

Bristol County Retirement System

Analysis of Investment Performance

As of December 31, 2019

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ANALYSIS OF INVESTMENT PERFORMANCE

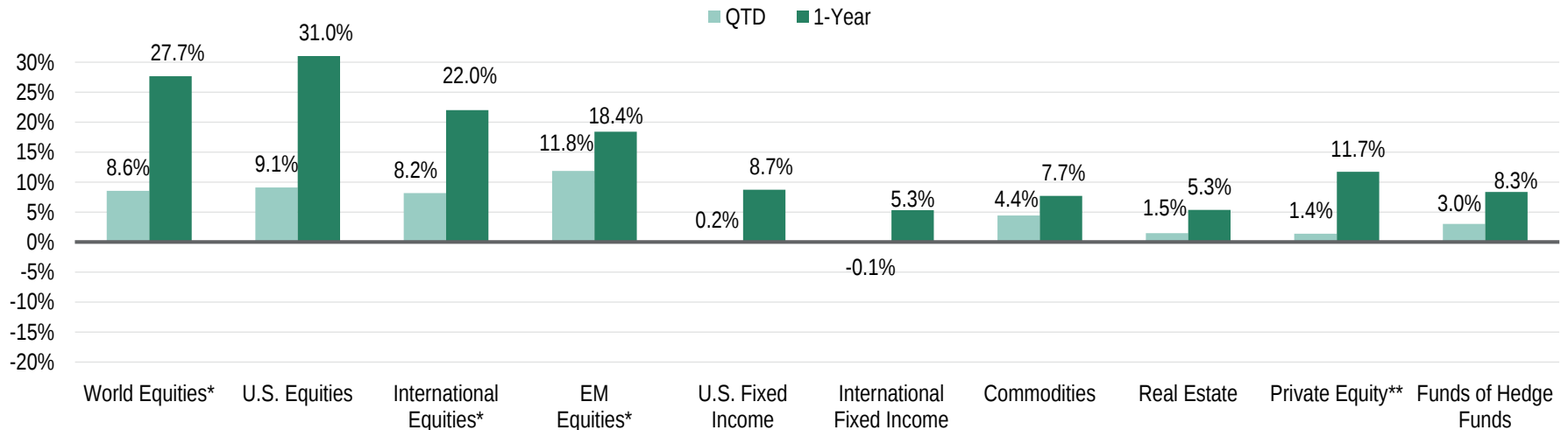
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Financial Market Conditions

Q4 2019 In Review

Summary of Investment Returns



Quarterly Synopsis

- World equity markets rose in Q4. Global trade tensions seemed to moderate and the Federal Reserve cut rates early in the quarter.
- U.S. equity was strongly positive. A more optimistic trade outlook and stable economic data boosted stocks.
- International equities also gained. Stronger economic data from Germany helped, as did the brighter trade picture.
- Emerging market equity surged. A weaker USD and a Federal Reserve rate cut boosted EM stocks.
- U.S. fixed income inched higher. The Treasury yield curve steepened as investors took a more optimistic view of the economy.
- Non-U.S. fixed income fell slightly. European yields rose with increasing political risk.
- Hedge funds rose. Equity hedge strategies were the top performers.

* Net Dividends Reinvested

** Performance as of Q3 2019 because Q4 2019 performance data is not yet available.

Sources: Investment Metrics, Thomson One, FactSet

Q4 2019 Index Returns

Asset Class	Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
World Equity	MSCI World ¹	8.56	27.67	27.67	12.57	8.74	9.47
U.S. Equity	Russell 3000	9.10	31.02	31.02	14.57	11.24	13.42
Non-U.S. Equity	MSCI EAFE ¹	8.17	22.01	22.01	9.56	5.67	5.50
Emerging Market Equity	MSCI EM ¹	11.84	18.42	18.42	11.57	5.61	3.68
U.S. Fixed Income	Bloomberg Barclays U.S. Aggregate	0.18	8.72	8.72	4.03	3.05	3.75
Non-U.S. Fixed Income	FTSE ² Non-U.S. WGBI (Unhedged)	-0.07	5.32	5.32	4.49	1.87	1.36
Commodities	Bloomberg Commodity Index	4.42	7.69	7.69	-0.94	-3.92	-4.73
Real Estate	NFI-ODCE ³	1.52	5.34	5.34	7.09	8.97	11.42
Private Equity	Thomson Reuters US Private Equity ⁴	1.39	8.62	11.65	15.25	13.29	14.79
Hedge Funds	HFRI Fund of Funds Composite	3.04	8.34	8.34	3.87	2.36	2.83

¹ Net Dividends Reinvested

² Formerly Citigroup Non-U.S. WGBI. Citigroup's fixed income indices were purchased by London Stock Exchange Group (LSEG) and were all rebranded to FTSE by July 31, 2018. FTSE Russell is a unit of LSEG's Information Services Division and a wholly owned subsidiary of LSEG.

³ NCREIF Fund Index (NFI) – Open End Diversified Core Equity (ODCE)

⁴ Performance as of Q3 2019 because Q4 2019 performance data is not yet available.

Sources: Investment Metrics, Thomson One, FactSet

Q4 2019 Index Returns

Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500®	9.07	31.49	31.49	15.27	11.70	13.56
Russell 1000	9.04	31.43	31.43	15.05	11.48	13.54
Russell 1000 Growth	10.62	36.39	36.39	20.49	14.63	15.22
Russell 1000 Value	7.41	26.54	26.54	9.68	8.29	11.80
Russell 2000	9.94	25.52	25.52	8.59	8.23	11.83
Russell 2000 Growth	11.39	28.48	28.48	12.49	9.34	13.01
Russell 2000 Value	8.49	22.39	22.39	4.77	6.99	10.56
Russell 3000	9.10	31.02	31.02	14.57	11.24	13.42
MSCI EAFE*	8.17	22.01	22.01	9.56	5.67	5.50
MSCI World*	8.56	27.67	27.67	12.57	8.74	9.47
MSCI EM*	11.84	18.42	18.42	11.57	5.61	3.68

Fixed-Income Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Blbg Bar U.S. Aggregate	0.18	8.72	8.72	4.03	3.05	3.75
Blbg Bar U.S. Govt/Credit	-0.01	9.71	9.71	4.35	3.23	3.96
Blbg Bar U.S. Intermediate Govt/Credit	0.37	6.80	6.80	3.24	2.57	3.05
Blbg Bar U.S. L/T Govt/Credit	-1.12	19.59	19.59	8.07	5.42	7.59
Blbg Bar U.S. Government	-0.77	6.83	6.83	3.31	2.36	3.03
Blbg Bar U.S. Credit	1.05	13.80	13.80	5.75	4.39	5.32
Blbg Bar U.S. Mortgage-Backed Securities	0.71	6.35	6.35	3.25	2.58	3.18
Blbg Bar U.S. Corporate High Yield	2.61	14.32	14.32	6.37	6.13	7.57
FTSE Non-U.S. WGBI (Unhedged)***	-0.07	5.32	5.32	4.49	1.87	1.36
FTSE 3-Month T-Bill***	0.46	2.25	2.25	1.65	1.05	0.56

Other Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Hueler Stable Value	0.62	2.52	2.52	2.24	2.06	2.19
Bloomberg Commodity	4.42	7.69	7.69	-0.94	-3.92	-4.73
HFRI Fund of Funds Composite	3.04	8.34	8.34	3.87	2.36	2.83
NCREIF NFI-ODCE	1.52	5.34	5.34	7.09	8.97	11.42
Thomson Reuters Private Equity**	1.39	8.61	11.65	15.25	13.29	14.79

* Net Dividends Reinvested

** Performance reported as of Q3 2019 because Q4 2019 performance data is not yet available.

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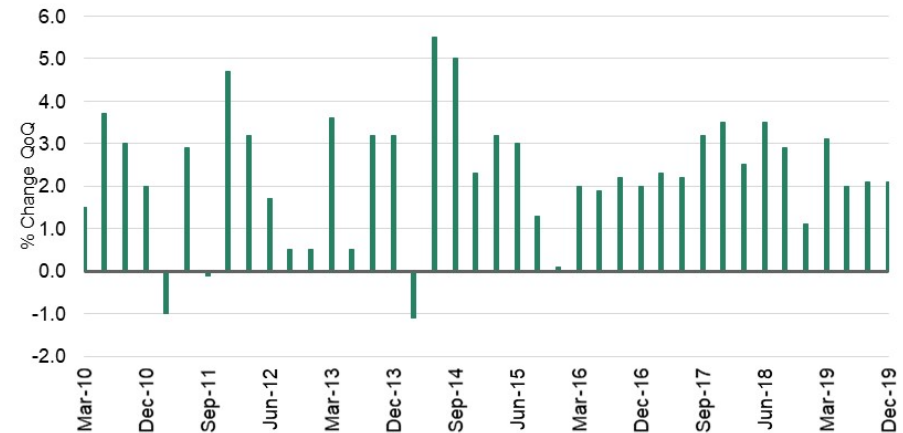
Sources: eVestment Alliance, Hueler Analytics, Investment Metrics, Thomson One, FactSet

Q4 2019 In Review: U.S. Economy

GDP Growth

- U.S. GDP growth rose by 2.1% in Q4 2019, matching Q3's growth rate.
- Growth in Q4 resulted from trade, with exports increasing and imports falling. Consumer spending increased but business investment fell for the third quarter in a row.
- Residential fixed investment grew 5.8% in the quarter, while government expenditures rose 2.7%.
- Overall in 2019, the U.S. economy grew 2.3%, the least since 2016.

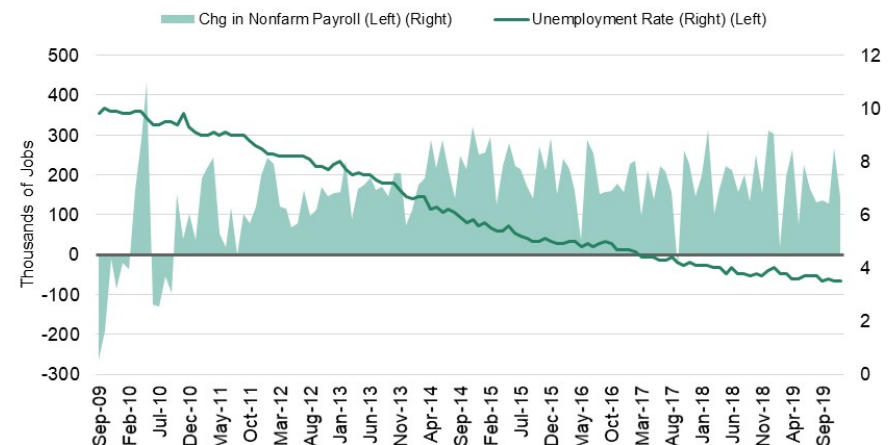
U.S. Real GDP Growth



Employment Picture

- The unemployment rate was 3.5% in December, the same level as at the end of Q3. Nonfarm payrolls rose by 553,000 over the quarter.
- Employment gains were led by retail, health care, leisure and hospitality.
- Employment in mining declined. Employment in manufacturing, wholesale trade, information, financial activities, and government showed little change.

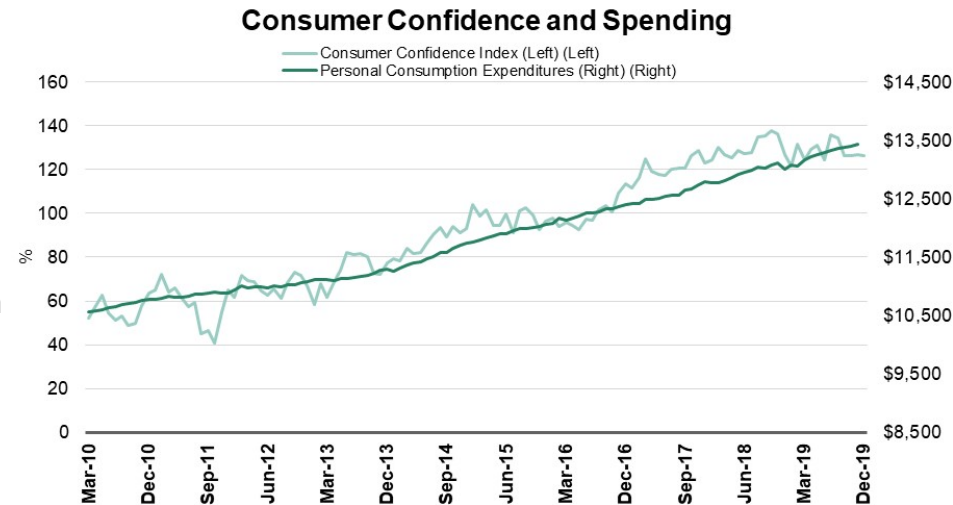
U.S. Nonfarm Payrolls and Unemployment Rate



Q4 2019 In Review: U.S. Economy

Consumer Confidence and Spending

- Sentiment rose in Q4, as the Conference Board's Consumer Confidence Index increased from 126 at the end of September to 128 at the end of December.
- Personal consumption expenditures rose in November*.
- Consumer confidence increased with unemployment still at record lows, rising wages, and the Federal Reserve on hold from raising interest rates in the near term.



Retail Sales

- Retail sales ended December* up 5.8% from one year ago.
- Sales were higher for food and drinks, clothes, and electricity and appliances in December 2019.
- Sales for motor vehicles declined in December.



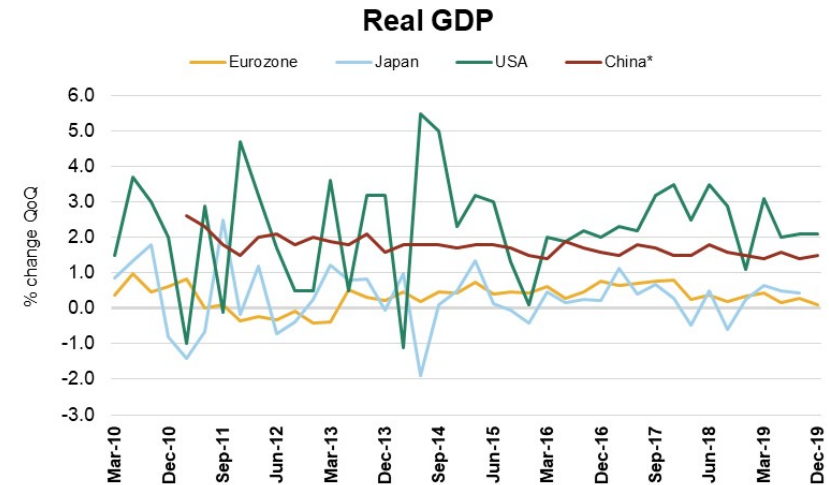
*The most recent data available.

Source this page: FactSet

Q4 2019 In Review: Global Economy

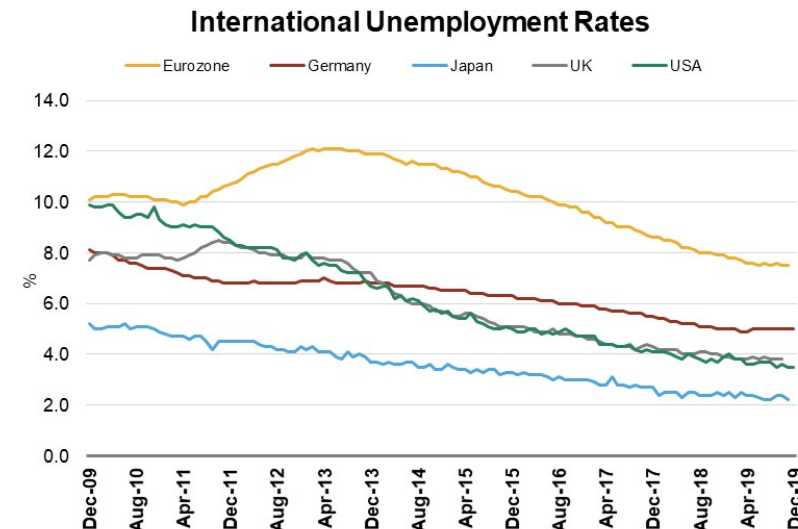
World GDP Growth

- Eurozone GDP rose 0.1% quarter over quarter (QoQ), below market expectations. The Eurozone's annual growth rate was 1%.
- China's GDP grew at a rate of 1.5% in Q4. The country's annual growth rate stayed the same at 6%, the slowest since Q1 1992.
- Japan's GDP increased 0.4% QOQ in Q3**, less than the 0.5% growth notched in Q2. The Japanese economy's annual growth rate rose to 1.8%.
- U.S. GDP grew 2.1% in Q4.



