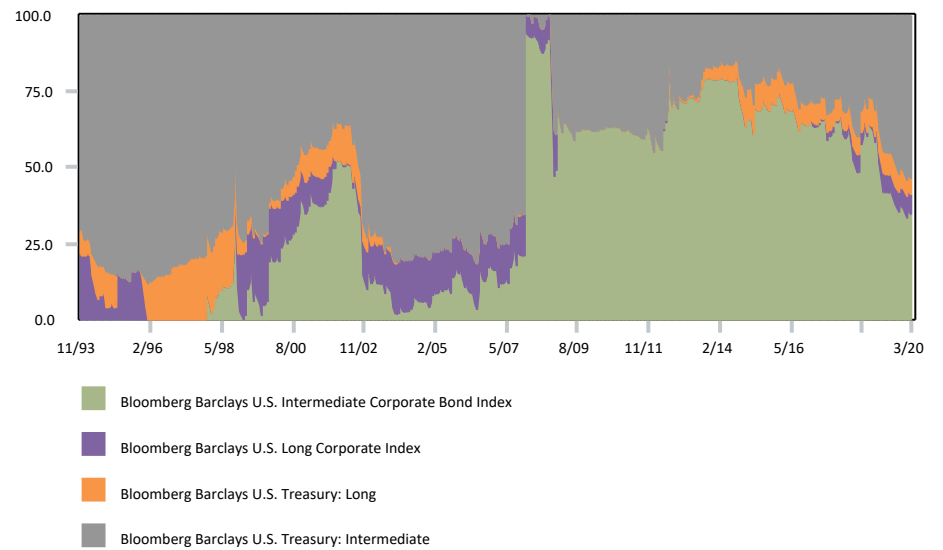


	Market Value (\$)	Allocation (%)
■ PIMCO Total Return	168,020,061	49.91
■ SSgA Bond Market Index	168,640,875	50.09

## Style Analysis - Returns Based



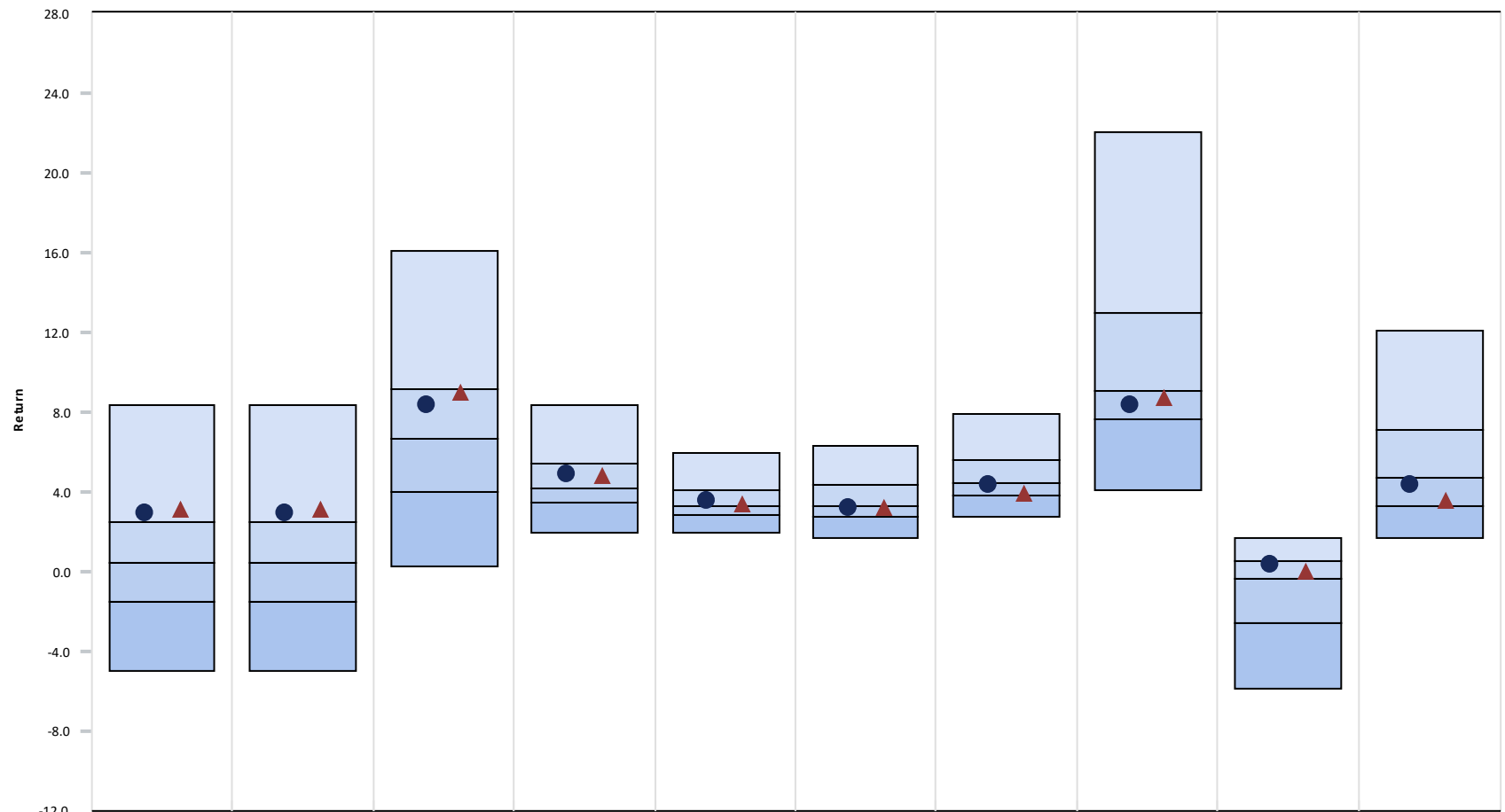
## 3 Year Style Analysis



# Employees' Retirement System of the City of Norfolk

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

March 31, 2020



	<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>2019</u>	<u>2018</u>	<u>2017</u>
● Fixed Income	2.90 (21)	2.90 (21)	8.34 (32)	4.89 (31)	3.53 (42)	3.23 (53)	4.35 (58)	8.39 (64)	0.35 (28)	4.34 (56)
▲ Blmbg. Barc. U.S. Aggregate	3.15 (19)	3.15 (19)	8.93 (27)	4.82 (33)	3.36 (49)	3.19 (55)	3.88 (73)	8.72 (58)	0.01 (37)	3.54 (69)
5th Percentile	8.36	8.36	16.10	8.36	5.99	6.29	7.93	22.04	1.73	12.12
1st Quartile	2.50	2.50	9.14	5.39	4.10	4.32	5.60	12.98	0.49	7.09
<b>Median</b>	<b>0.43</b>	<b>0.43</b>	<b>6.66</b>	<b>4.20</b>	<b>3.33</b>	<b>3.28</b>	<b>4.44</b>	<b>9.06</b>	<b>-0.38</b>	<b>4.74</b>
3rd Quartile	-1.50	-1.50	3.97	3.43	2.84	2.74	3.84	7.68	-2.54	3.32
95th Percentile	-4.96	-4.96	0.25	1.95	1.93	1.68	2.74	4.05	-5.82	1.66

gross of fees

Parentheses contain percentile rankings.