Global Employment Picture

- Eurozone unemployment rose slightly to 7.5% in November 2019**. Germany (3.1%) had the lowest unemployment rate in the EU, with higher rates seen in France (8.4%) and Italy (9.7%).
- Japan's unemployment rate stayed steady at 2.2% in November. This matches its previous historic low of 2.2% from October 1992.



*Quarter over quarter data calculations began in 2011.

**Most recent data available.

Source this page: FactSet

Q4 2019 In Review: U.S. Equity

U.S. Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
S&P 500	9.07	31.49	31.49	15.27	11.70	13.56
Russell 1000	9.04	31.43	31.43	15.05	11.48	13.54
Russell 1000 Growth	10.62	36.39	36.39	20.49	14.63	15.22
Russell 1000 Value	7.41	26.54	26.54	9.68	8.29	11.80
Russell 2000	9.94	25.52	25.52	8.59	8.23	11.83
Russell 2000 Growth	11.39	28.48	28.48	12.49	9.34	13.01
Russell 2000 Value	8.49	22.39	22.39	4.77	6.99	10.56
Russell Midcap	7.06	30.54	30.54	12.06	9.33	13.19
Russell 3000	9.10	31.02	31.02	14.57	11.24	13.42

All data in the tables are percentages.

Performance

- Small caps outperformed large caps in Q4, a change from previous quarters. Despite the reversal, the Russell 1000 finished the year 5.9% higher than the Russell 2000.
- Growth outperformed value in Q4 across the market cap spectrum, following a September in which value significantly outperformed growth in both large and small cap markets.
- The progression of Presidential impeachment proceedings provided no significant impact on equity markets, as the Russell 1000 rose 1.2% in the weeks following the House impeachment vote, and 2.9% for the month of December.
- Technology led the way in Q4, appreciating 14.3%. Real estate was the sole negative returning sector in Q4 at -0.8%, in part due to rising long term yields. Technology was also the biggest gainer in 2019, up 50.3%, while energy, up 11.9%, lagged all the other sector returns over the year.

S&P 500 Sector Returns	QTD	1-Year
Cons. Disc.	4.37	27.42
Cons. Staples	3.30	26.51
Energy	5.17	10.54
Financials	10.28	31.23
Healthcare	14.23	20.18
Industrials	5.37	28.60
IT	14.28	49.61
Materials	6.21	23.76
Telecom	8.88	32.15
Real Estate	-0.78	27.78
Utilities	0.52	25.10

Q4 2019 In Review: International Equity

MSCI International Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
World ex. U.S.	7.86	22.49	22.49	9.34	5.42	5.32
EAFE	8.17	22.01	22.01	9.56	5.67	5.50
EAFE Local Currency	5.19	21.67	21.67	7.66	6.73	7.24
Europe	8.84	23.77	23.77	9.77	5.06	5.17
Europe ex U.K.	8.46	24.81	24.81	10.33	5.82	5.15
U.K.	9.95	21.05	21.05	8.32	3.25	5.05
Japan	7.64	19.61	19.61	8.92	7.70	6.59
Pacific Asia ex Japan	5.78	18.36	18.36	10.15	5.70	5.81

All data in the tables are percentages and net dividends reinvested.

Performance

- Following a lag in momentum-led stocks in Q3, international developed markets finished the year robustly. The MSCI EAFE and World ex US indices, proxies for international developed markets, each rose 8% for the quarter.
- Uncertainty around Brexit also diminished during the fourth quarter, as conservative party leader Boris Johnson's reelection seemed to increase the likelihood of an exit from the EU. The UK rallied 10% and Germany was also up 10% due to improved economic data. International growth (8.4%) outpaced international value (7.8%) for the quarter.
- All MSCI EAFE sectors rose, though information technology (+12.62%) and health care (+12.44%) gained the most over the quarter. Those two sectors were also 2019's biggest gainers.

MSCI EAFE Sector Returns	QTD	1-Year
Consumer Disc.	9.35	24.83
Cons. Staples	1.88	18.88
Energy	3.80	7.59
Financials	8.40	17.74
Healthcare	12.44	30.69
Industrials	10.00	26.19
IT	12.62	37.68
Materials	10.51	22.92
Telecom	4.79	12.66
Utilities	5.29	19.22
Real Estate	4.21	14.77

Q4 2019 In Review: Emerging Market Equity

MSCI EM Equity Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Emerging Markets	11.84	18.42	18.42	11.57	5.61	3.68
EM Local Currency	9.54	18.05	18.05	11.49	7.46	6.14
Asia	12.51	19.24	19.24	12.92	6.63	5.76
EMEA	9.88	15.52	15.52	6.50	2.98	1.11
Latin America	10.48	17.46	17.46	10.74	4.18	-0.65

All data in the tables are percentages and net dividends reinvested.

Performance

- Emerging markets bounced back in Q4, rising nearly 12%, ahead of both domestic and international developed markets. This can be attributed to monetary easing by major EM central banks and the US and China agreeing to terms for a 'phase one' trade deal.
- Taiwan was the leader in returns for the quarter (17.9%) in part due to a trend of Taiwanese businesses returning from China and a strong global demand for the tech hardware products. Russia (16.8%) and China (14.7%) posted strong returns as well.
- Each EM sector posted positive absolute returns in Q4 and for the year. Technology led all EM sectors in Q4 (18.9%) and for the year (41.6%). The worst performing sectors in Q3, materials and real estate, assembled the largest turnarounds in Q4 by outperforming their Q3 returns by 23% and 26% respectively. Optimism toward global trade and lower interest rates drove the change in performance for those sectors.

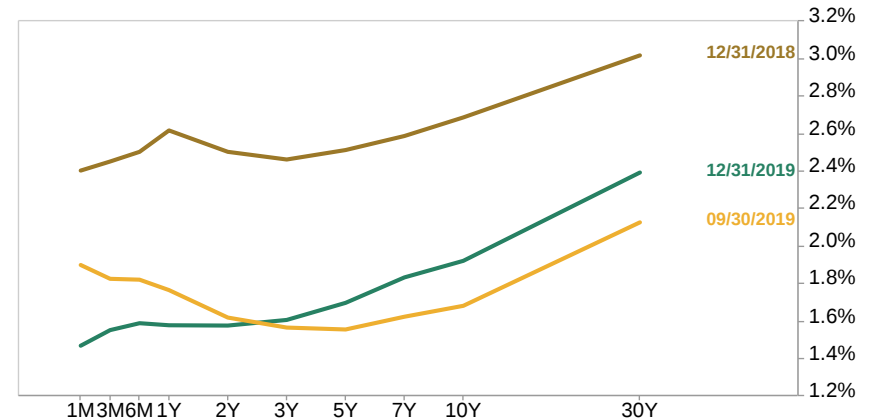
MSCI EM Sector Returns	QTD	1-Year
Cons. Disc.	16.74	35.10
Cons. Staples	2.55	10.69
Energy	9.80	19.79
Financials	9.78	12.58
Healthcare	14.68	3.67
Industrials	7.79	7.11
IT	18.92	41.60
Materials	12.33	5.88
Telecom	9.76	11.20
Utilities	4.26	7.85
Real Estate	17.63	23.89

Q4 2019 In Review: Fixed Income Overview

Yield Curve

- After the Federal Reserve cut rates for the third time in 2019, shorter-maturity yields fell.
- Global demand for Treasuries contributed to higher yields at the long end of the Treasury yield curve.
- The 3-yr Treasury ended the quarter yielding 1.62%, which was only 6 basis points higher than its yield at the end of Q3. Longer yields showed a bigger change, with the 30-yr yield ending the quarter at 2.39%, a 31 basis point increase over the prior quarter.

United States Treasury Yield Curve

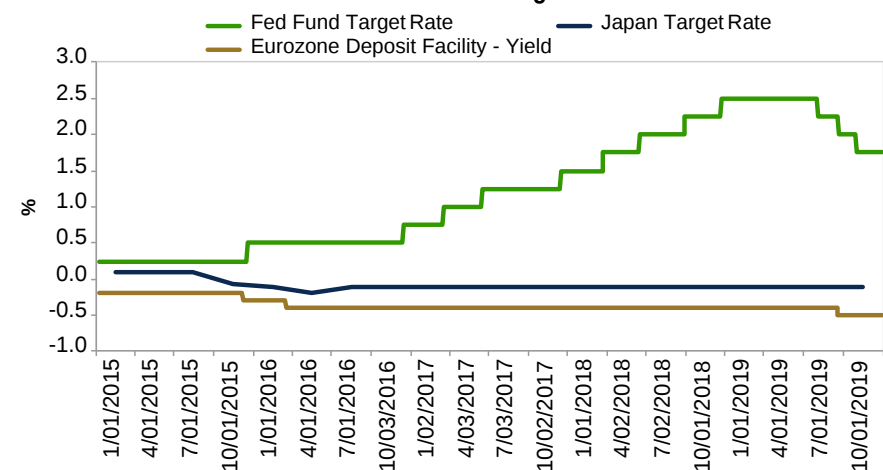


Monetary Policies/Global Interest Rates

- Central bank deposit rates remained negative in Japan and Europe. Slow growth and worries surrounding global trade kept central banks on hold.
- The U.S. continues to be a global outlier with its policy rate at 1.75%. Policy rates in the Eurozone and Japan remain negative.
- The Fed cut rates again in Q4 in an attempt to stimulate economic growth as uncertainty surrounding the effect of trade wars continue.

Interest Rates	Fed Funds Rate	EZ Deposit Facility Rate
Average	5.15% (1971-2019)	1.02% (1999-2019)
Max	20.0% (Mar. 1980)	3.75% (Oct. 2000)
Min	0.25% (Dec. 2008)	-0.40% (Mar. 2016)

Central Bank Target Rates



Q4 2019 In Review: U.S. Fixed Income

U.S. Fixed Income Indices*	QTD	YTD	1-Year	3-Year	5-Year	10-Year
U.S. Aggregate	0.18	8.72	8.72	4.03	3.05	3.75
Government/Credit	-0.01	9.71	9.71	4.35	3.23	3.96
Government	-0.77	6.83	6.83	3.31	2.36	3.03
Investment Grade Corporate	1.18	14.54	14.54	5.92	4.60	5.54
Investment Grade CMBS	-0.31	8.27	8.27	4.22	3.41	5.74
U.S. Corporate High Yield	2.61	14.32	14.32	6.37	6.13	7.57
FTSE** 3-Month T-Bill	0.46	2.25	2.25	1.65	1.05	0.56
Hueler Stable Value	0.63	2.51	2.51	2.23	2.05	2.18

* Bloomberg Barclays Indices, unless otherwise noted.

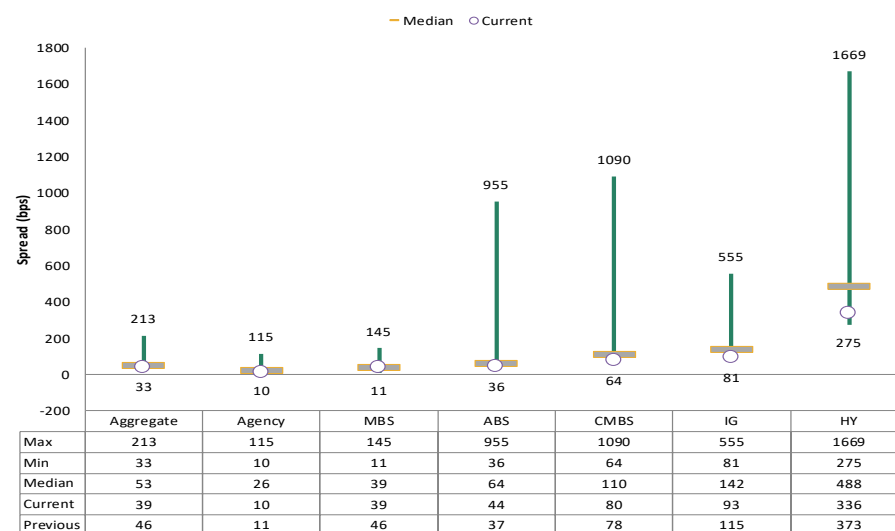
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All data in the table are percentages.

Performance and Spreads

- The U.S. Aggregate Index was positive in Q4. In absolute terms, the US Corporate High Yield sector generated the strongest returns (+2.61%). Given the sizeable Treasury weight in the index, that sector's negative performance was a detractor as well (-0.77%).
- After generating a 1.33% return in Q3, high yield continued to rise in Q4, generating 2.61% for the quarter. Continued low defaults and a relatively positive economic backdrop boosted high yield and IG credit (+1.18%).
- With the exception of bank loans and ABS, most domestic fixed income spreads were either tighter than or in line with end of Q3 levels, but still wider than the levels seen at the end of the third quarter of 2018.

Fixed Income Spreads



Q4 2019 In Review: International Fixed Income

Global Fixed Income Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Bloomberg Barclays Global Aggregate	0.49	6.84	6.84	4.27	2.31	2.48
Bloomberg Barclays Global Aggregate (Hgd)	-0.49	8.22	8.22	4.30	3.57	4.08
FTSE Non-U.S. WGBI*	-0.07	5.32	5.32	4.49	1.87	1.36
FTSE Non-U.S. WGBI (Hgd)	-1.85	8.02	8.02	4.49	4.02	4.32
JPM EMBI Global Diversified**	1.81	15.04	15.04	6.69	6.24	6.90
JPM GBI-EM Global Diversified***	5.20	13.47	13.47	7.03	2.78	2.71

All data in the table are percentages.

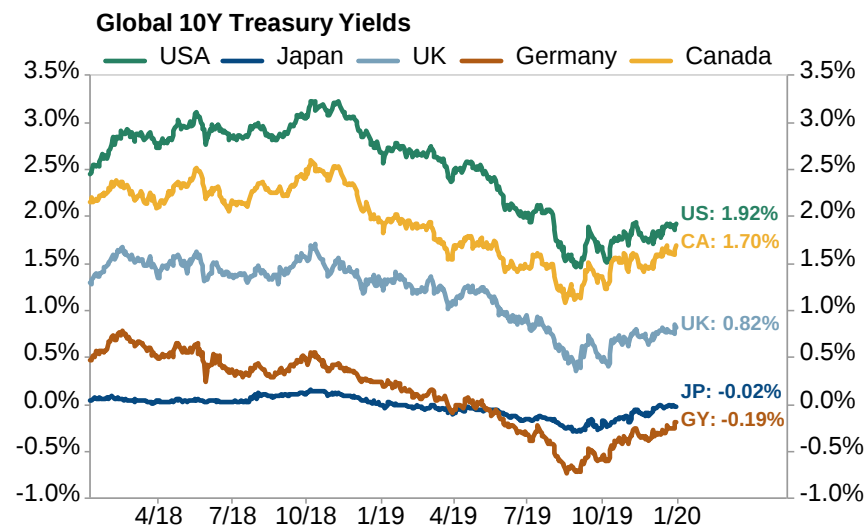
* Formerly Citigroup. The FTSE Non-U.S. World Government Bond Index (WGBI) measures the performance of fixed-rate, local currency, investment grade sovereign bonds excluding the U.S.