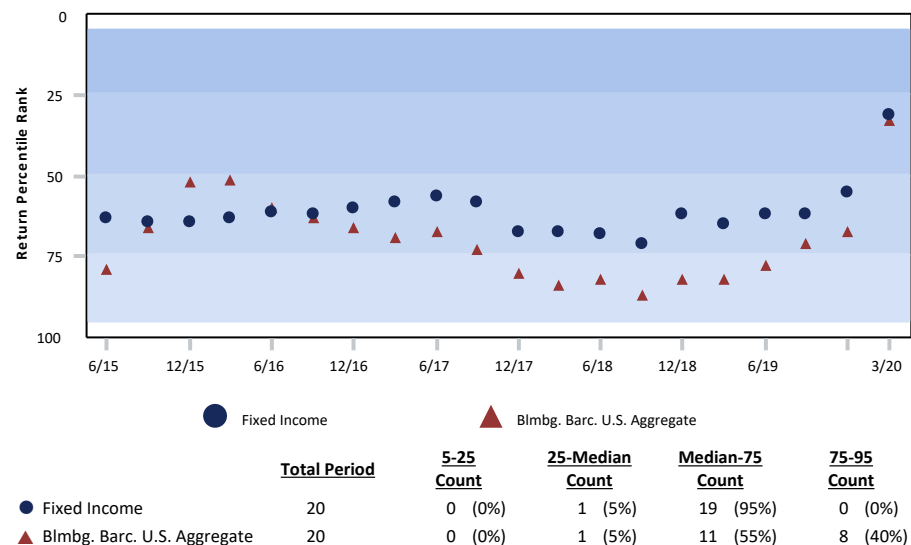


# Employees' Retirement System of the City of Norfolk

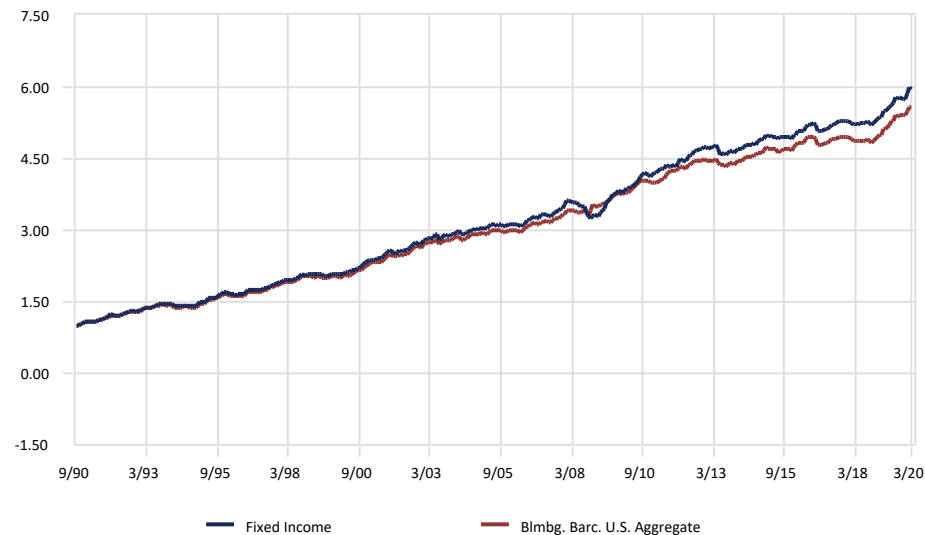
Fixed Income

March 31, 2020

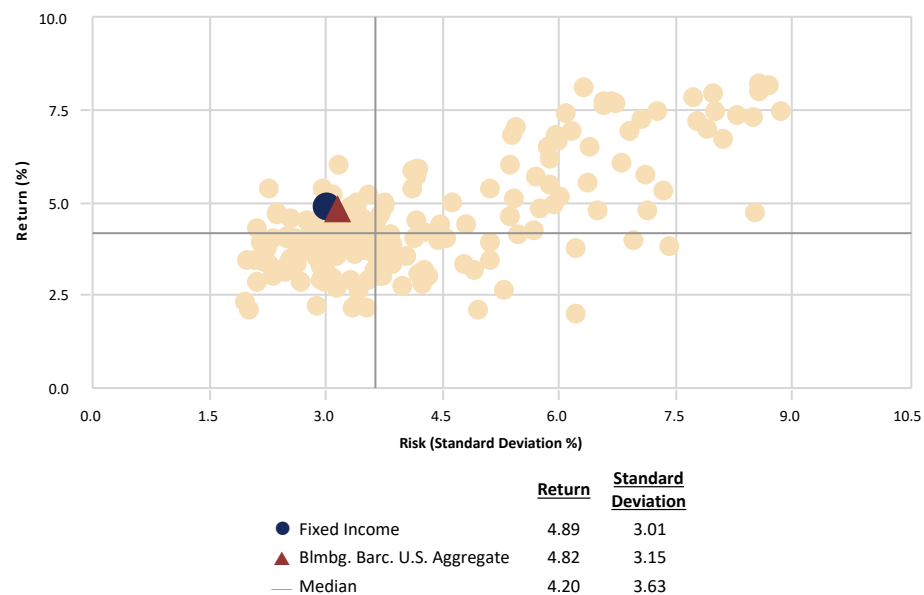
## 3 Year Rolling Return Rank



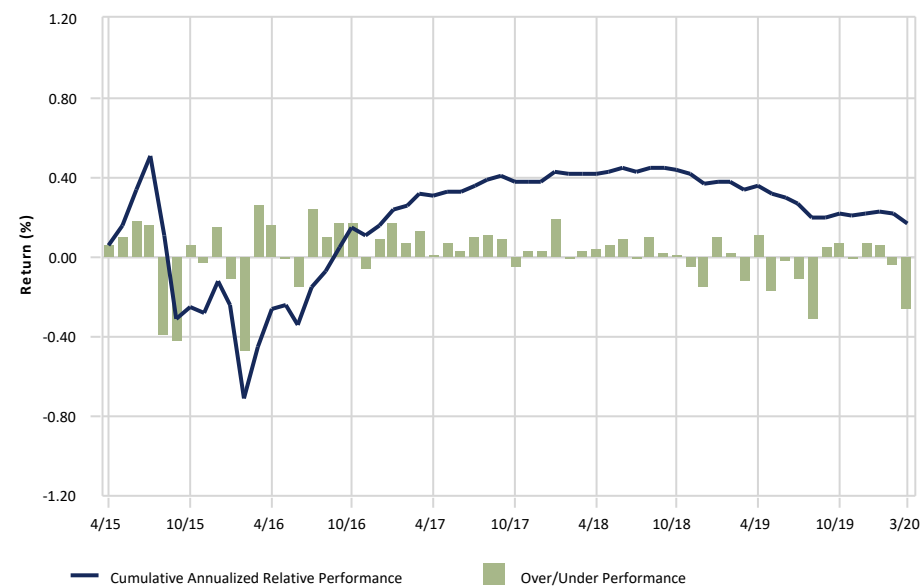
## Growth of \$1 - Since Inception (10/01/90)



## Risk vs. Return (04/01/17 - 03/31/20)



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

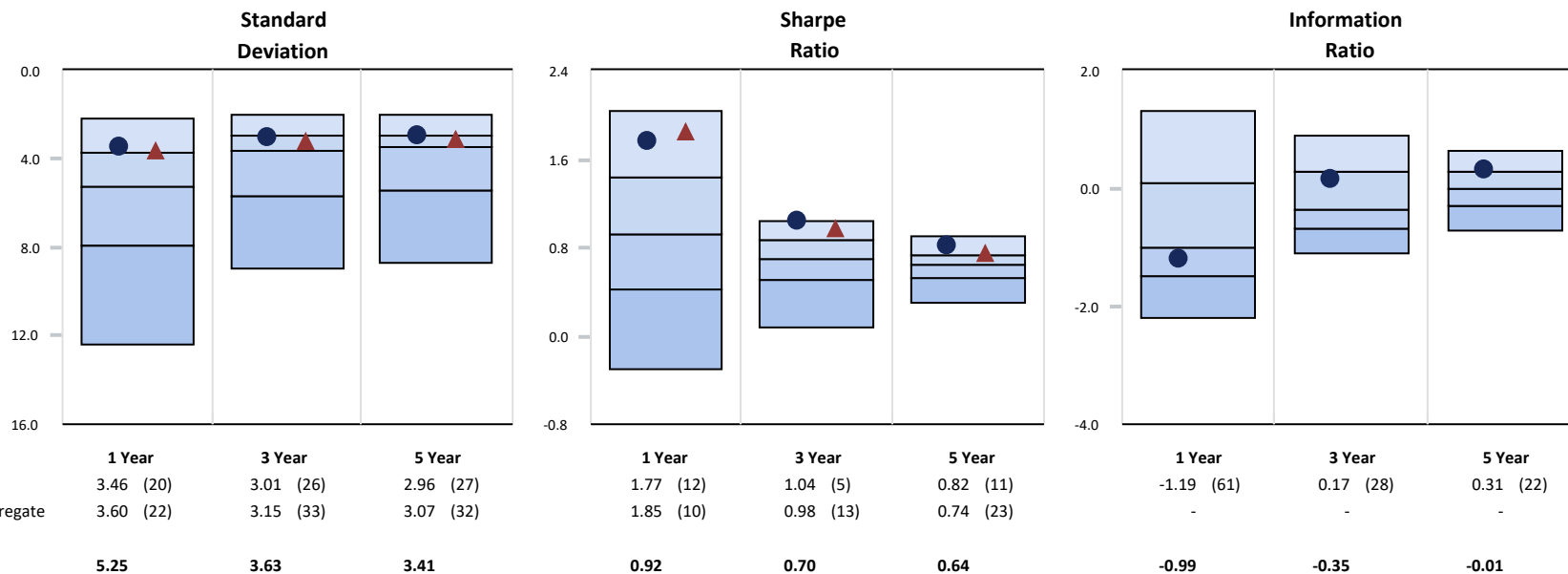


# Employees' Retirement System of the City of Norfolk

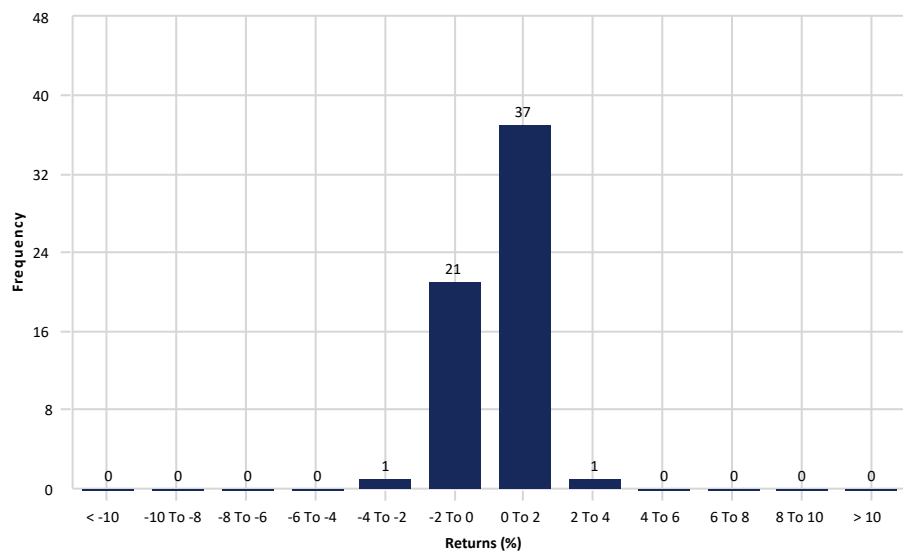
Fixed Income

March 31, 2020

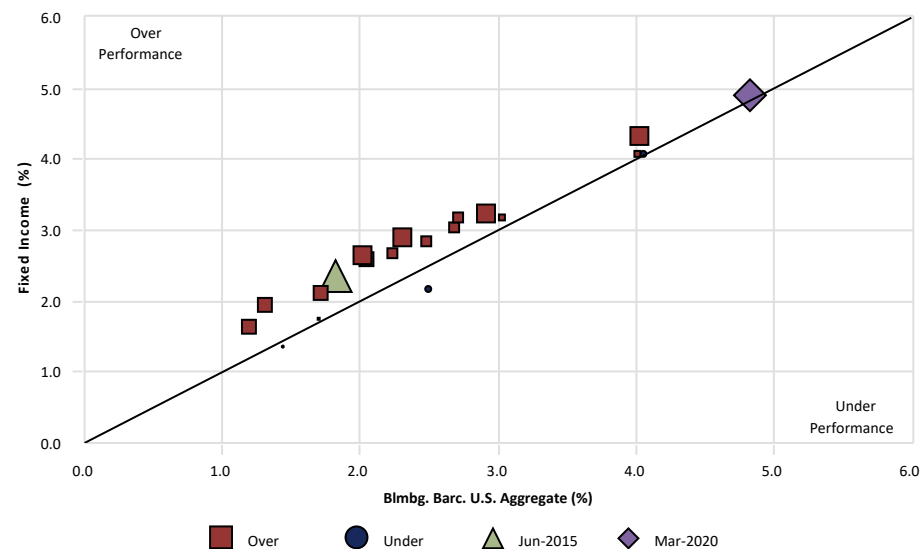
## Peer Group Analysis: All Master Trust-US Fixed Income Segment



## Monthly Distribution of Returns



## 3 Year Rolling Under/Over Performance



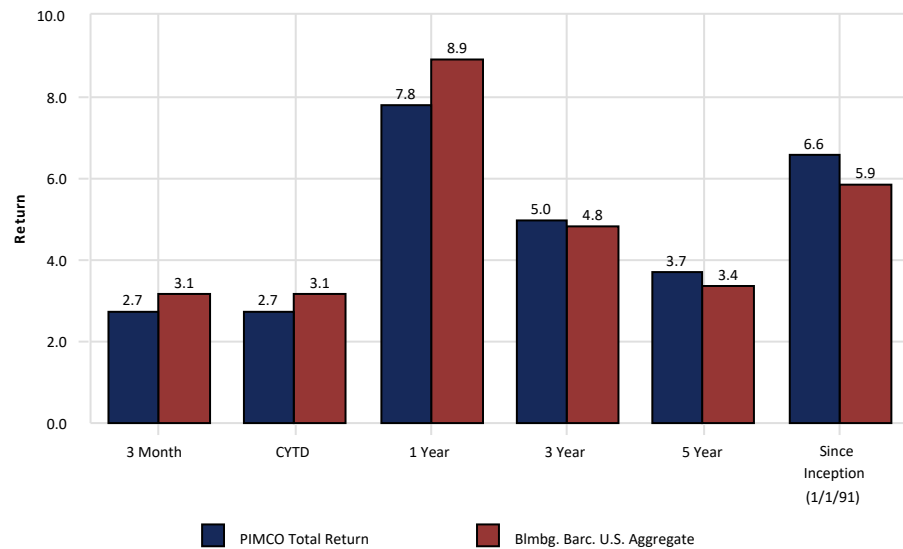


# Employees' Retirement System of the City of Norfolk

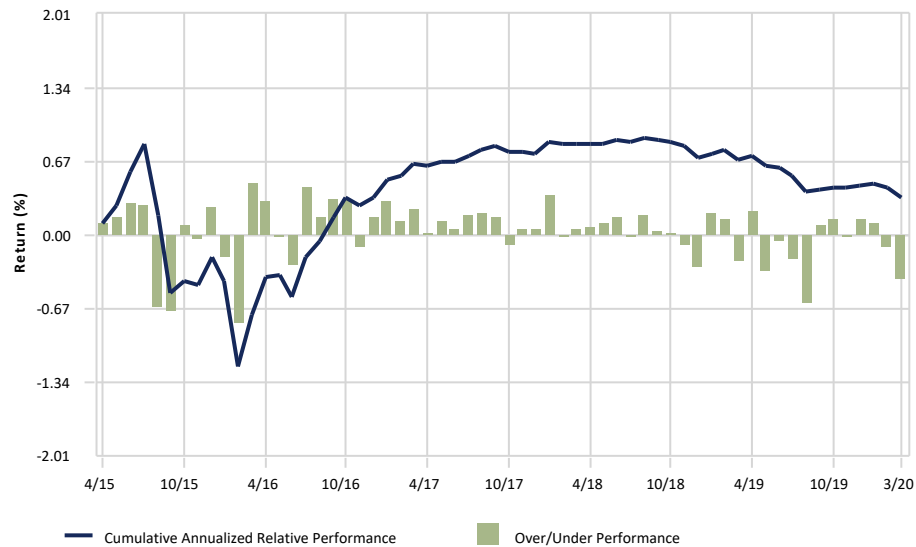
## PIMCO Total Return vs. IM U.S. Broad Market Core Fixed Income (SA+CF)