** The JP Morgan Emerging Market Bond Index (EMBI) Global Diversified index measures government bonds in hard currencies.

*** The JP Morgan Government Bond Index – Emerging Markets (GBI-EM) Global Diversified index measures government bonds in local currencies.

Global Performance and Yields

- Government yields rose in Q4 across developed markets.
- Rhetoric from central banks was more dovish than in the prior quarter due to escalating global trade tensions and underwhelming growth rates in major international regions like the Eurozone.
- The British pound and euro appreciated relative to the U.S. dollar, while the yen depreciated.
- Developed market bonds were lower with better Eurozone economic data and trade optimism.
- In emerging markets, though, bonds were solidly positive with corporates and some lower-rated issues performing well.



Q4 2019 In Review: Absolute Return Strategies

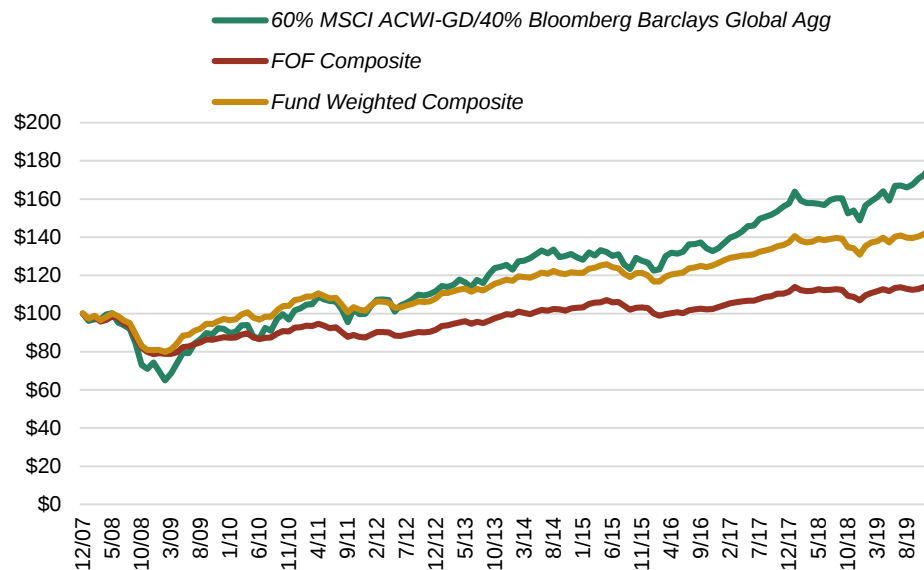
HFRI Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Fund of Funds Composite	3.04	8.34	8.34	3.87	2.36	2.83
Fund Weighted Composite	3.50	10.38	10.38	4.52	3.55	4.04
Event Driven	2.88	7.53	7.53	4.23	3.84	4.92
Equity Hedge	5.71	13.74	13.74	6.16	4.56	4.68
Macro	-0.48	6.18	6.18	1.34	0.76	1.23
Emerging Markets	5.01	11.62	11.62	5.86	4.20	2.93
Relative Value	2.02	7.61	7.61	4.05	3.87	5.21

Hedge Fund Performance

- The HFRI Fund Weighted Composite gained 3.5% in Q4. Equity Hedge – up 5.71% – was the leading strategy, while Macro concluded the quarter marginally lower. Hedge fund strategies closed the year with positive results unseen since the Financial Crisis.
- Event-Driven and Relative Value strategies gained as continued low rates propelled mergers & acquisitions and initial public offerings. Optimism over trade negotiations between the U.S. and China eased investor concerns of growth while the Fed's rate cut was favorable for equities. Macro continued to lag as economic and geopolitical uncertainty hurt trend followers.
- The Fund of Funds Composite gained 3.04% in Q4. That mark underperformed the 60% MSCI ACWI / 40% Bloomberg Barclays Global Aggregate blended index.

Sources this page: FactSet, eVestment

HFRI Fund Weighted and Fund of Funds Composite
Growth of \$100 | January 2008 - December 2019



Q4 2019 In Review: Private Equity

Performance

- The total return for US private equity funds, comprising performance across all strategies, was 1.4% in Q3 2019* and 11.7% over the 1-year period ending Q3.
- The 5-, 10-, and 20-year returns for US private equity funds were 13.3%, 14.4% and 11.3%, respectively, at the end of Q3. Venture funds continued to outperform other strategies.
- The 2017 buyout vintages have generated negative returns as the volatile business environment has been tough for implementing new business plans.

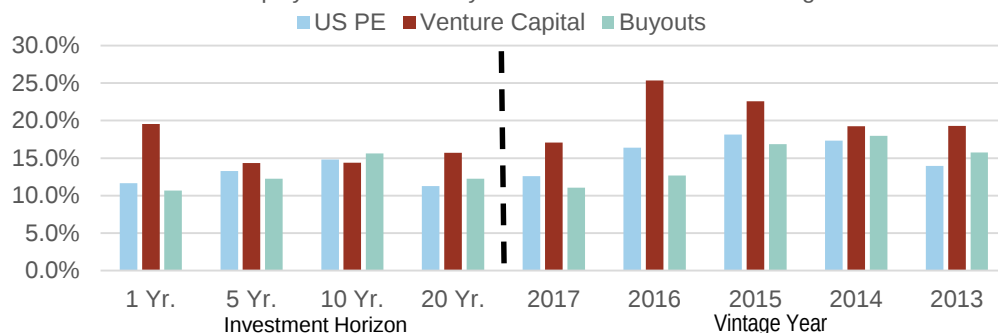
Fundraising

- Globally, private equity funds raised approximately \$595 billion across 1316 funds through December 2019. This was a significant decline compared to the 1,790 raised in 2018.
- In Q2 2019, fundraising activity was still focused on North America, while Europe and Asia closed fewer funds with less capital.
- Dry powder** continues to reach new records, with \$1.28 trillion as of December 2019.

Exit Activity

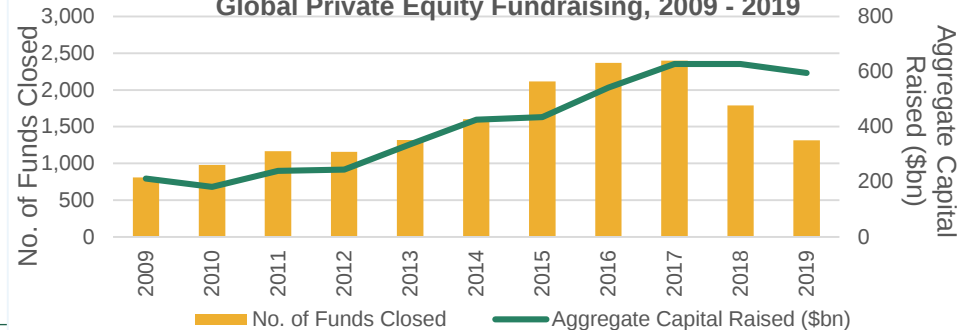
- While the number of buyout-backed exits was down, their value (\$375 billion) was similar to that of 2018 (\$377 billion).
- Venture-backed exit activity was \$30 billion for the past two quarters, in line with the five-year average of \$28 billion. The strong public equity markets created a favorable IPO environment, as did a steady number of continued exits to strategic buyers.

Private Equity Performance by Investment Horizon and Vintage Year

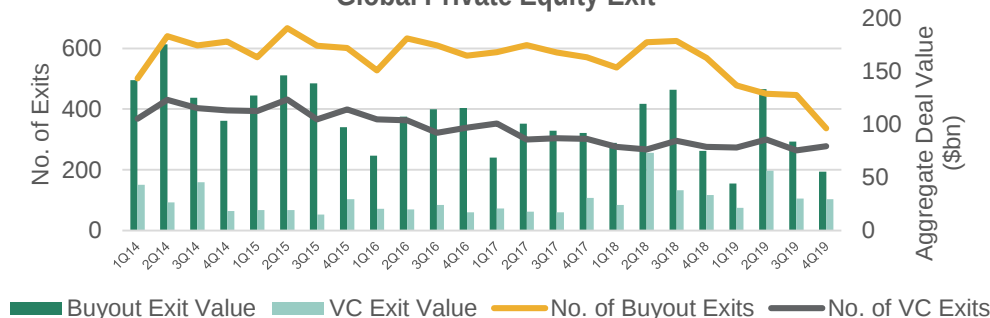


"Vintage year" refers to the first year that capital was committed in a particular fund. Vintage-year performance is calculated as the median percentile returns of all funds reporting as pooled IRRs.

Global Private Equity Fundraising, 2009 - 2019



Global Private Equity Exit



*Most recent data available.

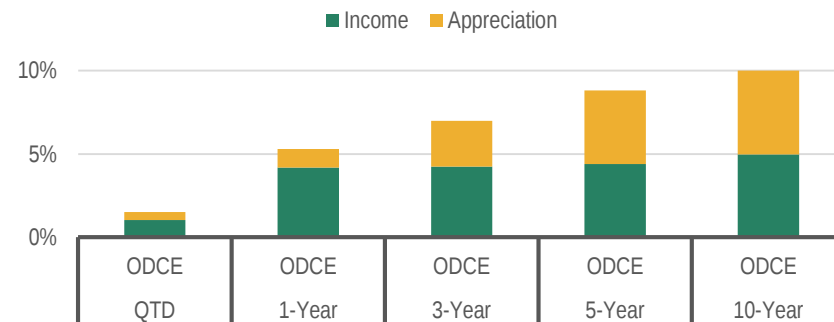
**Dry powder is capital raised that hasn't yet been invested.
Sources this page: Thomson Reuters, Preqin

Q4 2019 In Review: Real Estate

Real Estate Performance

- NFI ODCE was up 152 bps for the quarter, while the NCREIF NPI gained 155 bps and the NAREIT Equity REIT Index gained 13 bps
- Income for the NFI-ODCE was 104 bps for the quarter. It has been consistently between 4.2% - 5.0% on an annual basis over the trailing 1-3-5-10 year period.
- In the U.S., operating results remain favorable but have experienced decelerating/stabilizing cash flow growth, driven by modest economic growth and supply deliveries that are generally in equilibrium with tenant demand
- Enormous disparities in valuations persist among market segments within each of the major regions. A key characteristic of the quarter was a modest reversal in these valuation differences as, generally, the sectors that outperformed in 4Q19 had been the year-to-date laggards
- Specifically, sectors viewed as defensive generally underperformed as the lower-for-longer interest rate investment theme lessened and sectors viewed as more likely to benefit from better economic growth and reduced political uncertainty outperformed

NCREIF Fund Index (NFI) Open-End Diversified Core (ODCE)
Real Estate Performance



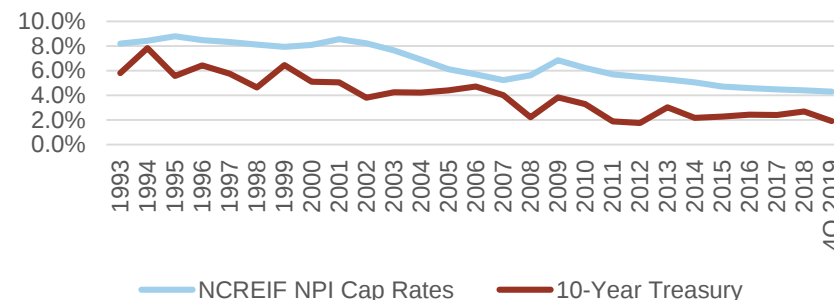
The NFI-ODCE (Open-end Diversified Core Equity) is defined by NCREIF as a fund-level cap-weighted, gross of fee, time-weighted return index with an inception date of December 31, 1977.

The NFI-CEVA Index, which is a quarter lagged in performance reporting, is defined by NCREIF as a capitalization-weighted, gross of fees, time-weighted return index. Funds included in the index must be closed-end with a value-add strategy operated for U.S. institutional investors and must comply with NCREIF's data collection and reporting standards.

Real Estate Capitalization Rates* vs. Treasuries

- Asset values remain steady for the most part; however, record levels of capital were committed with growing retail assets for sale and limited price discovery YTD.
- Equal weighted cap rates edged down slightly for the quarter from 4.73% to 4.67%. More relevant to the pricing of the NPI properties, the value-weighted cap rate dropped from 4.32% to 4.29% this quarter, which helped with the increase in market values.
- Treasury rate decreases in 2019 relative to more consistent cap-rates have resulted in a 237 bps spread as of 4Q 2019.

Capitalization Rates & 10-Year U.S. Treasury Rates



*A cap rate is the potential rate of return on a real estate investment. Assuming no change in net operating income, real estate valuations rise when cap rates fall. Comparing cap rates to the 10-year U.S. Treasury provides investors with an estimated spread for expected returns from real estate (higher risk) vs. fixed rate bond (lower risk) investments.

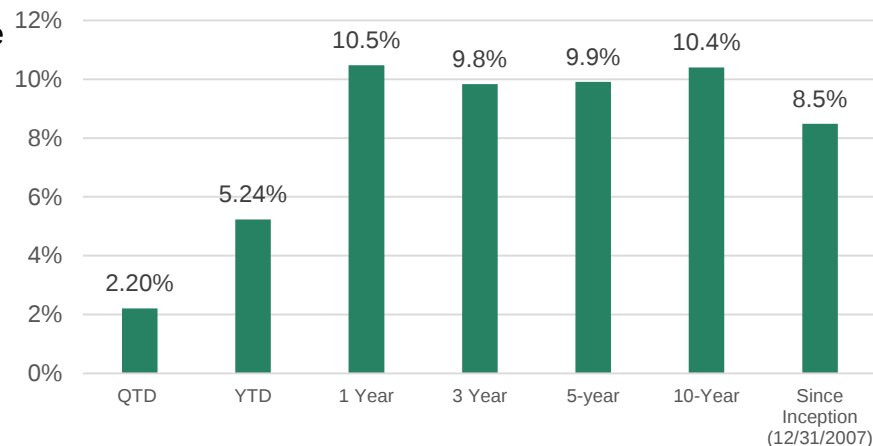
Sources this page: NCREIF, Bloomberg

Q4 2019 In Review: Infrastructure

Infrastructure Performance

- Private infrastructure gained 2.2% in Q2 2019* and 10.5% over the 1-year period ending June 30, 2019.
- Strong investor demand for infrastructure investments has led to good absolute performance across all time periods.
- The number of deals completed in Q4 2019 rose slightly to 680 from 631. At \$465.4 million, the average deal size for 2019 is at a record high with a \$57 million increase relative to 2018. Average deal size has increased throughout 2019.
- Public infrastructure registered a 3.9% return in Q4 2019, as per the FTSE Global Infrastructure 50/50 Index. Global infrastructure securities participated almost completely in the 2019 equity rally.

Preqin Infrastructure Annualized Return as of 6/30/2019*

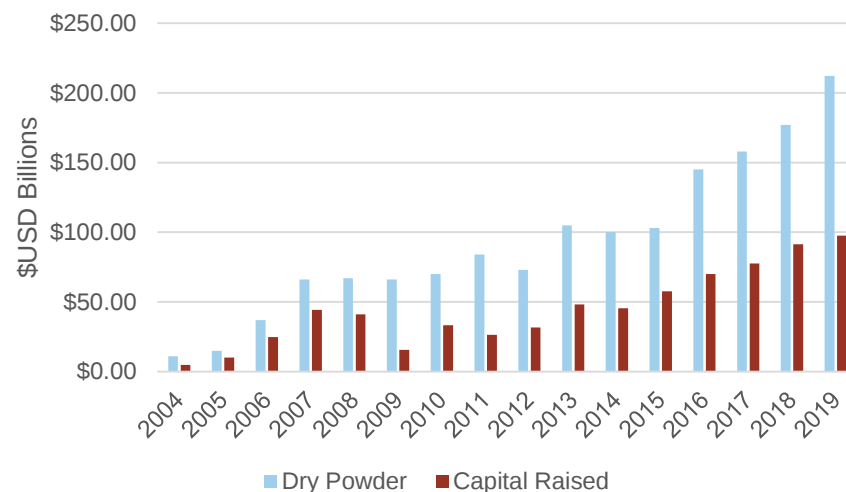


According to Preqin, the Preqin Infrastructure Index captures the average returns earned by investors in their infrastructure portfolios, based on the actual amount of money invested. The Preqin Infrastructure index is calculated on a quarterly basis using data from Preqin's Infrastructure Online services.

Dry Powder and Fundraising

- Infrastructure fundraising rebounded strongly in Q4 2019 with \$38.5 billion raised relative to Q3 2019's fundraise of \$10.2 billion. Average fund size in Q4 2019 was \$3.2 billion with larger funds dominating fundraising. With \$97.5 billion raised, 2019 broke 2018's record year of \$91.4 billion fundraised.
- Dry powder** has increased to \$212 billion. The rise in fundraising led to more dry powder but strong deal flow kept that increase to \$8 billion for the quarter.
- North America-based managers have driven fundraising and the growth of dry powder in 2019. Asian- and European-based strategies have not seen significant growth in dry powder this year.

Dry Powder and Fundraising



*The most recent data available.

**Dry powder is capital raised that hasn't yet been invested.

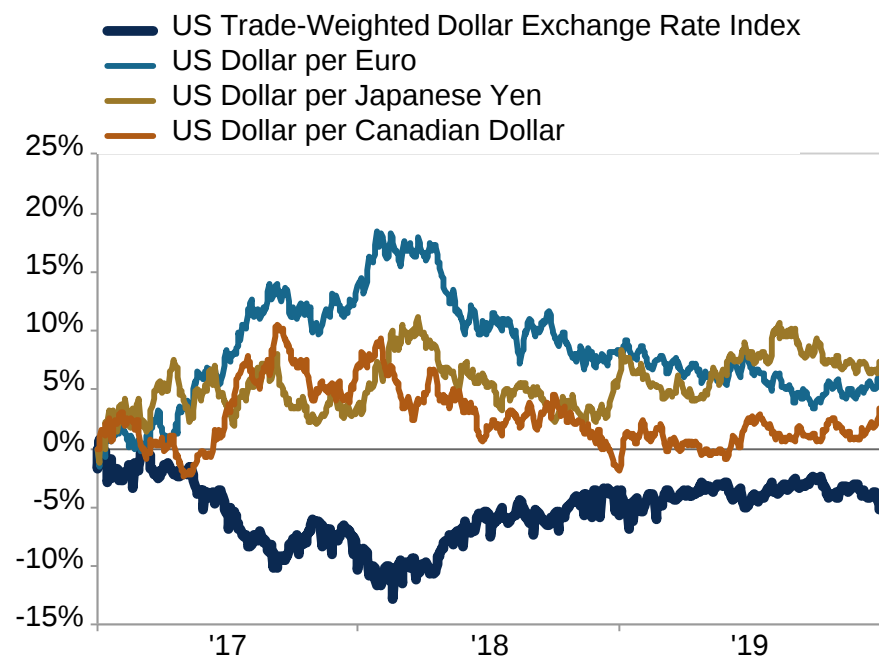
Sources this page: Preqin

Q4 2019 In Review: Commodities and Currencies

BCOM Indices	QTD	YTD	1-Year	3-Year	5-Year	10-Year
Bloomberg Commodity Index (BCOM)	4.42	7.69	7.69	-0.94	-3.92	-4.73
Energy	5.82	11.78	11.78	-2.26	-7.87	-11.69
Agriculture	7.11	1.72	1.72	-6.89	-7.00	-3.96
Industrial Metals	-0.25	6.98	6.98	3.67	-0.46	-3.55
Precious Metals	3.72	17.02	17.02	7.40	3.74	2.09
Livestock	0.15	-5.99	-5.99	-0.57	-5.52	-1.80

Commodity and Currency Highlights

- The Bloomberg Commodity Index posted a gain in Q4. Performance across subsectors was positive across the board, except for Industrial Metals, which declined slightly as nickel and zinc fell on rising inventories.
- Agriculture saw strong gains. Coffee prices increased (up 24.8%) as weather conditions in Brazil impacted supply and soybean oil (+ 18.1%) saw greater demand as it becomes a more cost-effective substitute for palm oil.
- Energy posted a strong quarter. Oil rose on improved global demand expectations as tensions between the U.S. and China eased. However, this was offset by natural gas, which fell 17.2% as milder-than-average temperatures throughout the U.S. resulted in reduced demand.
- The US dollar declined in Q4 after the Federal Reserve cut rates and said it was unlikely to raise them in the near term. The Japanese yen also declined, while the euro and Canadian dollar rose.



Total Fund

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)										
	Market Value (\$000)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Fund	742,179	100.00	5.50	0.19	3.14	17.26	17.26	9.82	7.33	8.61	8.79	7.60	01/01/2000
Total Plan Index			5.48	0.62	3.38	18.83	18.83	9.55	7.07	8.42	8.28	5.16	
Total Plan Allocation Index			5.69	0.34	3.05	18.33	18.33	9.48	N/A	N/A	N/A	N/A	
Total Domestic Equity	171,725	23.14	10.55	-1.11	3.16	29.71	29.71	12.54	9.35	13.42	12.76	5.77	01/01/2000
S&P 500 Index			9.07	1.70	4.30	31.49	31.49	15.27	11.70	14.73	13.56	6.06	
Russell 3000 Index			9.10	1.16	4.10	31.02	31.02	14.57	11.24	14.38	13.42	6.39	
ClearBridge Large Cap Growth	32,523	4.38	9.18	-0.31	5.38	33.19	33.19	N/A	N/A	N/A	N/A	13.62	09/01/2018
Russell 1000 Growth Index			10.62	1.49	4.64	36.39	36.39	20.49	14.63	16.92	15.22	11.31	
Columbia	33,239	4.48	14.83	-5.75	4.33	37.93	37.93	21.41	12.29	N/A	N/A	14.13	09/01/2013
Russell 1000 Growth Index			10.62	1.49	4.64	36.39	36.39	20.49	14.63	16.92	15.22	16.15	
LSV	37,336	5.03	9.15	0.76	2.24	24.73	24.73	9.40	8.37	13.23	12.56	9.17	09/01/2004
Russell 1000 Value Index			7.41	1.36	3.84	26.54	26.54	9.68	8.29	12.20	11.80	8.26	
Lyrical	35,007	4.72	10.96	-0.49	1.63	27.31	27.31	6.36	5.84	N/A	N/A	10.43	09/01/2013
Russell 1000 Value Index			7.41	1.36	3.84	26.54	26.54	9.68	8.29	12.20	11.80	10.71	
Frontier Capital Appreciation	17,416	2.35	9.85	-0.54	2.46	28.86	28.86	N/A	N/A	N/A	N/A	13.32	12/01/2018
Russell 2000 Growth Index			11.39	-4.17	2.75	28.48	28.48	12.49	9.34	13.08	13.01	12.37	
Earnest Partners	16,205	2.18	8.13	1.03	2.62	25.79	25.79	9.35	9.21	12.50	12.49	11.65	04/01/2003
Russell 2000 Value Index			8.49	-0.57	1.38	22.39	22.39	4.77	6.99	10.13	10.56	10.26	

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)										
	Market Value (\$000)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total International Equity	180,163	24.27	10.40	-2.49	3.72	22.80	22.80	11.03	7.26	7.63	7.72	9.98	01/01/2000
MSCI EAFE (net)			8.17	-1.07	3.68	22.01	22.01	9.56	5.67	6.35	5.50	3.32	
MSCI AC World ex USA			8.99	-1.70	3.22	22.13	22.13	10.40	6.01	5.93	5.45	4.28	
Arrowstreet Capital	30,265	4.08	10.15	-1.62	3.08	23.56	23.56	11.44	7.73	8.25	7.53	7.71	07/01/2001
MSCI AC World ex USA			8.99	-1.70	3.22	22.13	22.13	10.40	6.01	5.93	5.45	6.37	
Freedom Capital Intl	36,658	4.94	10.26	-2.50	2.45	21.39	21.39	10.60	7.92	9.56	9.73	9.30	06/01/1998
MSCI EAFE (net)			8.17	-1.07	3.68	22.01	22.01	9.56	5.67	6.35	5.50	4.42	
Fiera International Equity	35,805	4.82	10.63	-0.19	6.96	32.28	32.28	N/A	N/A	N/A	N/A	26.52	12/01/2018
MSCI EAFE (Net)			8.17	-1.07	3.68	22.01	22.01	9.56	5.67	6.35	5.50	14.77	
Lazard Emerging Markets	39,723	5.35	11.18	-3.81	2.59	17.47	17.47	7.08	3.39	1.70	3.23	2.97	05/01/2007
MSCI Emerging Markets Index			11.93	-4.11	0.74	18.90	18.90	11.99	6.01	3.64	4.04	3.91	
Aberdeen Emerging Markets	37,712	5.08	9.68	-3.90	3.99	21.52	21.52	N/A	N/A	N/A	N/A	9.01	03/01/2017
MSCI Emerging Markets Index			11.93	-4.11	0.74	18.90	18.90	11.99	6.01	3.64	4.04	9.46	
Global REITs													
Brookfield Global Real Estate	14,331	1.93	1.24	3.36	-0.12	20.42	20.42	N/A	N/A	N/A	N/A	12.29	12/01/2018
FTSE EPRA/NAREIT Developed Index			1.96	4.87	0.20	23.06	23.06	9.31	6.53	7.51	9.25	15.04	

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)										
	Market Value (\$000)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Domestic Fixed	55,492	7.48	0.14	2.26	3.41	9.29	9.29	4.27	3.46	3.02	4.60	5.68	01/01/2000
Barclays Cap Aggregate			0.18	2.27	3.08	8.72	8.72	4.03	3.05	2.72	3.75	5.03	
Income Research & Management	42,962	5.79	-0.10	2.76	3.68	10.05	10.05	4.70	3.64	3.41	4.74	5.74	12/01/1996
Blmbg. Barc. U.S. Gov't/Credit			-0.01	2.64	3.53	9.71	9.71	4.35	3.23	2.81	3.96	5.12	
IR+M TIPS	12,279	1.65	0.99	0.59	2.54	6.88	6.88	2.82	2.40	1.01	2.71	3.66	02/01/2007
Barclays Cap US Treas: US TIPS			0.79	1.35	2.86	8.43	8.43	3.32	2.62	1.08	3.36	4.14	
Total Global Fixed	113,754	15.33	2.28	-0.68	2.72	9.63	9.63	5.57	4.79	3.48	5.13	6.49	01/01/2000
Barclays Cap Global Aggregate			0.49	0.71	3.29	6.84	6.84	4.27	2.31	1.35	2.48	4.47	
Franklin Templeton Global Bond	22,083	2.98	1.25	-3.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.62	05/01/2019
FTSE World Government Bond Index			-0.35	0.85	3.57	5.90	5.90	4.12	2.03	0.79	1.85	4.60	
PIMCO Diversified Income	41,655	5.61	1.65	1.23	3.62	12.81	12.81	6.74	6.36	4.81	6.66	6.72	08/01/2006
Global Diversified Index**			1.99	0.81	3.31	11.67	11.67	5.67	4.73	3.57	5.44	6.12	
GoldenTree Multi-Sector Opportunistic Fund	20,690	2.79	2.93	-0.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.45	05/01/2019
GoldenTree Blended Benchmark*			2.16	1.11	2.13	11.50	11.50	5.34	5.30	4.98	6.26	3.91	
Stone Harbor EMD	14,505	1.95	4.14	-0.82	4.78	14.69	14.69	6.19	N/A	N/A	N/A	4.56	11/01/2016
50%/50% Blend **			3.51	0.37	4.86	14.31	14.31	6.92	4.57	2.27	4.86	5.16	
Ashmore Emerging Markets Total Return	14,821	2.00	2.78	-3.07	4.44	9.82	9.82	5.72	N/A	N/A	N/A	5.72	01/01/2017
50%/50% Blend **			3.51	0.37	4.86	14.31	14.31	6.92	4.57	2.27	4.86	6.92	

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)										
	Market Value (\$000)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
PRIT Absolute Return	50,920	6.86	1.72	-0.17	2.86	7.70	7.70	4.67	3.11	4.76	4.49	4.12	10/01/2008
HFRI Fund of Funds Composite Index			3.03	-0.95	1.49	8.33	8.33	3.92	2.38	3.44	2.84	2.54	
HFRI FOF: Diversified Index			2.67	-0.81	1.67	8.02	8.02	3.78	2.31	3.40	2.87	2.60	
Total Real Estate	60,954	8.21	1.85	2.69	1.81	7.93	7.93	9.34	10.07	9.78	9.33	7.21	01/01/1995
NCREIF Property Index			1.55	1.41	1.51	6.42	6.42	6.70	8.25	9.14	10.18	9.34	
RREEF America REIT II	14,021	1.89	1.65	1.79	1.79	7.27	7.27	7.71	9.74	10.94	12.30	7.55	04/01/2005
NCREIF Property Index			1.55	1.41	1.51	6.42	6.42	6.70	8.25	9.14	10.18	8.23	
Intercontinental	31,685	4.27	2.87	2.50	1.45	9.09	9.09	9.45	N/A	N/A	N/A	9.45	01/01/2017
NCREIF Property Index			1.55	1.41	1.51	6.42	6.42	6.70	8.25	9.14	10.18	6.70	
Total Infrastructure	37,822	5.10	4.40	2.00	4.33	14.19	14.19	15.36	N/A	N/A	N/A	13.53	03/01/2016
IFM	29,724	4.00	5.41	2.40	4.05	16.13	16.13	N/A	N/A	N/A	N/A	16.51	04/01/2017
Bristol County Cash	5,404	0.73	0.48	0.83	0.73	2.68	2.68	2.42	1.76	1.41	1.08	2.77	01/01/1997
90 Day U.S. Treasury Bill			0.46	0.56	0.64	2.28	2.28	1.67	1.05	0.76	0.56	2.17	

**Stone Harbor 50/50 Blend: 50% JPM EMBI Global Diversified Index/50% JPM GBI-EM Global Diversified US Index

**PIMCO Index: 33% BC Global Agg/33% ML Global HY/33% JPM EMBI Global.

*GoldenTree Blended Benchmark: 50% Merrill Lynch High Yield Index / 50% S&P/LSTA Leveraged Loan Index

Bristol County Retirement System

As of December 31, 2019

Internal Rates of Return

	Market Value (\$)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	1 Quarter Ending Mar-2019	1 Year	3 Years	5 Years	7 Years	Since Inception	Inception Date
Other Fixed Income												
Invesco Mortgage Recovery Fund	251,357	0.03	0.00	-0.02	-0.33	1.35	1.49	2.89	10.79	16.69	13.90	03/31/2010
Real Assets												
Active Funds:												
Brookfield Timberlands Fund V	1,124,097	0.15	0.00	-0.33	2.31	3.19	5.29	7.90	6.07	N/A	8.53	12/23/2013
Eastern Timberland Opportunities II	2,848,636	0.38	0.00	1.96	0.91	4.40	7.51	7.60	9.10	N/A	8.56	07/03/2014
GCM Customized Infrastructures Strategies II, LP	8,098,072	1.09	0.00	0.12	5.35	-0.05	5.55	9.76	N/A	N/A	8.65	03/10/2016
Invesco Mortgage Recovery II	4,513,292	0.61	0.00	2.96	6.42	0.75	12.11	13.76	N/A	N/A	14.09	05/20/2016
TerraCap Partners IV	10,670,285	1.44	0.00	4.22	-1.06	-0.33	2.72	N/A	N/A	N/A	7.35	07/17/2018
Funds in Liquidation												
Hunt RIVA (FKA SSgA Tuckerman)	63,961	0.01	0.00	-0.52	1.50	-0.85	0.12	-11.26	-2.23	8.67	0.00	10/01/2004