March 31, 2020

### Comparative Performance

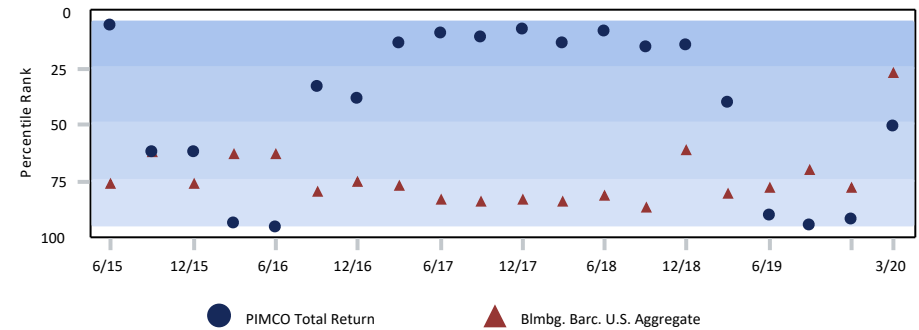


### Relative Performance vs Blmbg. Barc. U.S. Aggregate

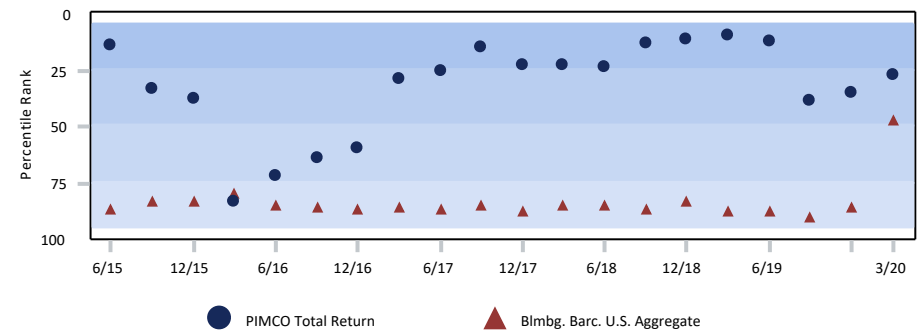


gross of fees

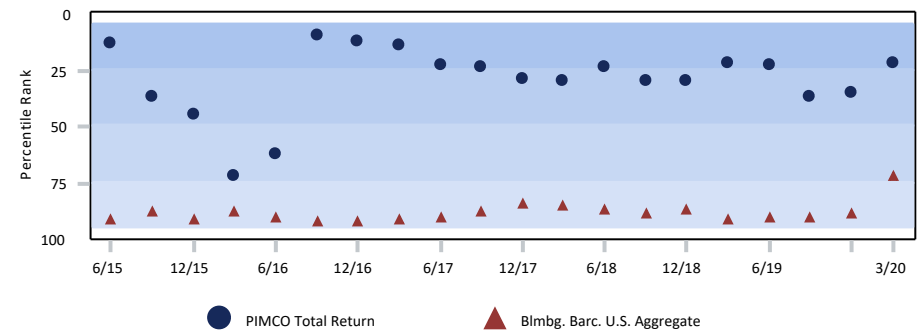
### 1 Year Rolling Percentile Ranking



### 3 Year Rolling Percentile Ranking



### 5 Year Rolling Percentile Ranking



# Employees' Retirement System of the City of Norfolk

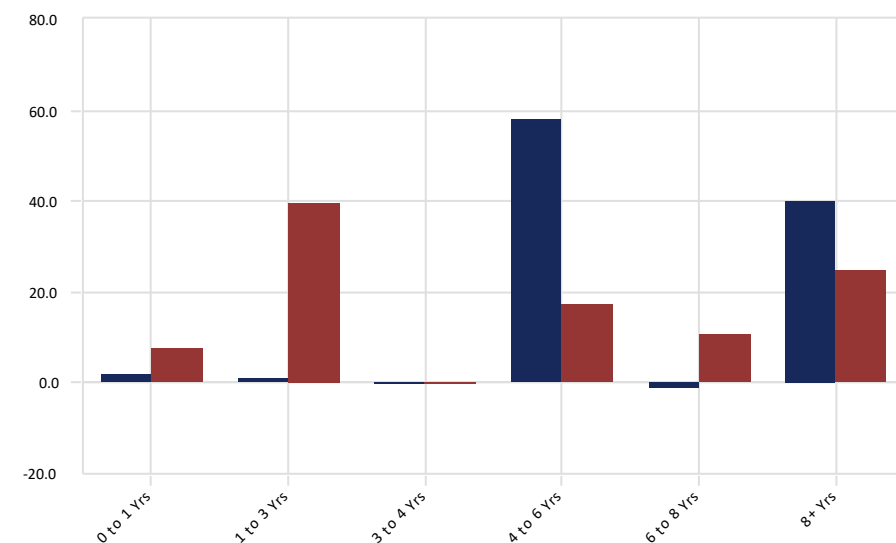
PIMCO Total Return vs. Blmbg. Barc. U.S. Aggregate

March 31, 2020

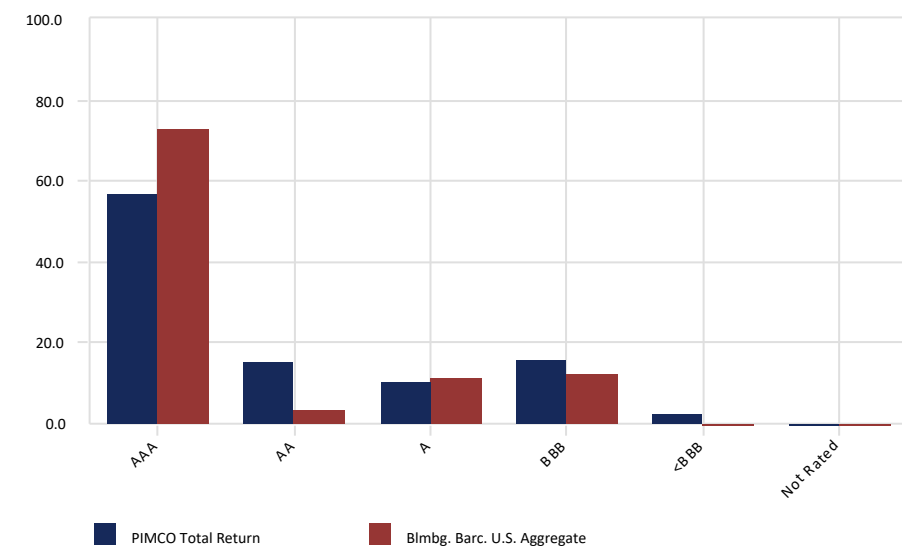
## Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.07	7.77
Avg. Quality	AA	Aa2
Coupon Rate (%)	3.16	3.14
Convexity	-	-
Effective Duration	5.22	5.69

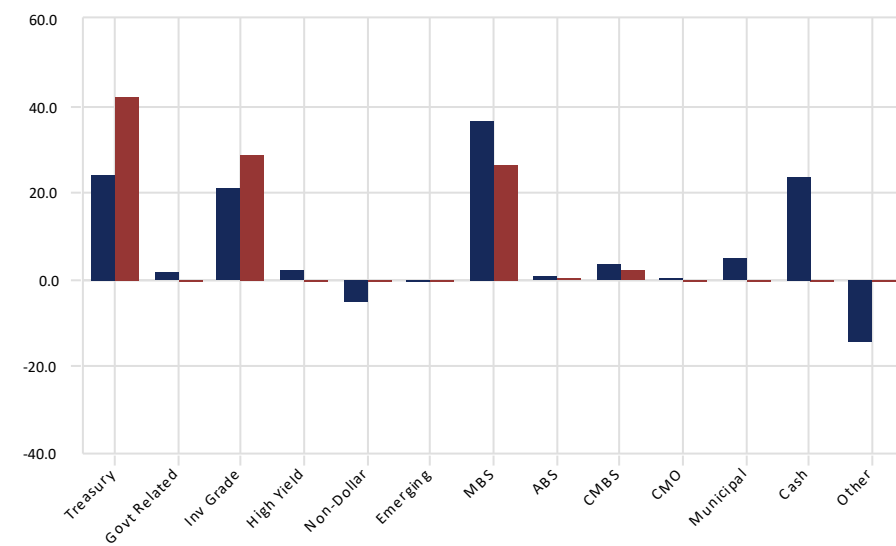
## Duration Distribution (%)



## Credit Quality Distribution (%)



## Sector Distribution (%)

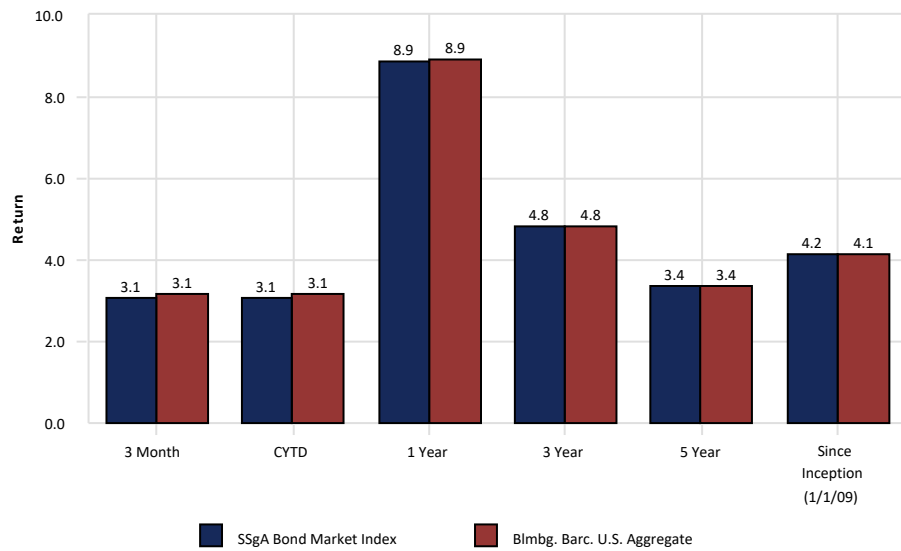


# Employees' Retirement System of the City of Norfolk

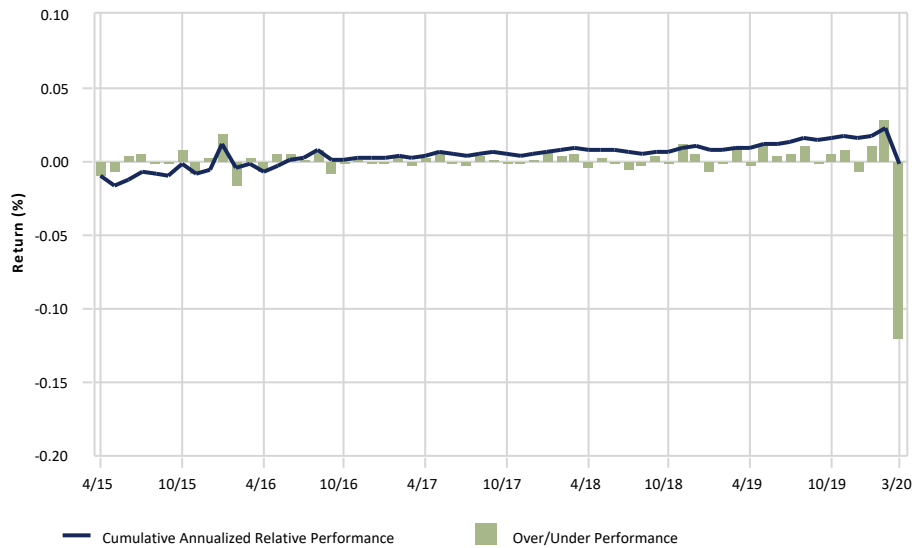
SSgA Bond Market Index vs. IM U.S. Broad Market Core Fixed Income (SA+CF)