Bristol County Retirement System

As of December 31, 2019

Internal Rates of Return

	Market Value (\$)	%	1 Quarter	1 Quarter Ending Sep-2019	1 Quarter Ending Jun-2019	1 Quarter Ending Mar-2019	1 Year	3 Years	5 Years	7 Years	Since Inception	Inception Date
Total Private Equity	47,640,992	6.42	-2.63	7.31	3.60	2.19	10.70	15.34	10.66	10.44	177.68	01/05/1995

Active Funds:

BlackRock Vesey Street Fund III	275,633	0.04	0.00	-3.45	-2.68	0.23	-5.73	-6.79	3.09	8.82	4.11	07/17/2006
DuPont Capital Management II	512,841	0.07	0.00	-3.89	-2.05	-0.28	-6.07	-1.45	-4.38	-0.24	0.48	08/14/2006
DN Partners II	1,933,386	0.26	-0.31	-0.41	-0.31	-0.31	-1.34	27.82	1.71	-1.70	-4.17	01/11/2007
BlackRock Vesey Street Fund IV	3,822,898	0.52	0.00	6.56	0.42	1.46	8.38	9.67	6.98	10.11	8.24	02/24/2009
Mesirow PE Fund V	3,688,092	0.50	0.00	0.94	6.47	4.43	12.73	14.80	14.19	15.84	14.26	04/09/2009
PRIT Vintage 2014	8,882,280	1.20	3.35	5.86	7.71	-1.10	16.65	25.00	20.82	N/A	19.29	05/01/2014
PRIT Vintage 2015	13,760,640	1.85	1.63	11.93	8.36	-0.36	23.48	28.92	22.89	N/A	22.89	03/01/2015
PRIT Vintage 2016	5,257,065	0.71	-3.87	4.01	3.58	-4.25	-0.42	4.24	N/A	N/A	2.25	03/01/2016
PRIT Vintage 2017	5,537,568	0.75	-20.59	10.33	-5.23	28.02	-2.04	N/A	N/A	N/A	-11.65	04/30/2017
PRIT Vintage 2018	2,701,085	0.36	-8.62	14.17	-16.17	17.40	-0.75	N/A	N/A	N/A	-11.05	05/30/2018
PRIT Vintage 2019	1,124,332	0.15	-28.74	3.33	-0.65	N/A	N/A	N/A	N/A	N/A	-44.21	03/31/2019

Funds in Liquidation:

Charles River XI	145,173	0.02	0.00	0.04	0.04	0.02	0.10	1.26	7.94	8.52	8.83	11/22/2000
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Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)									
	Market Value (\$000)	%	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Fund	742,179	100.00	-3.68	17.25	7.32	0.21	5.30	18.86	15.68	-1.44	14.26	21.58
Total Plan Index			-4.59	15.96	6.19	0.79	6.25	17.81	12.59	0.45	11.21	21.02
Total Plan Allocation Index			-4.73	16.40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Domestic Equity	171,725	23.14	-11.11	23.61	9.01	0.66	10.97	39.12	16.25	1.11	17.08	29.17
S&P 500 Index			-4.38	21.83	11.96	1.38	13.69	32.39	16.00	2.11	15.06	26.46
Russell 3000 Index			-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Columbia	33,239	4.48	-4.30	35.56	-8.17	8.65	10.45	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index			-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21
ClearBridge Large Cap Growth	32,523	4.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index			-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21
Intech Large Cap Growth	-	0.00	N/A	30.03	6.11	4.36	10.44	33.91	14.80	2.22	17.65	27.40
Russell 1000 Growth Index			-1.51	30.21	7.08	5.67	13.05	33.48	15.26	2.64	16.71	37.21
LSV	37,336	5.03	-11.72	18.89	16.66	-2.14	13.25	40.94	21.22	-0.94	13.94	24.91
Russell 1000 Value Index			-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69
Lyrical	35,007	4.72	-20.80	19.32	15.33	-4.25	14.28	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index			-8.27	13.66	17.34	-3.83	13.45	32.53	17.51	0.39	15.51	19.69
Frontier Capital Appreciation	17,416	2.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Growth Index			-9.31	22.17	11.32	-1.38	5.60	43.30	14.59	-2.91	29.09	34.47
Rice Hall James	-	0.00	1.03	13.28	7.08	-0.08	5.41	36.41	13.30	9.12	30.15	38.55
Russell 2000 Growth Index			-9.31	22.17	11.32	-1.38	5.60	43.30	14.59	-2.91	29.09	34.47
Earnest Partners	16,205	2.18	-13.38	20.01	24.39	-4.51	8.89	34.88	14.90	2.76	20.45	26.39
Russell 2000 Value Index			-12.86	7.84	31.74	-7.47	4.22	34.52	18.05	-5.50	24.50	20.58

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)									
	Market Value (\$000)	%	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total International Equity	180,163	24.27	-12.74	27.74	8.40	-4.29	-3.24	21.81	24.35	-14.17	17.77	53.39
MSCI EAFE (net)			-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78
MSCI AC World ex USA			-13.78	27.77	5.01	-5.25	-3.44	15.78	17.39	-13.33	11.60	42.14
Arrowstreet Capital	30,265	4.08	-11.98	27.26	6.87	-1.88	-2.74	23.44	19.10	-12.96	14.39	47.80
MSCI AC World ex USA			-13.78	27.77	5.01	-5.25	-3.44	15.78	17.39	-13.33	11.60	42.14
Freedom Capital Intl	36,658	4.94	-12.90	27.96	6.75	1.37	-2.88	33.24	31.46	-15.84	20.72	53.54
MSCI EAFE (net)			-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78
Fiera International Equity	35,805	4.82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI EAFE (Net)			-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78
MFS International Equity	-	0.00	N/A	28.02	0.30	0.02	-4.21	18.57	22.55	-9.80	N/A	N/A
MSCI EAFE (Net)			-13.79	25.03	1.00	-0.81	-4.90	22.78	17.32	-12.14	7.75	31.78
Lazard Emerging Markets	39,723	5.35	-18.05	27.55	20.92	-20.42	-4.04	-0.77	21.83	-18.11	22.37	73.53
MSCI Emerging Markets Index			-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.64	-18.17	19.20	79.02
Aberdeen Emerging Markets	37,712	5.08	-13.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI Emerging Markets Index			-14.25	37.75	11.60	-14.60	-1.82	-2.27	18.64	-18.17	19.20	79.02
Global REITs												
Brookfield Global Real Estate	14,331	1.93	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE EPRA/NAREIT Developed Index			-4.74	11.42	4.99	0.05	15.89	4.39	28.65	-5.82	20.40	38.26

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)									
	Market Value (\$000)	%	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Domestic Fixed	55,492	7.48	-0.08	3.82	3.86	0.66	6.15	-2.14	9.73	5.49	9.95	11.40
Barclays Cap Aggregate			0.01	3.54	2.65	0.55	5.97	-2.02	4.21	7.84	6.54	5.93
Income Research & Management	42,962	5.79	-0.19	4.49	4.00	0.20	7.23	-1.39	7.70	8.31	7.71	14.40
Blmbg. Barc. U.S. Gov't/Credit			-0.42	4.00	3.05	0.15	6.01	-2.35	4.82	8.74	6.59	4.52
IR+M TIPS	12,279	1.65	-0.26	1.97	4.11	-0.53	0.88	-5.54	4.96	9.08	6.41	10.49
Barclays Cap US Treas: US TIPS			-1.26	3.01	4.68	-1.44	3.64	-8.61	6.98	13.56	6.31	11.41
Total Global Fixed	113,754	15.33	-2.43	10.00	8.55	-1.05	2.13	-1.54	11.04	4.23	12.13	21.87
Barclays Cap Global Aggregate			-1.19	7.39	2.09	-3.15	0.59	-2.60	4.32	5.64	5.54	6.93
Franklin Templeton Global Bond	22,083	2.98	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE World Government Bond Index			-0.84	7.49	1.60	-3.57	-0.48	-4.00	1.65	6.35	5.17	2.55
PIMCO Diversified Income	41,655	5.61	-0.96	8.85	10.56	1.24	2.98	-0.91	14.97	4.44	14.27	31.57
Global Diversified Index**			-3.03	8.97	8.97	-2.02	1.99	-0.49	13.86	5.68	10.39	31.15
GoldenTree Multi-Sector Opportunistic Fund	20,690	2.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GoldenTree Blended Benchmark*			-0.91	5.79	13.78	-2.66	2.06	6.36	12.59	2.99	12.67	54.63
Stone Harbor EMD	14,505	1.95	-8.65	14.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50%/50% Blend **			-5.15	12.74	10.16	-7.14	0.71	-7.10	17.21	2.79	14.02	26.00
Ashmore Emerging Markets Total Return	14,821	2.00	-5.33	13.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50%/50% Blend **			-5.15	12.74	10.16	-7.14	0.71	-7.10	17.21	2.79	14.02	26.00
Colchester Global Bond	-	0.00	-0.47	8.74	4.28	-5.53	0.27	-2.88	N/A	N/A	N/A	N/A
FTSE World Government Bond Index			-0.84	7.49	1.60	-3.57	-0.48	-4.00	1.65	6.35	5.17	2.55

Bristol County Retirement System

Comparative Performance

As of December 31, 2019

	Allocation		Performance (%)									
	Market Value (\$000)	%	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
PRIT Absolute Return	50,920	6.86	-1.56	8.16	3.57	-1.86	5.53	12.61	8.36	-2.77	6.29	12.33
HFRI Fund of Funds Composite Index			-3.87	7.77	0.51	-0.27	3.37	8.96	4.79	-5.72	5.70	11.47
HFRI FOF: Diversified Index			-3.17	6.87	0.45	-0.17	3.42	9.04	4.81	-5.01	5.48	11.46
Total Real Estate	60,954	8.21	12.55	7.60	9.60	12.77	10.35	7.79	6.52	7.31	11.09	-33.08
NCREIF Property Index			6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85
RREEF America REIT II	14,021	1.89	8.43	7.44	9.14	16.70	12.99	15.01	12.41	14.12	20.26	-29.13
NCREIF Property Index			6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85
Intercontinental	31,685	4.27	10.74	8.53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NCREIF Property Index			6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85
Total Infrastructure	37,822	5.10	15.97	15.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IFM	29,724	4.00	16.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bristol County Cash	5,404	0.73	3.84	0.77	0.35	1.19	0.86	0.23	0.12	0.28	0.56	1.15
90 Day U.S. Treasury Bill			1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17

**Stone Harbor 50/50 Blend: 50% JPM EMBI Global Diversified Index/50% JPM GBI-EM Global Diversified US Index

**PIMCO Index: 33% BC Global Agg/33% ML Global HY/33% JPM EMBI Global.

*GoldenTree Blended Benchmark: 50% Merrill Lynch High Yield Index / 50% S&P/LSTA Leveraged Loan Index

Bristol County Retirement System

Plan Index

As of December 31, 2019

Policy Index	Weight (%)
Jan-1976	
Blmbg. Barc. U.S. Aggregate	35.00
MSCI EAFE (Net)	15.00
S&P 500	50.00
Jul-2007	
Blmbg. Barc. U.S. Aggregate	33.00
MSCI EAFE (Net)	22.00
S&P 500	45.00
Jul-2010	
Blmbg. Barc. U.S. Aggregate	33.00
MSCI EAFE (Net)	25.50
S&P 500	41.50
Jan-2017	
Blmbg. Barc. U.S. Aggregate	18.00
Russell 3000 Index	34.00
Blmbg. Barc. Global Aggregate	16.50
MSCI AC World ex USA	24.00
NCREIF Property Index	7.50

Bristol County Retirement System

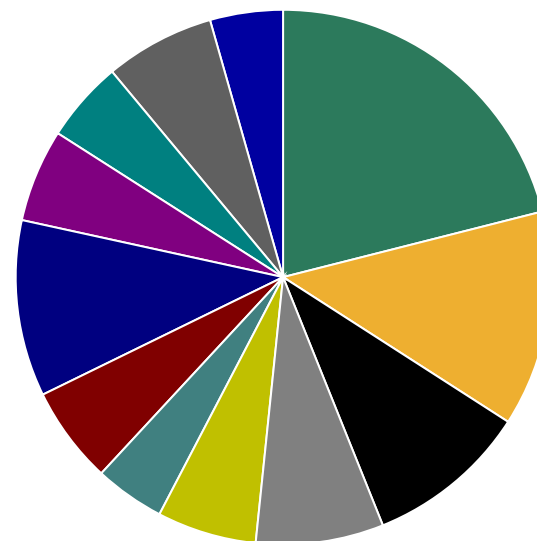
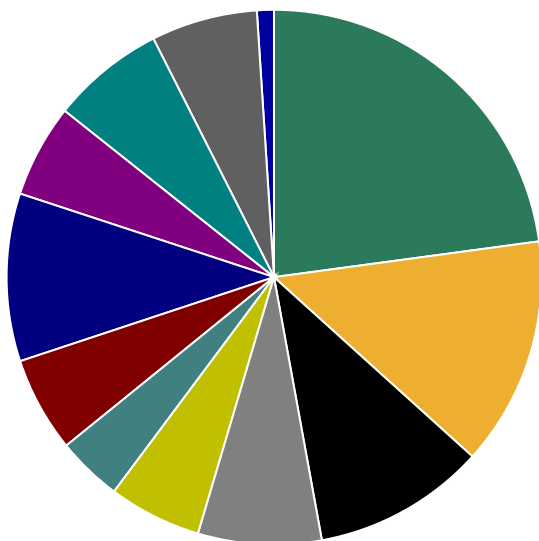
Total Plan Allocation Index

As of December 31, 2019

Policy Index	Weight (%)
Jan-2017	
Russell 3000 Index	30.00
NCREIF Timberland Index	3.00
FTSE EPRA/NAREIT Developed Index	2.00
MSCI EAFE Index	12.50
MSCI Emerging Markets Index	10.50
Blmbg. Barc. U.S. Aggregate	11.00
Blmbg. Barc. U.S. TIPS	2.00
Blmbg. Barc. Global Aggregate	6.50
50% JPM EMBI Global Div./ 50% JPM GBI-EM Global Div.	7.00
FTSE High Yield Market Capped Index	3.00
HFRI FOF: Diversified Index	5.00
NCREIF Property Index	7.50

Dec-2019 : \$742,179,080

Sep-2019 : \$714,323,759



Segments	Market Value (\$)	Allocation (%)
Domestic Equity	169,657,100	22.86
International Equity	102,727,510	13.84
Emerging Equity	77,435,093	10.43
Domestic Fixed Income	55,325,023	7.45
International Fixed Income	41,655,320	5.61
Emerging Fixed Income	29,326,063	3.95
Global Fixed Income	42,772,174	5.76
Real Estate	75,285,290	10.14
Alternative Investment	41,794,412	5.63
Hedge Fund	50,920,366	6.86
Private Equity	47,640,992	6.42
Cash Equivalent	7,639,735	1.03

Segments	Market Value (\$)	Allocation (%)
Domestic Equity	150,332,285	21.05
International Equity	93,215,969	13.05
Emerging Equity	70,189,226	9.83
Domestic Fixed Income	55,135,394	7.72
International Fixed Income	42,954,357	6.01
Emerging Fixed Income	30,311,788	4.24
Global Fixed Income	41,935,975	5.87
Real Estate	76,161,720	10.66
Alternative Investment	40,147,784	5.62
Hedge Fund	35,060,950	4.91
Private Equity	47,401,013	6.64
Cash Equivalent	31,477,298	4.41

Bristol County Retirement System

Financial Reconciliation

1 Quarter Ending December 31, 2019

	Market Value As of 10/01/2019	Contributions	Distributions	Fees	Expenses	Return On Investment	Market Value As of 12/31/2019
Domestic Equity							
ClearBridge Large Cap Growth	29,835,184	-	-	-47,662	-	2,735,259	32,522,782
Columbia	28,946,861	-	-	-	-	4,291,895	33,238,755
LSV	34,250,889	-	-	-47,083	-	3,132,015	37,335,821
Lyrical	31,609,410	-	-	-65,760	-	3,463,057	35,006,708
Earnest Partners	15,016,707	-	-	-29,855	-	1,218,571	16,205,423
Frontier Capital Appreciation	15,854,443	-	-	-	-	1,561,540	17,415,984
International Equity							
Arrowstreet Capital	27,475,167	51,091	-	-51,091	-	2,790,049	30,265,216
Freedom Capital Intl	33,317,945	-	-	-72,374	-	3,412,161	36,657,732
Fiera International Equity	32,422,858	-	-	-64,118	-	3,445,823	35,804,563
Lazard Emerging Markets	35,728,240	-	-	-	-	3,995,237	39,723,477
Aberdeen Emerging Markets	34,460,986	-	-	-85,677	-	3,336,307	37,711,616
Global REITs							
Brookfield Global Real Estate	15,146,564	-	-1,000,000	-	-	184,352	14,330,916
Domestic Fixed Income							
Income Research & Management	43,038,404	-	-	-33,007	-	-43,091	42,962,306
IRM-TIPS	12,162,067	-	-	-3,045	-	119,800	12,278,822
Invesco Mortgage Recovery Fund	251,357	-	-	-	-	-	251,357
International Fixed Income							
Franklin Templeton Global Bond	21,835,400	-	-	-25,971	-	273,169	22,082,598
PIMCO Diversified Income	42,954,357	-	-2,000,000	-	-	700,963	41,655,320
GoldenTree Multi-Sector Opportunistic Fund	20,100,575	-	-	-	-	589,002	20,689,576
Stone Harbor EMD	15,892,236	-	-2,000,000	-21,969	-	634,667	14,504,934
Ashmore Emerging Markets Total Return	14,419,552	-	-	-	-	401,577	14,821,129

Bristol County Retirement System

Financial Reconciliation

1 Quarter Ending December 31, 2019

	Market Value As of 10/01/2019	Contributions	Distributions	Fees	Expenses	Return On Investment	Market Value As of 12/31/2019
Short Term Investments							
Bristol County Cash	25,979,655	8,597,667	-29,210,108	-	-	36,687	5,403,900
Total Private Equity							
DN Partners II	1,939,453	-	-	-	-	-6,067	1,933,386
Charles River XI	145,173	-	-	-	-	-	145,173
DuPont Capital Management II	522,999	869	-11,028	-869	-	869	512,841
BlackRock Vesey Street Fund III	325,633	-	-50,000	-	-	-	275,633
BlackRock Vesey Street Fund IV	4,065,317	14,720	-257,139	-	-1,137	1,137	3,822,898
Mesirow PE Fund V	4,038,092	-	-350,000	-	-	-	3,688,092
PRIT Vintage 2014	9,117,110	-52,442	-479,762	-1,121	-17,759	316,255	8,882,280
PRIT Vintage 2015	13,852,920	499,208	-814,837	-9,437	-51,294	284,081	13,760,640
PRIT Vintage 2016	5,194,158	328,330	-64,925	-3,093	-35,093	-162,312	5,257,065
PRIT Vintage 2017	4,907,489	1,697,447	-6,376	-3,483	-54,357	-1,003,152	5,537,568
PRIT Vintage 2018	2,578,667	354,405	-2,231	-2,257	-54,815	-172,685	2,701,085
PRIT Vintage 2019	714,002	679,715	-	-930	-13,110	-255,345	1,124,332
Real Assets							
Hunt RIVA (FKA SSgA Tuckerman)	63,961	-	-	-	-	-	63,961
RREEF America REIT II	13,826,120	-	-	-33,012	-	228,284	14,021,392
Intercontinental	30,868,626	-	-	-68,620	-	885,439	31,685,445
Brookfield Timberlands Fund V	1,140,483	2,929	-19,315	-2,769	-160	2,929	1,124,097
Eastern Timberland Opportunities II	3,002,999	-	-154,363	-	-	-	2,848,636
GCM Customized Infrastructures Strategies II, LP	7,752,176	782,536	-436,641	-17,386	-55,449	72,835	8,098,072
Invesco Mortgage Recovery II	5,174,000	-	-660,708	-	-	-	4,513,292
IFM	28,252,126	-	-	-55,926	-	1,527,408	29,723,607
TerraCap Partners IV	11,082,450	3,514	-415,679	-3,514	-	3,514	10,670,285
Hedge Fund of Funds							
PRIT Absolute Return	35,060,950	15,000,000	-	-138,845	-	998,261	50,920,366
Total Fund	714,323,759	27,959,988	-37,933,112	-888,874	-283,174	39,000,493	742,179,080

Bristol County Retirement System

Financial Reconciliation

1 Year Ending December 31, 2019

	Market Value As of 01/01/2019	Contributions	Distributions	Fees	Expenses	Return On Investment	Market Value As of 12/31/2019
Domestic Equity							
ClearBridge Large Cap Growth	23,974,597	2,000,000	-1,250,000	-200,569	-	7,998,753	32,522,782
Columbia	23,439,708	2,000,000	-1,250,000	-	-	9,049,047	33,238,755
LSV	29,425,133	2,000,000	-1,250,000	-183,353	-	7,344,041	37,335,821
Lyrical	26,974,366	2,000,000	-1,250,000	-230,260	-	7,512,601	35,006,708
Earnest Partners	12,113,624	1,000,000	-	-105,185	-	3,196,985	16,205,423
Frontier Capital Appreciation	12,663,181	1,000,000	-	-	-	3,752,802	17,415,984
International Equity							
Arrowstreet Capital	26,714,516	210,017	-2,500,000	-210,017	-	6,050,700	30,265,216
Freedom Capital Intl	30,457,769	-	-	-289,759	-	6,489,722	36,657,732
Fiera International Equity	27,269,037	-	-	-237,405	-	8,772,931	35,804,563
Lazard Emerging Markets	39,436,498	-	-6,000,000	-	-	6,286,979	39,723,477
Aberdeen Emerging Markets	31,323,072	-	-	-330,554	-	6,719,098	37,711,616
Global REITs							
Brookfield Global Real Estate	12,733,520	-	-1,000,000	-	-	2,597,395	14,330,916
Domestic Fixed Income							
Income Research & Management	42,106,379	-	-3,000,000	-130,102	-	3,986,030	42,962,306
IRM-TIPS	11,499,265	-	-	-11,825	-	791,382	12,278,822
Invesco Mortgage Recovery Fund	374,182	-	-126,979	-	-	4,154	251,357

Bristol County Retirement System

Financial Reconciliation

1 Year Ending December 31, 2019

	Market Value As of 01/01/2019	Contributions	Distributions	Fees	Expenses	Return On Investment	Market Value As of 12/31/2019
International Fixed Income							
Colchester Global Bond	23,077,160	-	-23,396,028	-46,112	-	364,980	-
Franklin Templeton Global Bond	-	22,500,000	-	-51,260	-	-366,142	22,082,598
PIMCO Diversified Income	64,127,470	-	-29,000,000	-	-	6,527,850	41,655,320
GoldenTree Multi-Sector Opportunistic Fund	-	20,000,000	-	-	-	689,576	20,689,576
Stone Harbor EMD	18,270,096	-	-6,000,000	-93,870	-	2,328,708	14,504,934
Ashmore Emerging Markets Total Return	15,393,068	-	-2,000,000	-	-	1,428,061	14,821,129
Short Term Investments							
Bristol County Cash	4,860,774	125,043,291	-124,799,686	-	-	299,521	5,403,900
Total Private Equity							
DN Partners II	1,947,500	12,139	-	-	-	-26,253	1,933,386
Charles River XI	145,027	-	-	-	-	146	145,173
DuPont Capital Management II	687,703	5,259	-142,617	-5,259	-	-32,245	512,841
BlackRock Vesey Street Fund III	395,678	-	-100,000	-	-	-20,045	275,633
BlackRock Vesey Street Fund IV	4,935,644	93,146	-1,562,185	-	-59,128	415,421	3,822,898
Mesirow PE Fund V	4,084,345	75,000	-950,000	-32,800	-	511,547	3,688,092
PRIT Vintage 2014	7,945,491	603,873	-1,002,527	-4,294	-100,073	1,439,811	8,882,280
PRIT Vintage 2015	10,707,865	2,364,311	-1,994,564	-45,631	-196,367	2,925,027	13,760,640
PRIT Vintage 2016	4,727,624	1,125,120	-574,560	-5,811	-142,464	127,156	5,257,065
PRIT Vintage 2017	2,449,684	3,196,608	-38,843	-7,243	-249,861	187,223	5,537,568
PRIT Vintage 2018	1,042,374	1,954,455	-281,443	-5,317	-125,481	116,497	2,701,085
PRIT Vintage 2019	-	1,381,129	-1,869	-2,445	-15,644	-236,839	1,124,332

Bristol County Retirement System

Financial Reconciliation

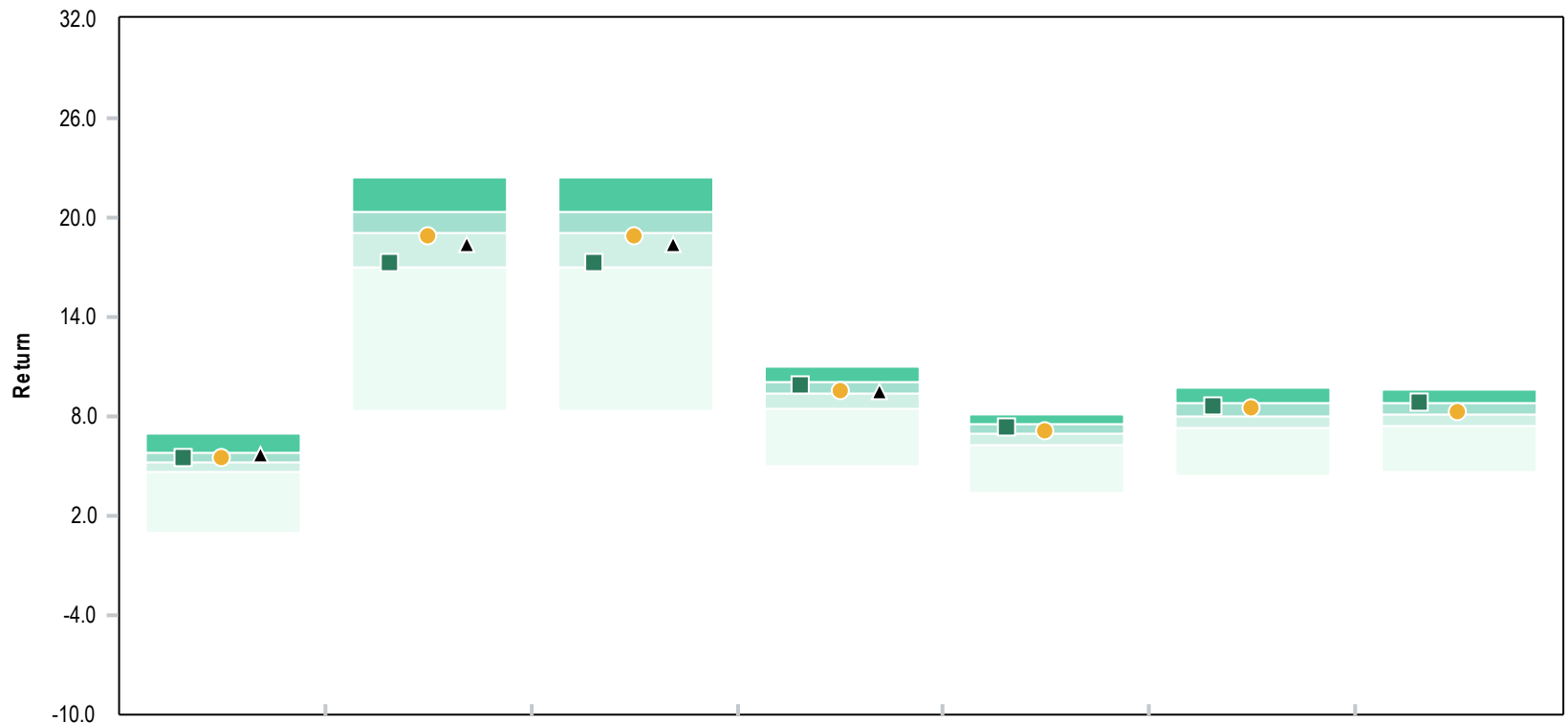
1 Year Ending December 31, 2019

	Market Value As of 01/01/2019	Contributions	Distributions	Fees	Expenses	Return On Investment	Market Value As of 12/31/2019
Real Assets							
Hunt RIVA (FKA SSgA Tuckerman)	63,885	-	-	-	-	76	63,961
RREEF America REIT II	13,194,920	-	-	-129,105	-	955,576	14,021,392
Intercontinental	29,301,930	-	-	-269,123	-	2,652,638	31,685,445
Brookfield Timberlands Fund V	1,117,812	11,616	-63,138	-10,986	-630	69,424	1,124,097
Eastern Timberland Opportunities II	2,898,480	-	-260,821	-	-	210,976	2,848,636
GCM Customized Infrastructures Strategies II, LP	6,586,563	2,204,412	-1,096,917	-66,206	-73,399	543,619	8,098,072
Invesco Mortgage Recovery II	7,925,885	1,347,230	-5,599,809	-	-	839,986	4,513,292
IFM	25,806,874	-	-	-224,902	-	4,141,635	29,723,607
TerraCap Partners IV	11,287,217	3,514	-919,081	-3,514	-	302,149	10,670,285
Hedge Fund of Funds							
PRIT Absolute Return	33,114,696	15,000,000	-	-421,500	-	3,227,171	50,920,366
Total Fund	646,693,814	207,131,120	-217,469,699	-3,390,973	-963,049	110,177,869	742,179,080