March 31, 2020

## Comparative Performance

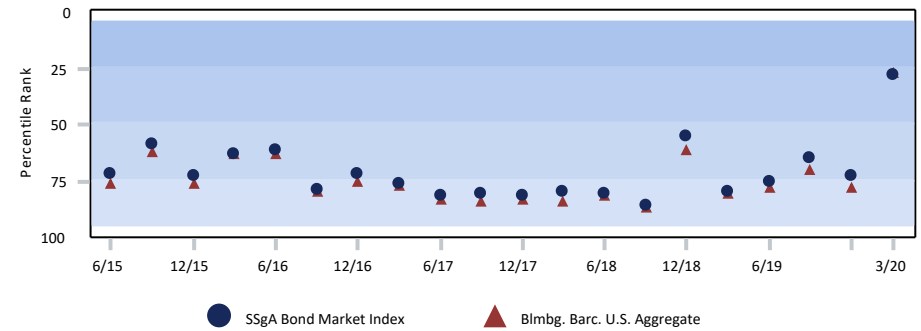


## Relative Performance vs Blmbg. Barc. U.S. Aggregate

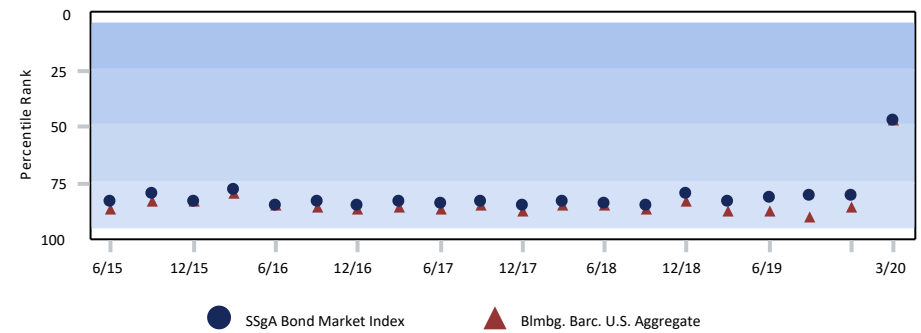


gross of fees

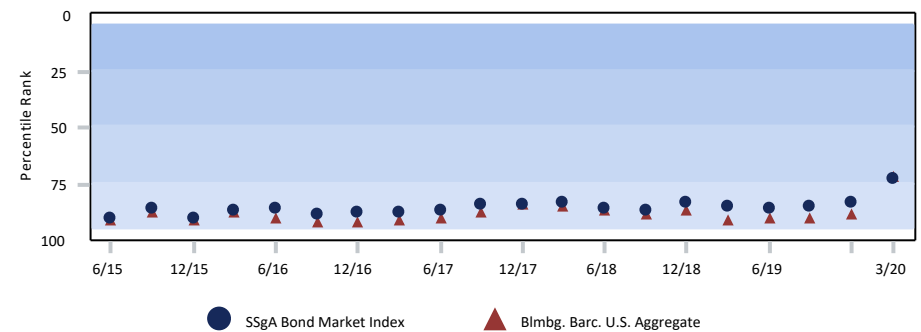
## 1 Year Rolling Percentile Ranking



## 3 Year Rolling Percentile Ranking



## 5 Year Rolling Percentile Ranking



# Employees' Retirement System of the City of Norfolk

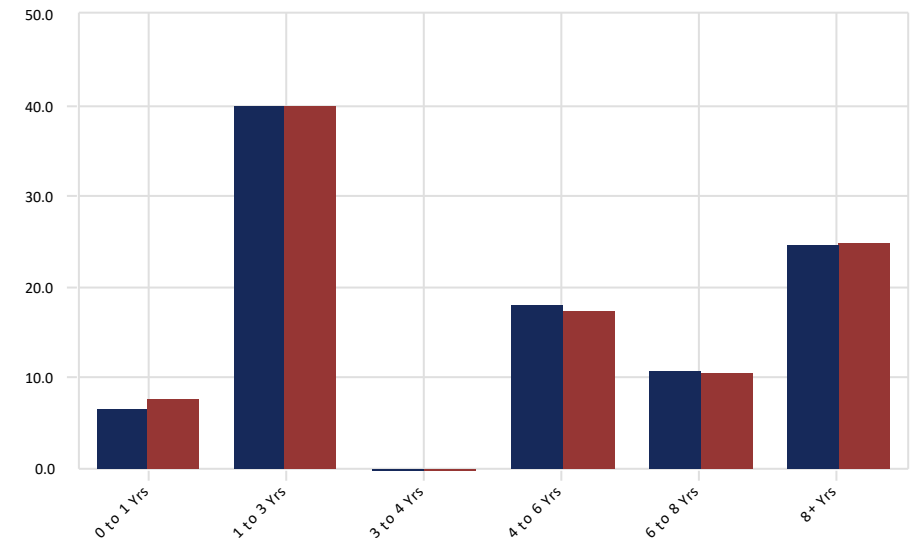
SSgA Bond Market Index vs. Blmbg. Barc. U.S. Aggregate

March 31, 2020

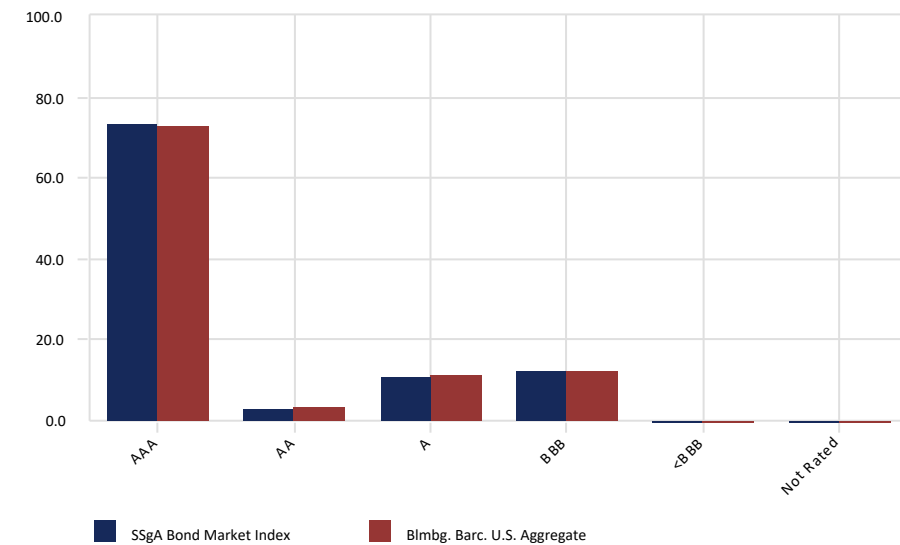
## Portfolio Characteristics

	<u>Portfolio</u>	<u>Benchmark</u>
Avg. Maturity	7.71	7.77
Avg. Quality	Aa2	Aa2
Yield To Maturity (%)	1.61	1.59
Modified Duration	-	-
Convexity	-	-

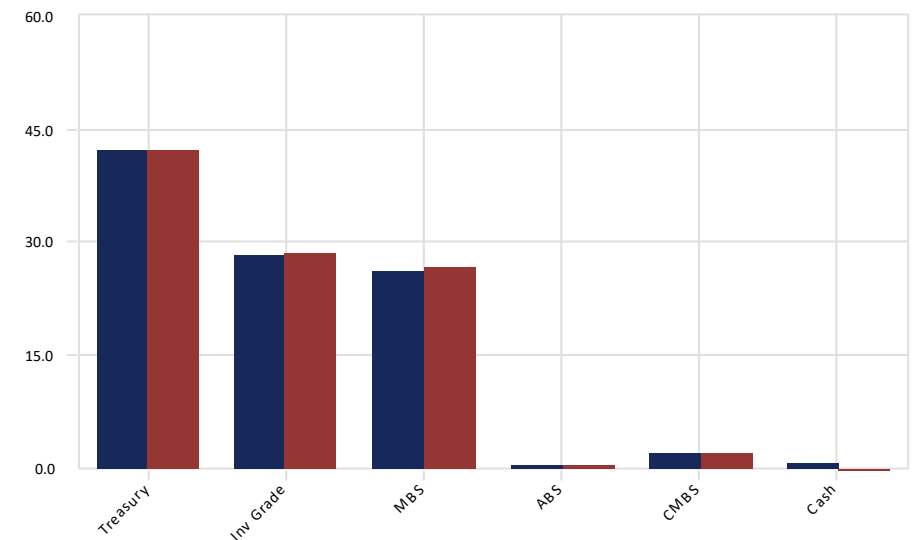
## Duration Distribution (%)



## Credit Quality Distribution (%)



## Sector Distribution (%)



## Real Estate

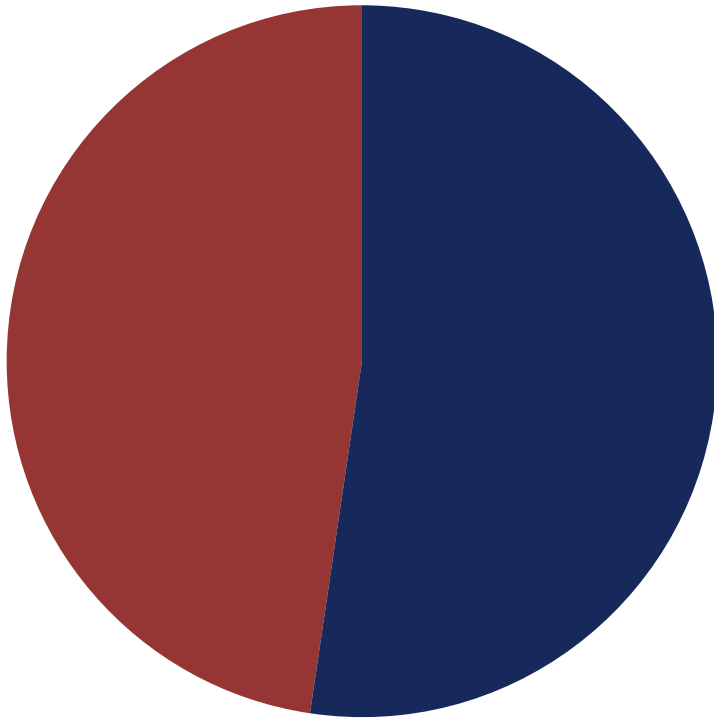
## Employees' Retirement System of the City of Norfolk

Asset Allocation By Manager - Real Estate

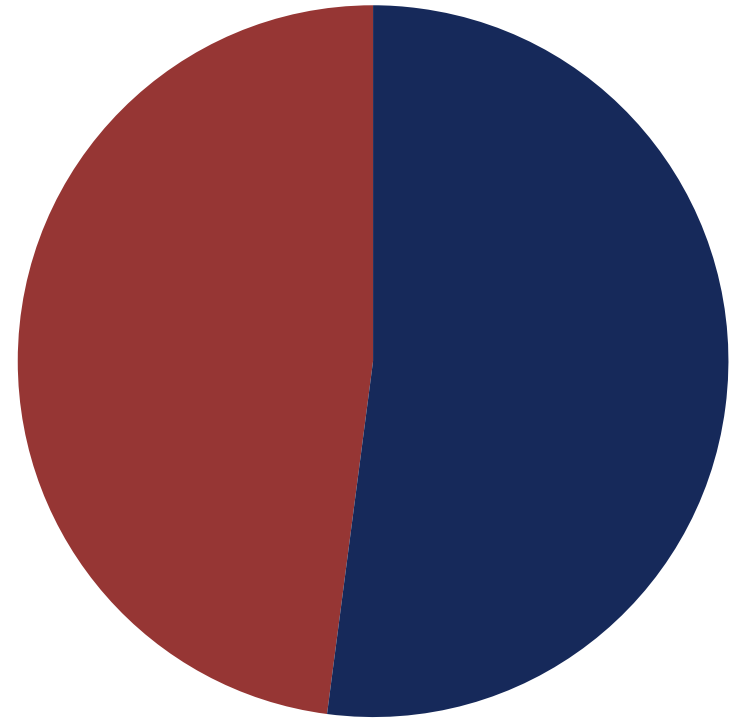
March 31, 2020

March 31, 2020 : \$83,816,713

December 31, 2019 : \$83,154,542



	Market Value (\$)	Allocation (%)
■ JP Morgan Asset Management Strategic Property Fund	43,869,511	52.34
■ UBS Trumbull Property Fund	39,947,201	47.66