Bristol County Retirement System

All Public Plans < \$1B-Total Fund

As of December 31, 2019



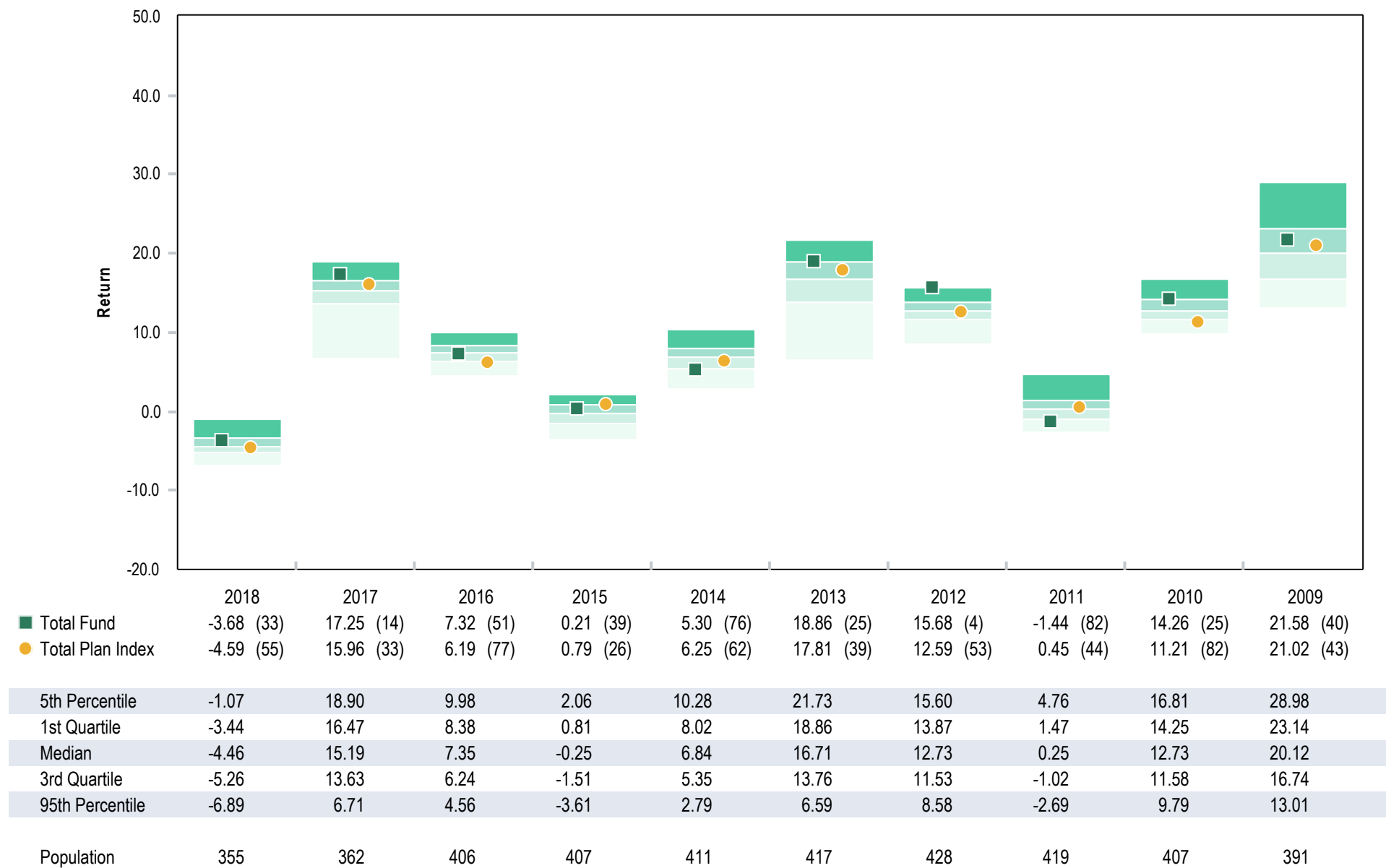
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Fund	5.50 (38)	17.26 (71)	17.26 (71)	9.82 (35)	7.33 (36)	8.61 (36)	8.79 (29)
● Total Plan Index	5.48 (39)	18.83 (54)	18.83 (54)	9.55 (45)	7.07 (47)	8.42 (41)	8.28 (47)
▲ Total Plan Allocation Index	5.69 (29)	18.33 (61)	18.33 (61)	9.48 (47)	N/A	N/A	N/A
5th Percentile	6.91	22.37	22.37	11.04	8.15	9.76	9.63
1st Quartile	5.82	20.38	20.38	10.09	7.50	8.84	8.81
Median	5.25	19.06	19.06	9.39	6.99	7.97	8.15
3rd Quartile	4.65	16.95	16.95	8.45	6.30	7.27	7.48
95th Percentile	0.98	8.30	8.30	4.94	3.40	4.45	4.64
Population	380	368	368	346	333	317	282

Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.

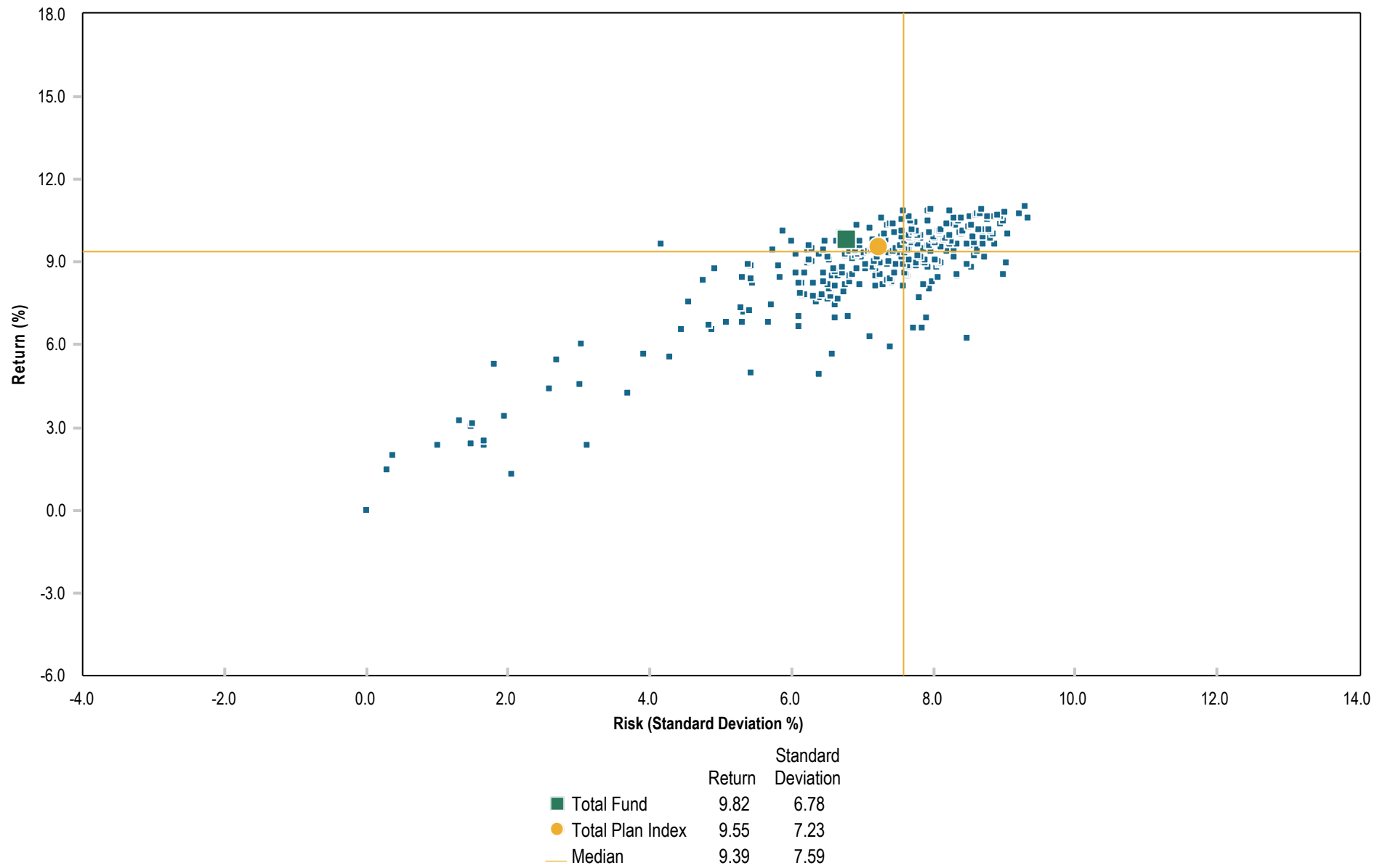
Bristol County Retirement System

All Public Plans < \$1B-Total Fund

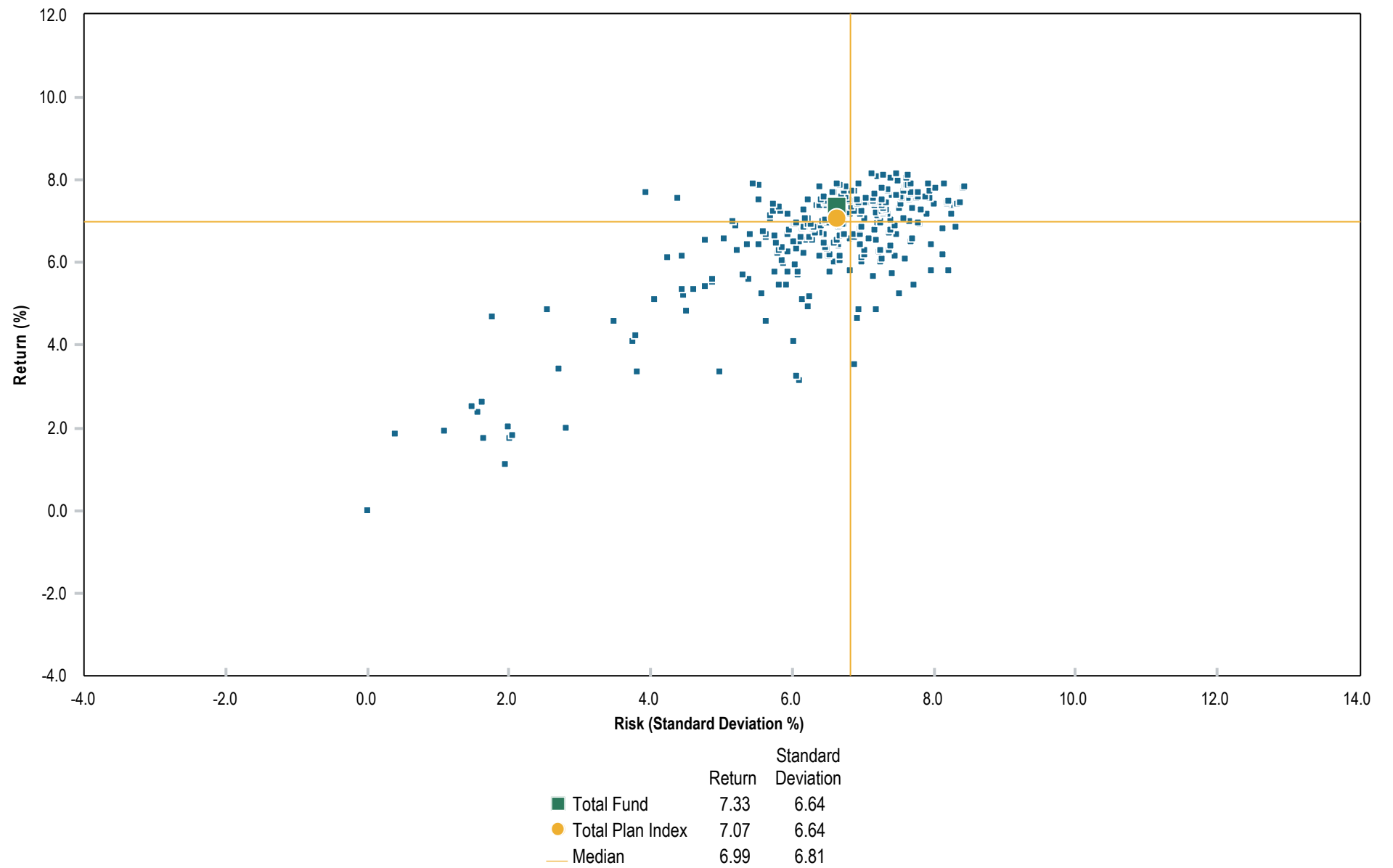
As of December 31, 2019



Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.



Calculation based on quarterly periodicity.



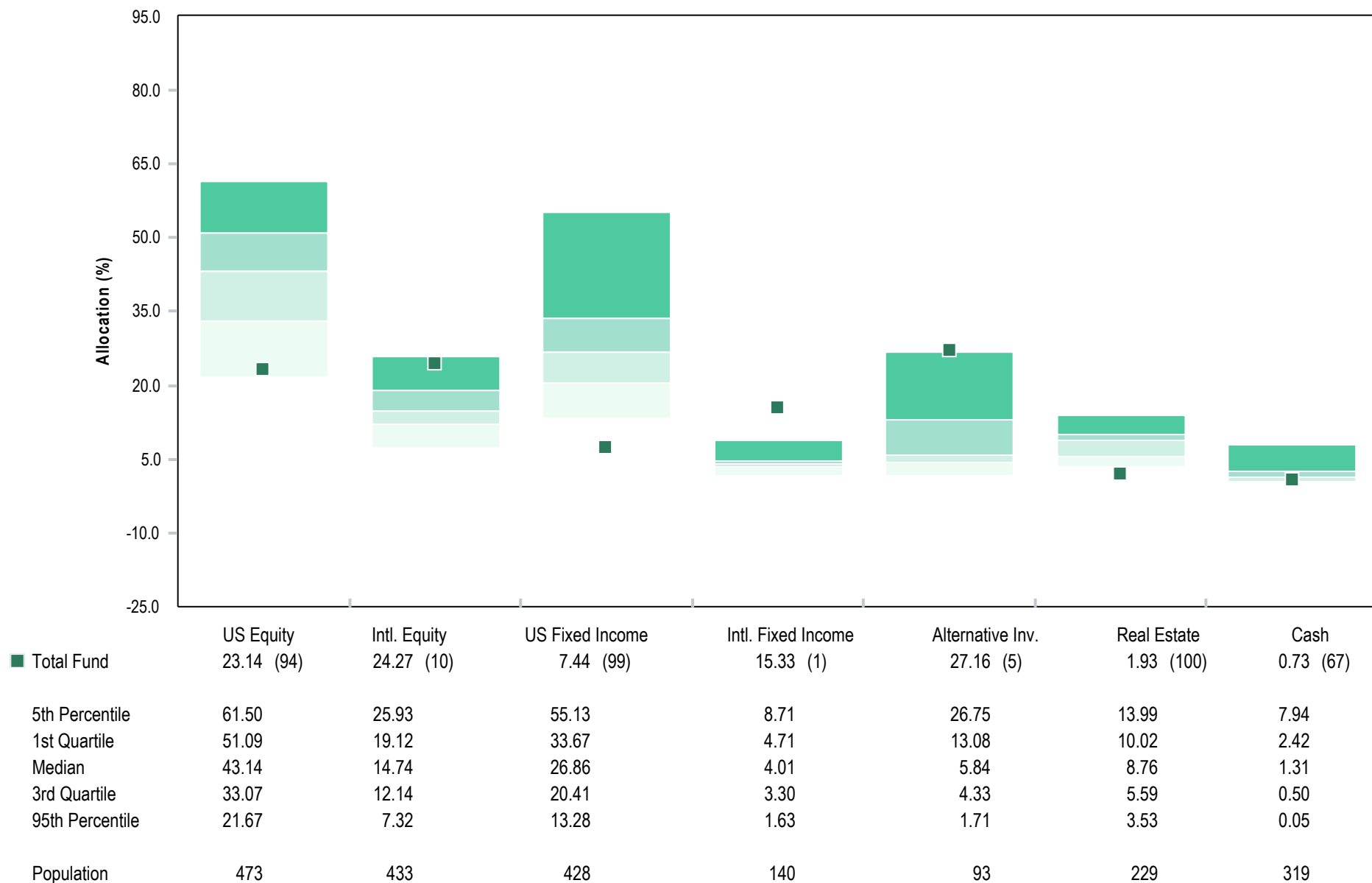
Calculation based on quarterly periodicity.