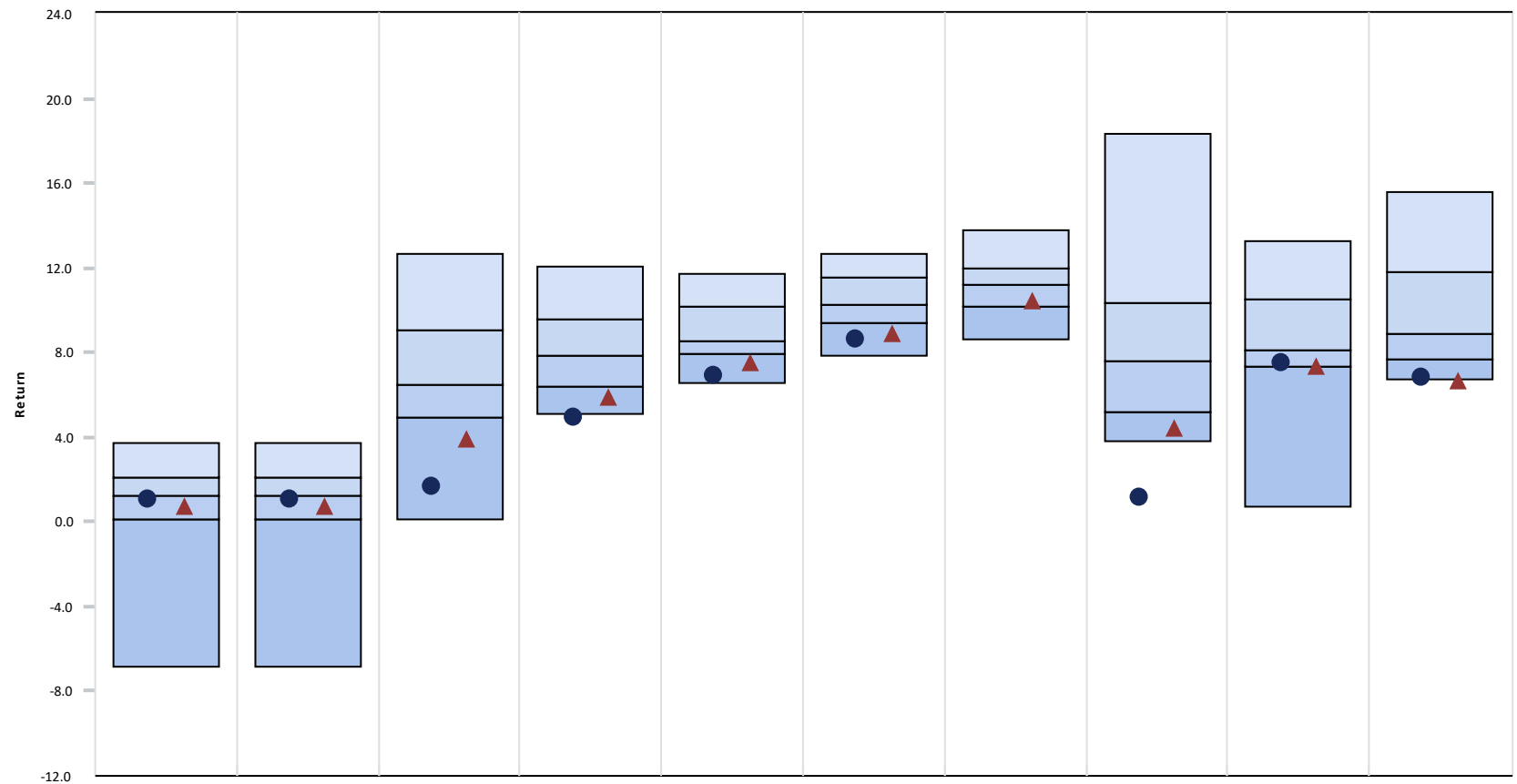
	Market Value (\$)	Allocation (%)
■ JP Morgan Asset Management Strategic Property Fund	43,297,922	52.07
■ UBS Trumbull Property Fund	39,856,620	47.93



# Employees' Retirement System of the City of Norfolk

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

March 31, 2020



	<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>2019</u>	<u>2018</u>	<u>2017</u>
● Real Estate	1.03 (59)	1.03 (59)	1.64 (93)	4.93 (97)	6.91 (90)	8.58 (88)	-	1.18 (100)	7.52 (70)	6.81 (93)
▲ NCREIF Fund Index-ODCE (Net)	0.75 (65)	0.75 (65)	3.93 (84)	5.85 (91)	7.48 (82)	8.91 (82)	10.42 (66)	4.39 (87)	7.36 (72)	6.66 (97)
5th Percentile	3.74	3.74	12.68	12.09	11.67	12.67	13.82	18.37	13.25	15.62
1st Quartile	2.13	2.13	9.05	9.59	10.14	11.53	11.98	10.38	10.48	11.83
<b>Median</b>	<b>1.23</b>	<b>1.23</b>	<b>6.51</b>	<b>7.84</b>	<b>8.57</b>	<b>10.27</b>	<b>11.22</b>	<b>7.60</b>	<b>8.13</b>	<b>8.92</b>
3rd Quartile	0.09	0.09	4.96	6.42	7.92	9.37	10.17	5.19	7.30	7.71
95th Percentile	-6.86	-6.86	0.12	5.10	6.53	7.87	8.64	3.84	0.70	6.70
Population	136	136	109	67	51	34	21	108	79	77

gross of fees

Parentheses contain percentile rankings.



## **Master Limited Partnerships**

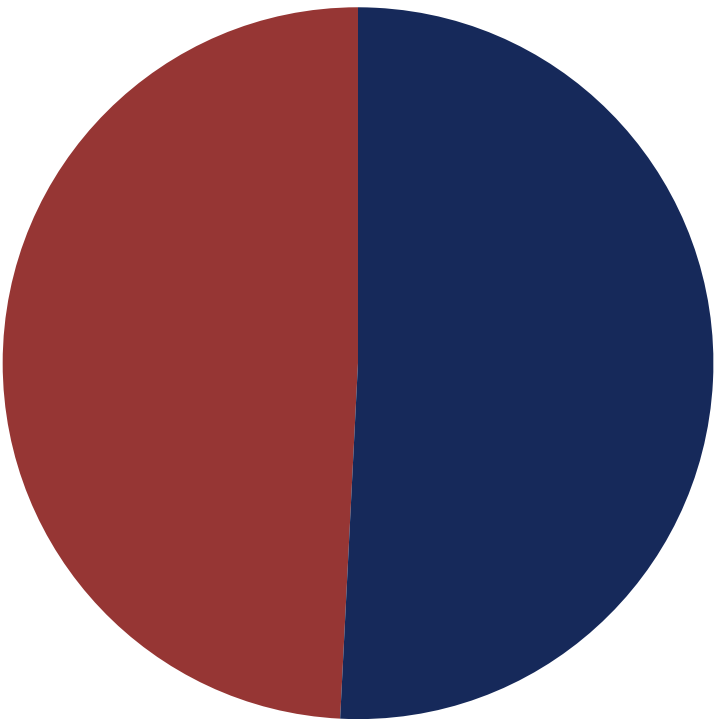


# Employees' Retirement System of the City of Norfolk

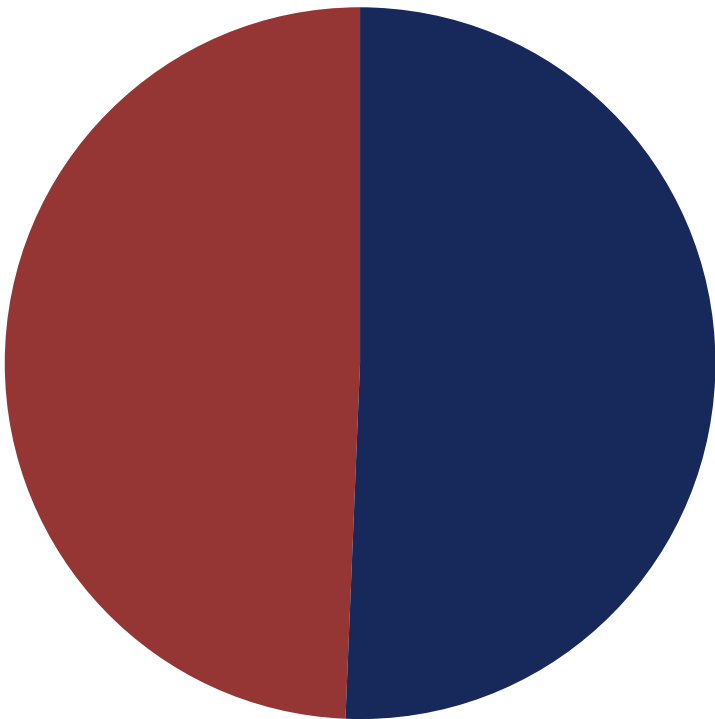
Asset Allocation By Manager - MLPs

March 31, 2020

March 31, 2020 : \$39,223,572	December 31, 2019 : \$76,948,958
-------------------------------	----------------------------------



	Market Value (\$)	Allocation (%)
Harvest MLP	19,926,029	50.80
Tortoise Capital Advisors	19,297,543	49.20



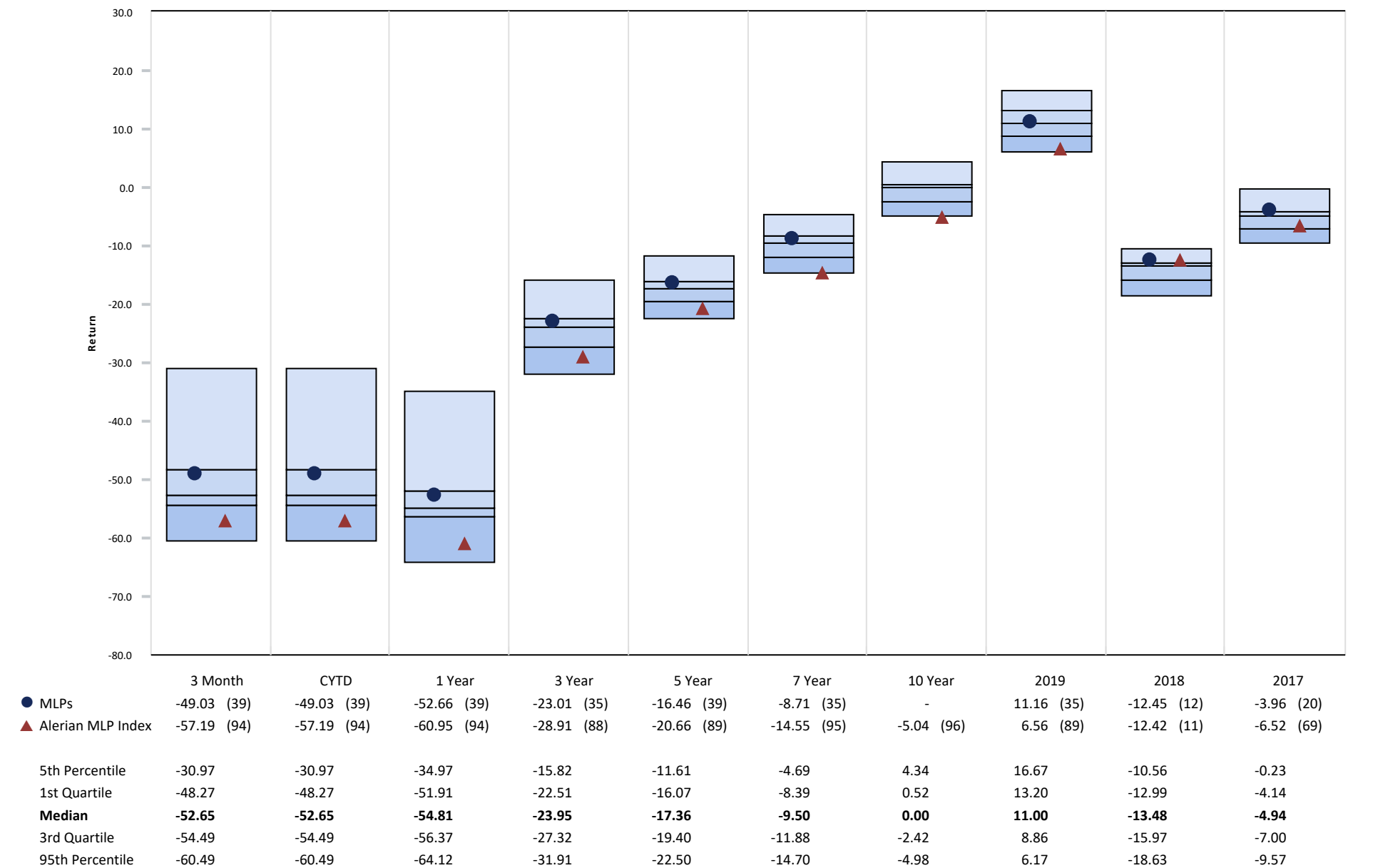
	Market Value (\$)	Allocation (%)
Harvest MLP	38,981,214	50.66
Tortoise Capital Advisors	37,967,744	49.34



# Employees' Retirement System of the City of Norfolk

MLPs vs. Master Limited Partnerships (SA+CF)

March 31, 2020



gross of fees

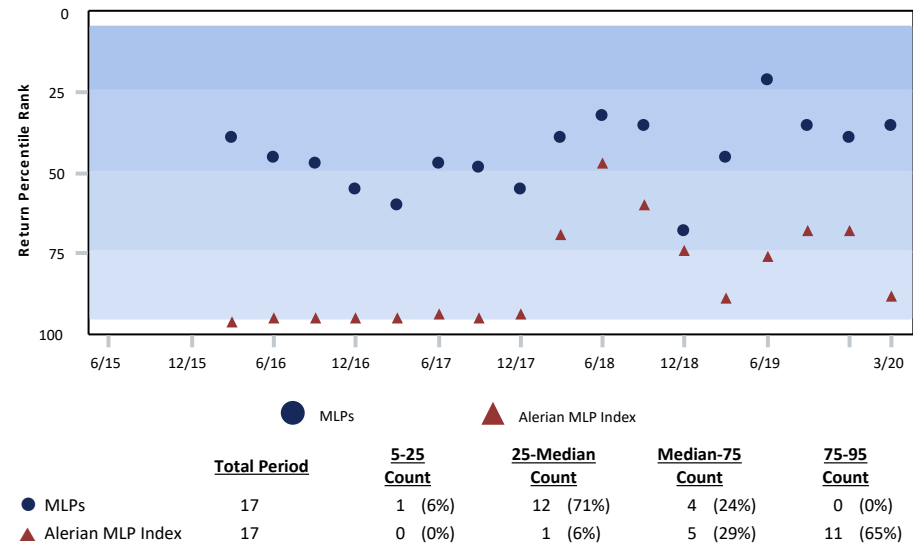


Employees' Retirement System of the City of Norfolk

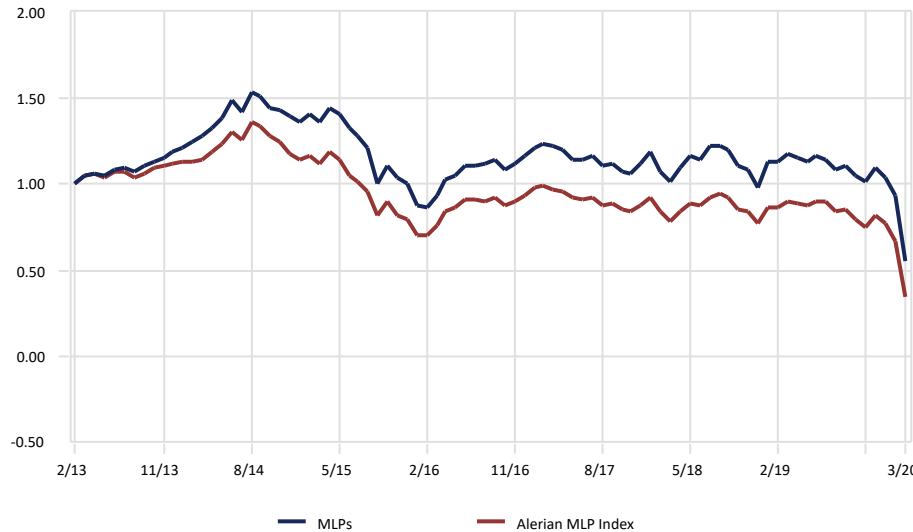
MLPs

March 31, 2020

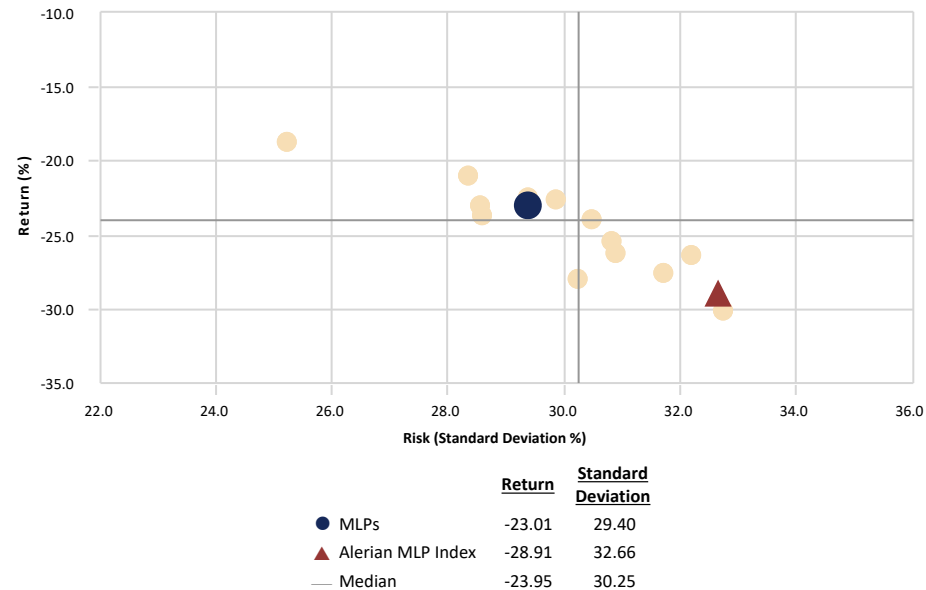
3 Year Rolling Return Rank



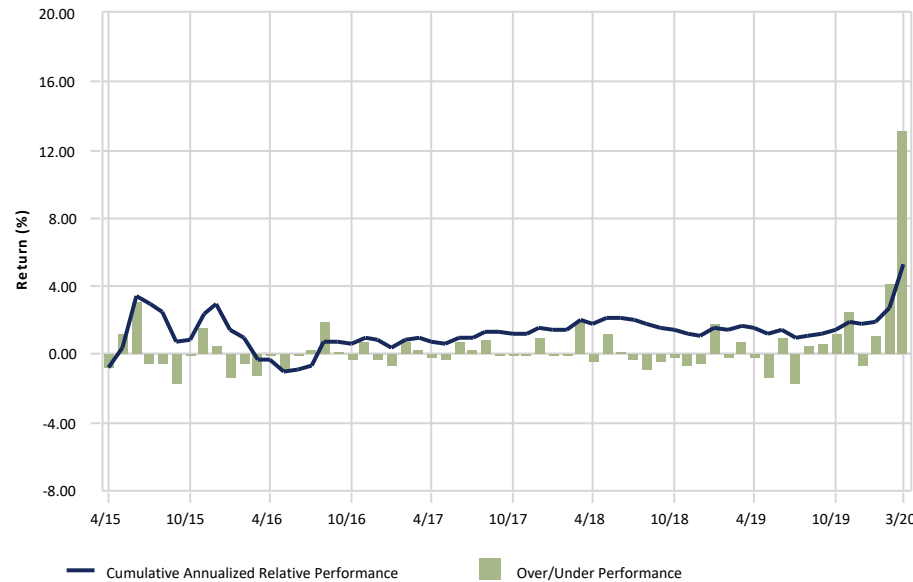
Growth of \$1 - Since Inception (03/01/13)



Risk vs. Return (04/01/17 - 03/31/20)



Relative Performance vs. Alerian MLP Index

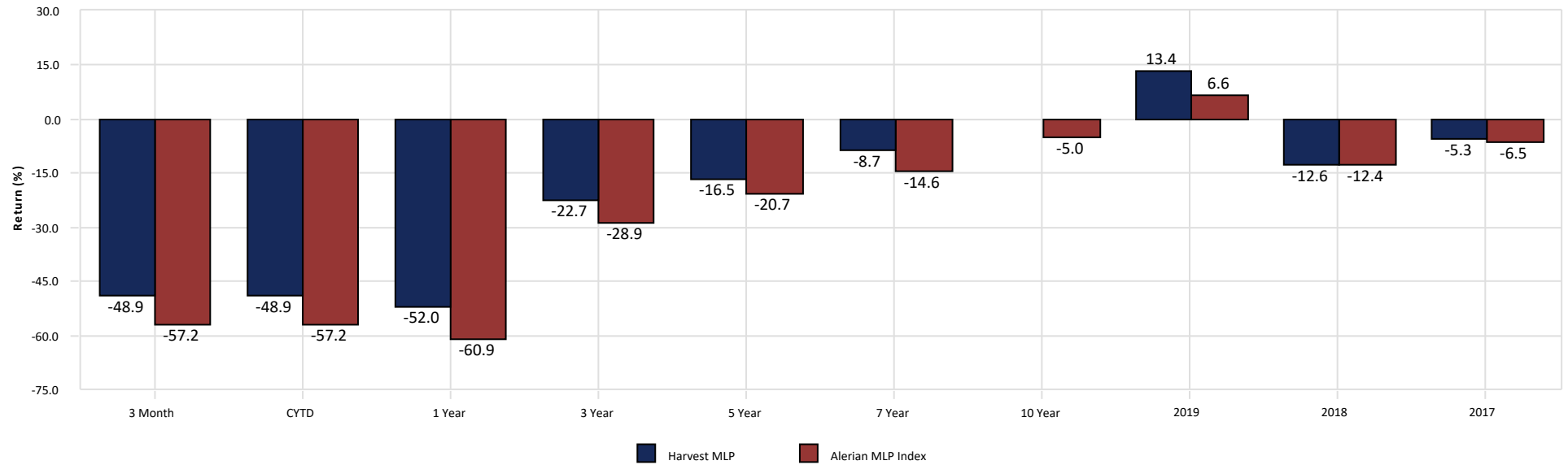


# Employees' Retirement System of the City of Norfolk

Harvest MLP

March 31, 2020

## Comparative Performance



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



## Relative Performance vs. Alerian MLP Index



gross of fees

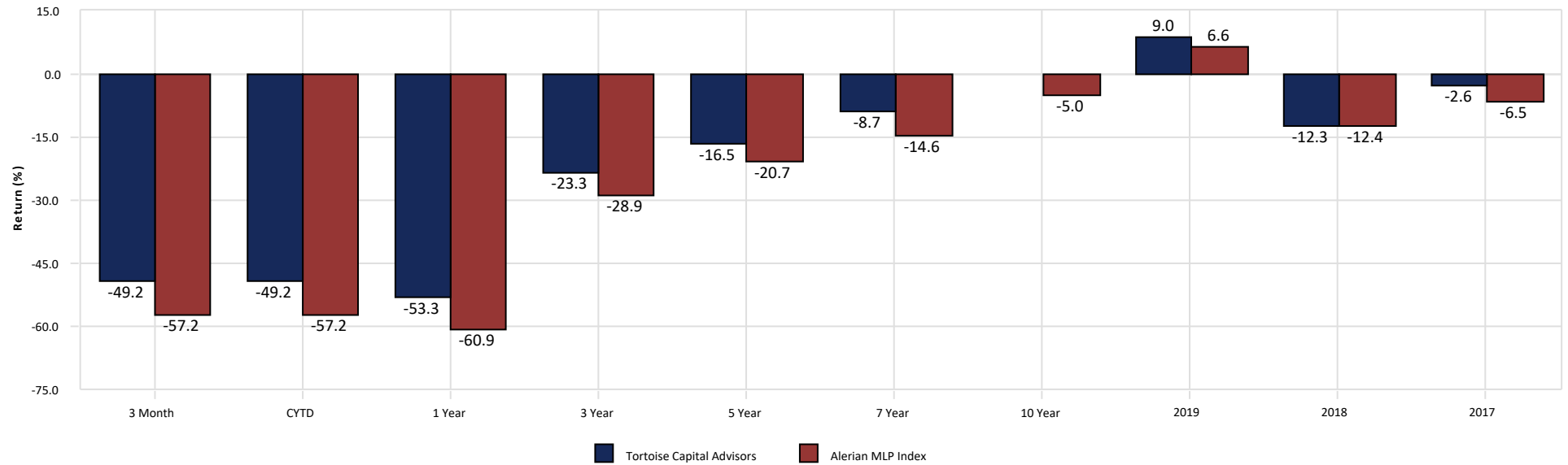


# Employees' Retirement System of the City of Norfolk

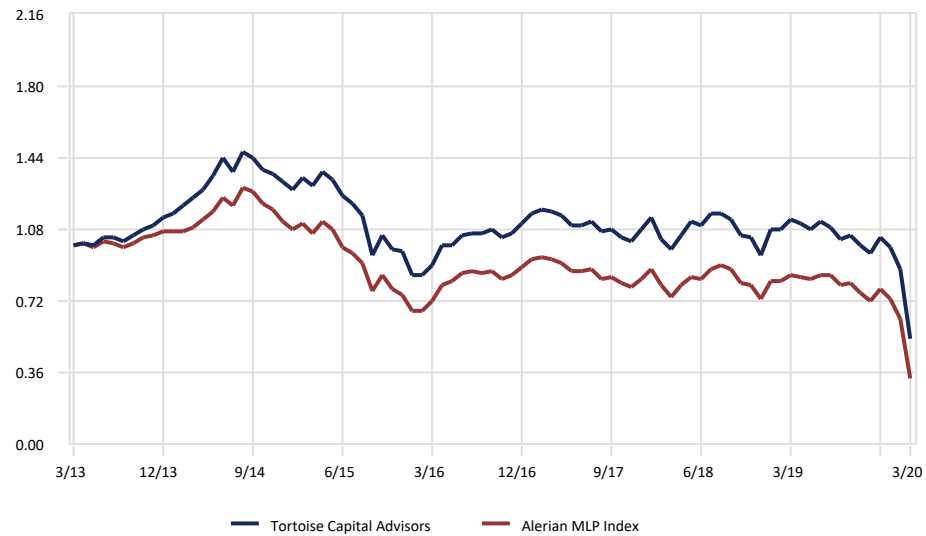
Tortoise Capital Advisors

March 31, 2020

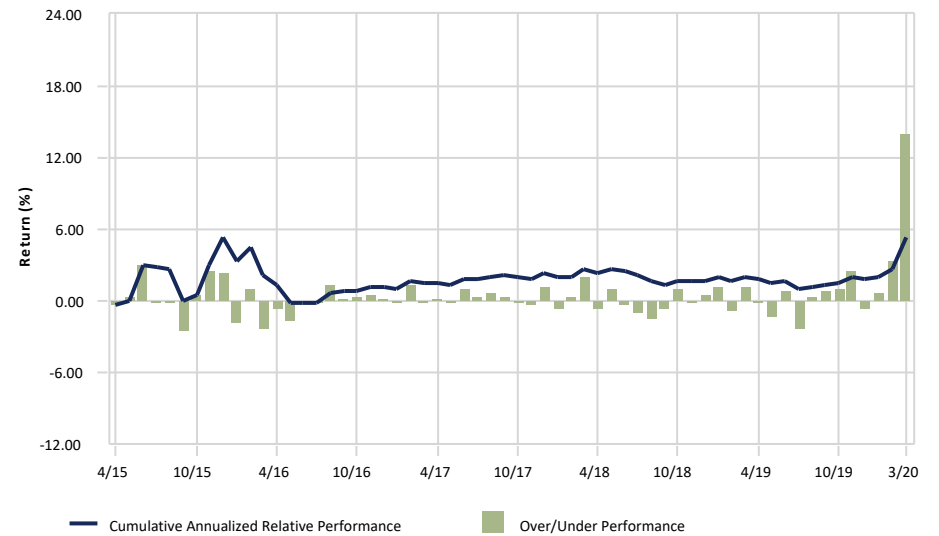
## Comparative Performance



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



## Relative Performance vs. Alerian MLP Index



gross of fees



## Appendix

## Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance (gross of fees)

March 31, 2020

	Asset \$	Asset %	3 Month	CYTD	1 Year	2 Year	3 Year	5 Year	Since Inception	Inception Date
<b>Total Fund</b>	<b>949,003,038</b>	<b>100.00</b>	<b>-15.10 (78)</b>	<b>-15.10 (78)</b>	<b>-8.14 (93)</b>	<b>-2.13 (89)</b>	<b>1.27 (94)</b>	<b>2.59 (90)</b>	<b>7.62 (70)</b>	<b>Oct-1990</b>
<i>Total Fund Policy</i>			-13.34	-13.34	-4.60	-0.83	2.58	3.11	7.61	
Excess Return			-1.76	-1.76	-3.54	-1.30	-1.31	-0.52	0.01	
<i>Total Fund Strategy Index</i>			-16.49	-16.49	-9.63	-2.92	0.38	1.88	7.43	
Excess Return			1.39	1.39	1.49	0.79	0.89	0.71	0.19	
 Global Equity	 488,955,908	 51.52	 -22.31 (62)	 -22.31 (62)	 -12.30 (61)	 -5.28 (60)	 1.20 (57)	 2.96 (53)	 8.31 (67)	 Oct-1990
<i>Global Equity Policy</i>			-22.44	-22.44	-12.73	-5.70	0.76	2.51	8.41	
Excess Return			0.13	0.13	0.43	0.42	0.44	0.45	-0.10	
 Fixed Income	 336,660,936	 35.48	 2.90 (21)	 2.90 (21)	 8.34 (32)	 6.45 (29)	 4.89 (31)	 3.53 (42)	 6.22 (-)	 Oct-1990
<i>Blmbg. Barc. U.S. Aggregate</i>			3.15	3.15	8.93	6.68	4.82	3.36	5.99	
Excess Return			-0.25	-0.25	-0.59	-0.23	0.07	0.17	0.23	
 Real Estate	 83,816,713	 8.83	 1.03 (59)	 1.03 (59)	 1.64 (93)	 3.78 (93)	 4.93 (97)	 6.91 (90)	 9.53 (79)	 Apr-2011
<i>NCREIF Fund Index-ODCE (Net)</i>			0.75	0.75	3.93	5.23	5.85	7.48	9.50	
Excess Return			0.28	0.28	-2.29	-1.45	-0.92	-0.57	0.03	
 MLPs	 39,223,572	 4.13	 -49.03 (37)	 -49.03 (37)	 -52.66 (38)	 -25.99 (39)	 -23.01 (36)	 -16.46 (37)	 -7.94 (37)	 Mar-2013
<i>Alerian MLP Index</i>			-57.19	-57.19	-60.95	-32.95	-28.91	-20.66	-13.76	
Excess Return			8.16	8.16	8.29	6.96	5.90	4.20	5.82	
 Cash	 345,909	 0.04								



## Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance (gross of fees)

March 31, 2020

	Asset \$	3 Month	CYTD	1 Year	2 Year	3 Year	5 Year	Since Inception	Inception Date
<b>Global Equity</b>									
SSgA MSCI ACWI IMI Index Fund	488,955,908	-22.31 (62)	-22.31 (62)	-12.30 (61)	-5.28 (60)	1.20 (57)	-	4.35 (52)	May-2016
MSCI AC World IMI (Net)		-22.44	-22.44	-12.73	-5.70	0.76	-	3.90	
Excess Return		0.13	0.13	0.43	0.42	0.44	-	0.45	
<b>Fixed Income</b>									
PIMCO Total Return	168,020,061	2.74 (34)	2.74 (34)	7.82 (51)	6.29 (52)	4.98 (27)	3.72 (22)	6.60 (8)	Jan-1991
Blmbg. Barc. U.S. Aggregate		3.15	3.15	8.93	6.68	4.82	3.36	5.87	
Excess Return		-0.41	-0.41	-1.11	-0.39	0.16	0.36	0.73	
SSgA Bond Market Index	168,640,875	3.06 (28)	3.06 (28)	8.88 (28)	6.67 (37)	4.82 (47)	3.36 (73)	4.15 (92)	Jan-2009
Blmbg. Barc. U.S. Aggregate		3.15	3.15	8.93	6.68	4.82	3.36	4.14	
Excess Return		-0.09	-0.09	-0.05	-0.01	0.00	0.00	0.01	
<b>Real Assets</b>									
JP Morgan Asset Mgmt Strategic Property Fund	43,869,511	1.57 (22)	1.57 (22)	5.56 (59)	5.87 (74)	6.41 (66)	8.09 (67)	10.62 (65)	Apr-2011
NCREIF Fund Index-ODCE (Net)		0.75	0.75	3.93	5.23	5.85	7.48	9.50	
Excess Return		0.82	0.82	1.63	0.64	0.56	0.61	1.12	
UBS Trumbull Property Fund	39,947,201	0.44 (74)	0.44 (74)	-2.34 (100)	1.62 (95)	3.39 (95)	5.59 (95)	7.54 (-)	Dec-2011
NCREIF Fund Index-ODCE (Net)		0.75	0.75	3.93	5.23	5.85	7.48	9.12	
Excess Return		-0.31	-0.31	-6.27	-3.61	-2.46	-1.89	-1.58	
<b>MLPs</b>									
Harvest MLP	19,926,029	-48.88 (36)	-48.88 (36)	-52.04 (25)	-25.27 (24)	-22.70 (30)	-16.46 (37)	-7.88 (36)	Mar-2013
Alerian MLP Index		-57.19	-57.19	-60.95	-32.95	-28.91	-20.66	-13.76	
Excess Return		8.31	8.31	8.91	7.68	6.21	4.20	5.88	
Tortoise Capital Advisors	19,297,543	-49.17 (38)	-49.17 (38)	-53.25 (45)	-26.68 (44)	-23.29 (39)	-16.47 (37)	-8.75 (37)	Apr-2013
Alerian MLP Index		-57.19	-57.19	-60.95	-32.95	-28.91	-20.66	-14.55	
Excess Return		8.02	8.02	7.70	6.27	5.62	4.19	5.80	





## Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance - (net of fees)

March 31, 2020

	Asset \$	Asset %	1 Month	3 Month	CYTD	FYTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
<b>Total Fund Composite</b>	<b>949,003,038</b>	<b>100.00</b>	<b>-10.52</b>	<b>-15.13</b>	<b>-15.13</b>	<b>-10.70</b>	<b>-8.30</b>	<b>1.09</b>	<b>2.43</b>	<b>7.42</b>	<b>Oct -1990</b>
<i>Total Fund Policy</i>			-9.22	-13.34	-13.34	-7.72	-4.60	2.58	3.11	7.61	
Excess Return			-1.30	-1.79	-1.79	-2.98	-3.70	-1.49	-0.68	-0.19	
<i>Total Fund Strategy Index</i>			-11.58	-16.49	-16.49	-12.22	-9.63	0.38	1.88	7.43	
Excess Return			1.06	1.36	1.36	1.52	1.33	0.71	0.55	-0.01	
Global Equity	488,955,908	51.52	-14.40	-22.32	-22.32	-15.32	-12.34	1.16	2.93	8.14	Oct -1990
<i>Global Equity Policy</i>			-14.39	-22.44	-22.44	-15.57	-12.73	0.76	2.51	8.41	
Excess Return			-0.01	0.12	0.12	0.25	0.39	0.40	0.42	-0.27	
Fixed Income	336,660,936	35.48	-0.85	2.90	2.90	5.08	8.23	4.76	3.42	6.03	Oct -1990
<i>Blmbg. Barc. U.S. Aggregate</i>			-0.59	3.15	3.15	5.68	8.93	4.82	3.36	5.99	
Excess Return			-0.26	-0.25	-0.25	-0.60	-0.70	-0.06	0.06	0.04	
Real Estate	83,816,713	8.83	0.48	0.80	0.80	2.22	0.71	4.02	5.92	8.52	Apr -2011
<i>NCREIF Fund Index-ODCE (VW) (Net)</i>			0.75	0.75	0.75	3.13	3.93	5.85	7.48	9.50	
Excess Return			-0.27	0.05	0.05	-0.91	-3.22	-1.83	-1.56	-0.98	
MLPs	39,223,572	4.13	-40.32	-49.08	-49.08	-52.68	-52.98	-23.57	-17.05	-8.55	Mar -2013
<i>Alerian MLP Index</i>			-47.23	-57.19	-57.19	-61.00	-60.95	-28.91	-20.66	-13.76	
Excess Return			6.91	8.11	8.11	8.32	7.97	5.34	3.61	5.21	
Cash	345,909	0.04									



## Employees' Retirement System of the City of Norfolk

Asset Allocation & Performance - (net of fees)

March 31, 2020

	Asset \$	Asset %	1 Month	3 Month	CYTD	FYTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
<b>Global Equity</b>											
SSgA MSCI ACWI IMI Index Fund	488,955,908	51.52	-14.40	-22.32	-22.32	-15.32	-12.34	1.16	-	4.32	May -2016
MSCI AC World IMI (Net)			-14.39	-22.44	-22.44	-15.57	-12.73	0.76	-	3.90	
Excess Return			-0.01	0.12	0.12	0.25	0.39	0.40	-	0.42	
<b>Fixed Income</b>											
PIMCO Total Return	168,020,061	17.70	-0.98	2.74	2.74	4.57	7.61	4.74	3.52	6.35	Jan -1991
Blmbg. Barc. U.S. Aggregate			-0.59	3.15	3.15	5.68	8.93	4.82	3.36	5.87	
Excess Return			-0.39	-0.41	-0.41	-1.11	-1.32	-0.08	0.16	0.48	
SSgA Bond Market Index	168,640,875	17.77	-0.71	3.06	3.06	5.60	8.86	4.80	3.34	4.14	Jan -2009
Blmbg. Barc. U.S. Aggregate			-0.59	3.15	3.15	5.68	8.93	4.82	3.36	4.14	
Excess Return			-0.12	-0.09	-0.09	-0.08	-0.07	-0.02	-0.02	0.00	
<b>Real Estate</b>											
JP Morgan Asset Mgmt Strategic Property Fund	43,869,511	4.62	0.71	1.32	1.32	3.59	4.52	5.46	7.09	9.63	Apr -2011
NCREIF Fund Index-ODCE (VW) (Net)			0.75	0.75	0.75	3.13	3.93	5.85	7.48	9.50	
Excess Return			-0.04	0.57	0.57	0.46	0.59	-0.39	-0.39	0.13	
UBS Trumbull Property Fund	39,947,201	4.21	0.23	0.23	0.23	0.75	-3.18	2.53	4.62	6.55	Jan -2012
NCREIF Fund Index-ODCE (VW) (Net)			0.75	0.75	0.75	3.13	3.93	5.85	7.48	9.05	
Excess Return			-0.52	-0.52	-0.52	-2.38	-7.11	-3.32	-2.86	-2.50	
<b>MLPs</b>											
Harvest MLP	19,926,029	2.10	-40.78	-48.88	-48.88	-52.11	-52.30	-23.24	-17.04	-8.48	Mar -2013
Alerian MLP Index			-47.23	-57.19	-57.19	-61.00	-60.95	-28.91	-20.66	-13.76	
Excess Return			6.45	8.31	8.31	8.89	8.65	5.67	3.62	5.28	
Tortoise Capital Advisors	19,297,543	2.03	-39.83	-49.27	-49.27	-53.22	-53.61	-23.87	-17.07	-9.38	Apr -2013
Alerian MLP Index			-47.23	-57.19	-57.19	-61.00	-60.95	-28.91	-20.66	-14.55	
Excess Return			7.40	7.92	7.92	7.78	7.34	5.04	3.59	5.17	



## Employees' Retirement System of the City of Norfolk

Fee Schedule

March 31, 2020

	Fee Schedule	Market Value As of 03/31/2020 (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
<b>Total Fund</b>		<b>949,003,038</b>	<b>1,972,640</b>	<b>0.21</b>
<b>Global Equity</b>		<b>488,955,908</b>	<b>195,582</b>	<b>0.04</b>
SSgA MSCI ACWI IMI Index Fund	0.04 % of Assets	488,955,908	195,582	0.04
<b>Fixed Income</b>		<b>336,660,936</b>	<b>722,610</b>	<b>0.21</b>
PIMCO Total Return	0.41 % of Assets	168,020,061	688,882	0.41
SSgA Bond Market Index	0.02 % of Assets	168,640,875	33,728	0.02
<b>Real Assets</b>		<b>123,040,285</b>	<b>1,054,447</b>	<b>0.86</b>
<b>Real Estate</b>		<b>83,816,713</b>	<b>760,270</b>	<b>0.91</b>
JP Morgan Strategic Property Fund	1.00 % of Assets	43,869,511	438,695	1.00
UBS Trumbull Property Fund	0.81 % of Assets	39,947,201	321,575	0.81
<b>MLPs</b>		<b>39,223,572</b>	<b>294,177</b>	<b>0.75</b>
Harvest MLP	0.75 % of Assets	19,926,029	149,445	0.75
Tortoise Capital Advisors	0.75 % of Assets	19,297,543	144,732	0.75
Cash		345,909	-	-

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, 2020

	Market Value As of 01/01/2020	Net Transfers	Contributions	Distributions	Mgmt Fees	Income	Apprec./ Deprec.	Market Value As of 03/31/2020
<b>Total Fund Composite</b>	<b>1,139,814,463</b>	<b>-</b>	<b>71,187</b>	<b>-21,100,000</b>	<b>-338,275</b>	<b>12,333,401</b>	<b>-181,777,738</b>	<b>949,003,038</b>
<b>Global Equity</b>	<b>652,198,055</b>	<b>-21,100,000</b>	<b>-</b>	<b>-</b>	<b>-67,432</b>	<b>-</b>	<b>-142,074,716</b>	<b>488,955,908</b>
SSgA MSCI ACWI IMI Index	652,198,055	-21,100,000	-	-	-67,432	-	-142,074,716	488,955,908
<b>Fixed Income</b>	<b>327,169,943</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8,187</b>	<b>10,214,184</b>	<b>-715,004</b>	<b>336,660,936</b>
PIMCO Total Return	163,535,203	-	-	-	-	10,214,184	-5,729,327	168,020,061
SSgA Bond Market Index	163,634,740	-	-	-	-8,187	-	5,014,323	168,640,875
<b>Real Estate</b>	<b>83,154,542</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-191,470</b>	<b>724,173</b>	<b>129,468</b>	<b>83,816,713</b>
JP Morgan Strategic Property	43,297,922	-	-	-	-106,080	304,892	372,778	43,869,511
UBS Trumbull Property	39,856,620	-	-	-	-85,390	419,281	-243,310	39,947,201
<b>MLPs</b>	<b>76,948,958</b>	<b>-</b>	<b>71,187</b>	<b>-</b>	<b>-71,187</b>	<b>1,391,945</b>	<b>-39,117,331</b>	<b>39,223,572</b>
Harvest MLP	38,981,214	-	-	-	-	704,558	-19,759,743	19,926,029
Tortoise Capital Advisors	37,967,744	-	71,187	-	-71,187	687,387	-19,357,587	19,297,543
Cash	342,965	21,100,000	-	-21,100,000	-	3,100	-156	345,909



## Employees' Retirement System of the City of Norfolk

### Financial Reconciliation

Year To Date Ending March 31, 2020

	Market Value As of 01/01/2020	Net Transfers	Contributions	Distributions	Mgmt Fees	Income	Apprec./ Deprec.	Market Value As of 03/31/2020
<b>Total Fund Composite</b>	<b>1,139,814,463</b>	<b>-</b>	<b>71,187</b>	<b>-21,100,000</b>	<b>-338,275</b>	<b>12,333,401</b>	<b>-181,777,738</b>	<b>949,003,038</b>
<b>Global Equity</b>	<b>652,198,055</b>	<b>-21,100,000</b>	<b>-</b>	<b>-</b>	<b>-67,432</b>	<b>-</b>	<b>-142,074,716</b>	<b>488,955,908</b>
SSgA MSCI ACWI IMI Index	652,198,055	-21,100,000	-	-	-67,432	-	-142,074,716	488,955,908
<b>Fixed Income</b>	<b>327,169,943</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8,187</b>	<b>10,214,184</b>	<b>-715,004</b>	<b>336,660,936</b>
PIMCO Total Return	163,535,203	-	-	-	-	10,214,184	-5,729,327	168,020,061
SSgA Bond Market Index	163,634,740	-	-	-	-8,187	-	5,014,323	168,640,875
<b>Real Estate</b>	<b>83,154,542</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-191,470</b>	<b>724,173</b>	<b>129,468</b>	<b>83,816,713</b>
JP Morgan Strategic Property	43,297,922	-	-	-	-106,080	304,892	372,778	43,869,511
UBS Trumbull Property	39,856,620	-	-	-	-85,390	419,281	-243,310	39,947,201
<b>MLPs</b>	<b>76,948,958</b>	<b>-</b>	<b>71,187</b>	<b>-</b>	<b>-71,187</b>	<b>1,391,945</b>	<b>-39,117,331</b>	<b>39,223,572</b>
Harvest MLP	38,981,214	-	-	-	-	704,558	-19,759,743	19,926,029
Tortoise Capital Advisors	37,967,744	-	71,187	-	-71,187	687,387	-19,357,587	19,297,543
Cash	342,965	21,100,000	-	-21,100,000	-	3,100	-156	345,909

## Employees' Retirement System of the City of Norfolk

Historical Hybrid Composition

March 31, 2020

	<u>(%)</u>		<u>(%)</u>
<b>Total Fund Policy : May-2016</b>		<b>Total Fund Strategy Index : Jul-2016</b>	
MSCI AC World IMI (Net)	62.50	MSCI AC World IMI (Net)	55.00
Blmbg. Barc. U.S. Aggregate	37.50	Blmbg. 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, 2020

#### Global Equity Policy

(%)

##### May-2016

MSCI AC World IMI (Net)	100.00
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##### Sep-2009

Russell 3000 Index	60.00
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MSCI AC World ex USA (Net)	40.00
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##### Jun-2009

Russell 3000 Index	70.00
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MSCI AC World ex USA (Net)	30.00
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##### Jun-2006

Russell 3000 Index	70.00
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MSCI EAFE Index	30.00
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##### Oct-1990

S&P 500	100.00
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<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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