Bristol County Retirement System

Plan Sponsor TF Asset Allocation

As of December 31, 2019

All Public Plans < \$1B-Total Fund



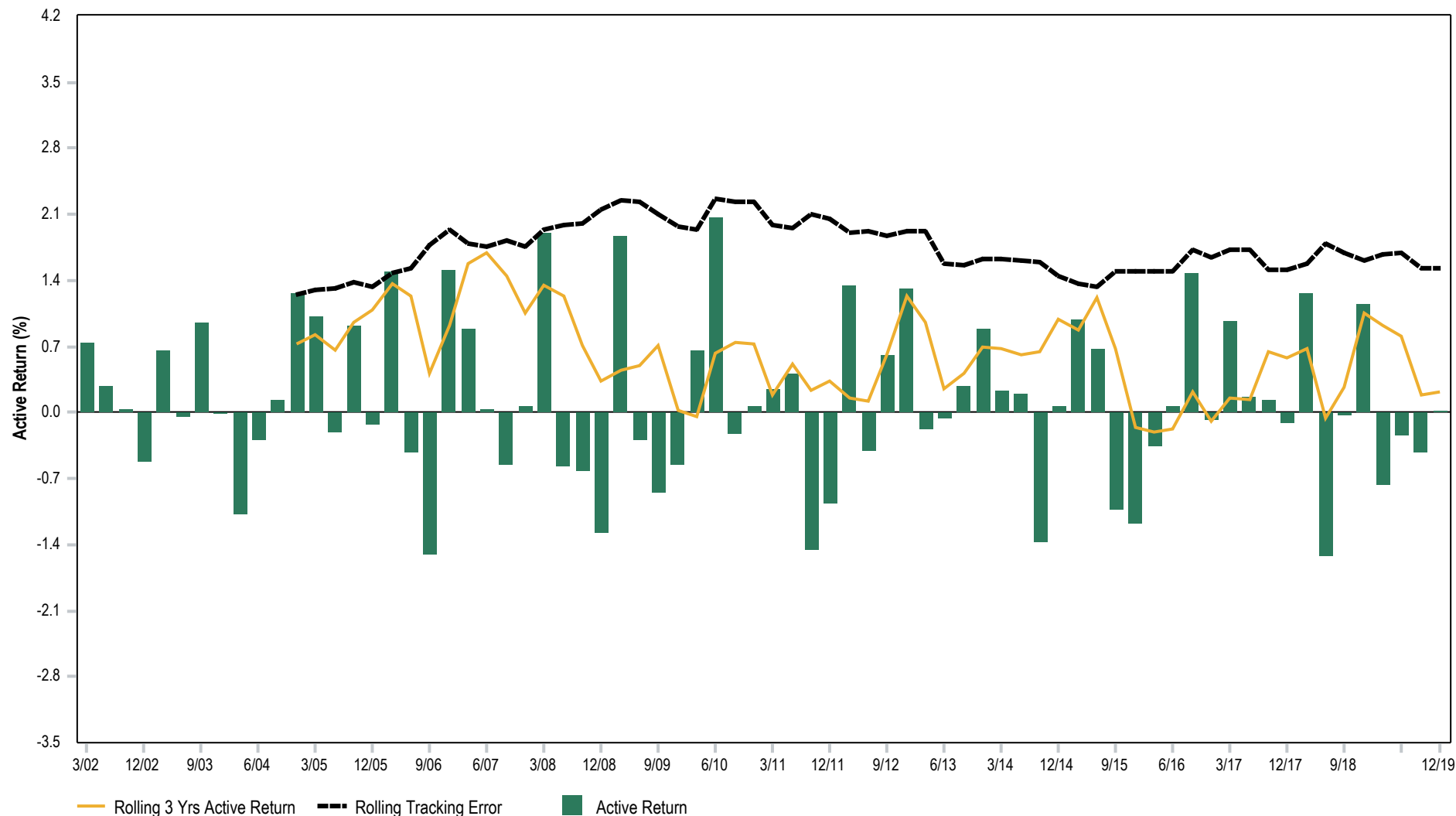
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

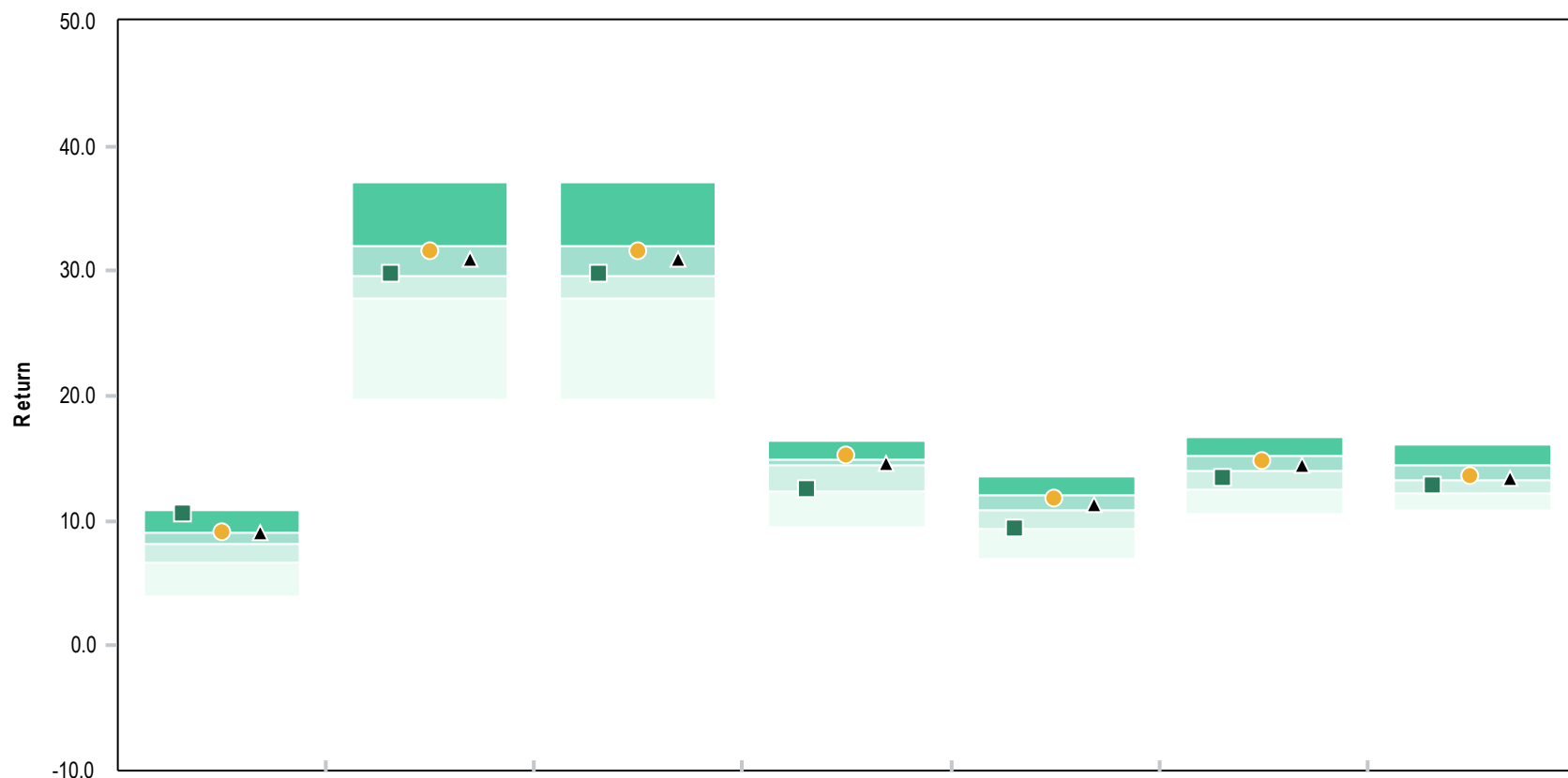
As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Total Fund	5.50	17.26	17.26	9.82	7.33	8.61	8.79	-3.68	17.25	7.32	0.21
Total Plan Index	5.48	18.83	18.83	9.55	7.07	8.42	8.28	-4.59	15.96	6.19	0.79
Difference	0.02	-1.57	-1.57	0.27	0.26	0.19	0.51	0.91	1.29	1.13	-0.58



Gross of Fees

Domestic Equity



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Domestic Equity	10.55 (6)	29.71 (50)	29.71 (50)	12.54 (70)	9.35 (78)	13.42 (65)	12.76 (63)
● S&P 500 Index	9.07 (24)	31.49 (28)	31.49 (28)	15.27 (21)	11.70 (30)	14.73 (35)	13.56 (41)
▲ Russell 3000 Index	9.10 (24)	31.02 (34)	31.02 (34)	14.57 (44)	11.24 (38)	14.38 (45)	13.42 (48)

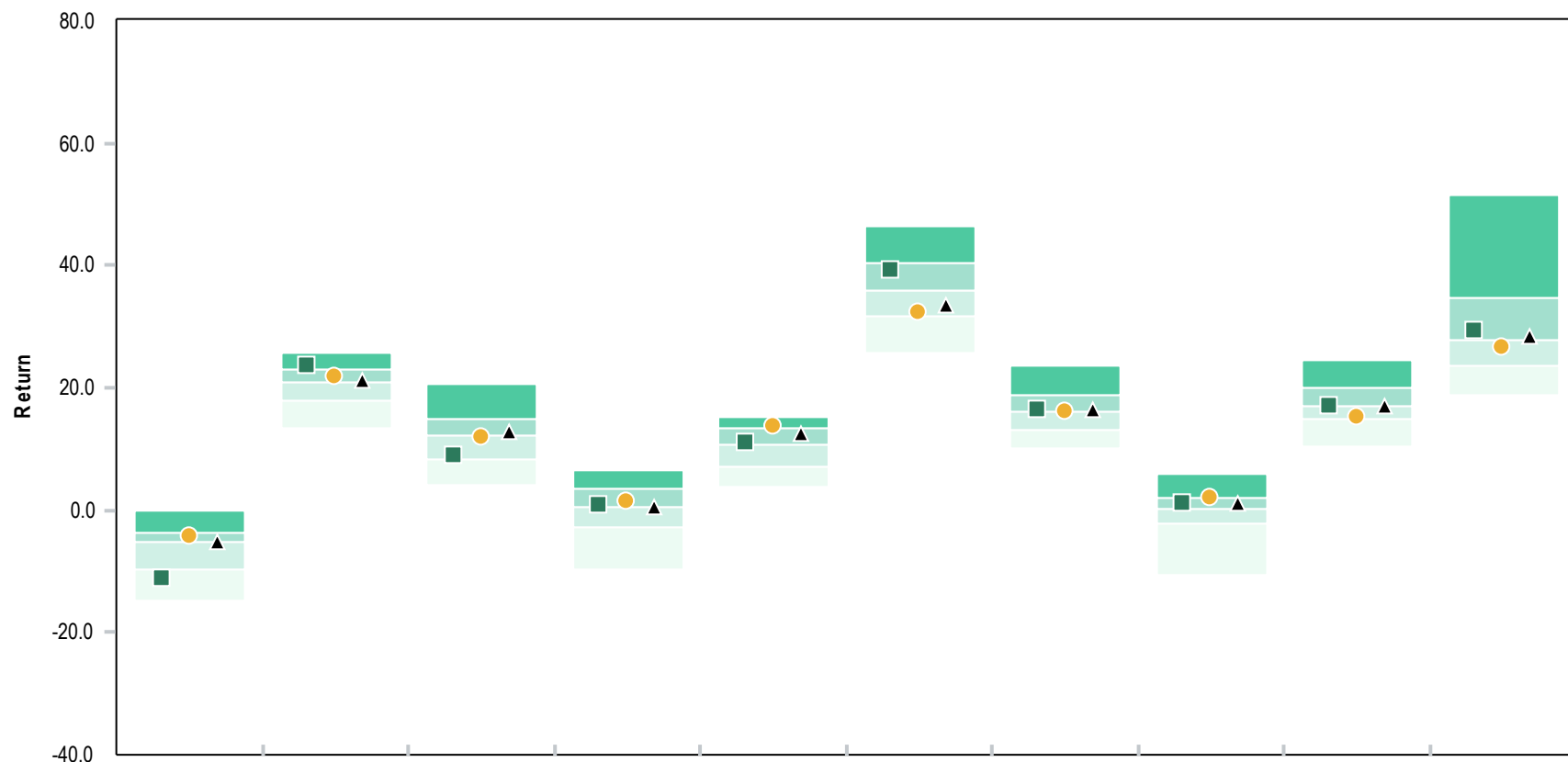
5th Percentile	10.82	37.08	37.08	16.44	13.51	16.70	16.15
1st Quartile	9.05	32.04	32.04	14.90	12.00	15.27	14.38
Median	8.12	29.67	29.67	14.46	10.80	14.05	13.22
3rd Quartile	6.61	27.75	27.75	12.41	9.39	12.51	12.21
95th Percentile	3.89	19.68	19.68	9.56	6.96	10.56	10.78

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. All Cap Core Equity (SA+CF)

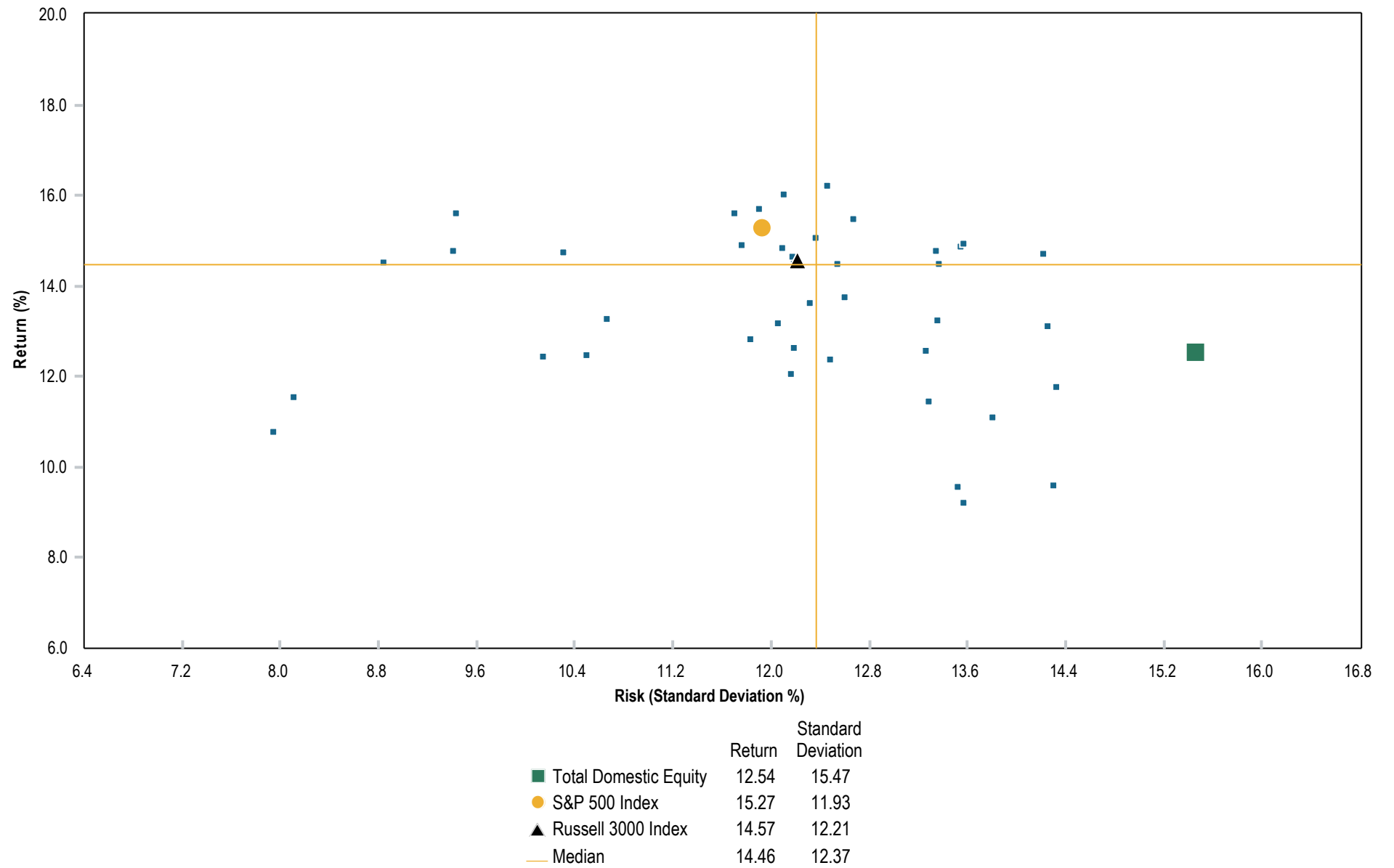
As of December 31, 2019



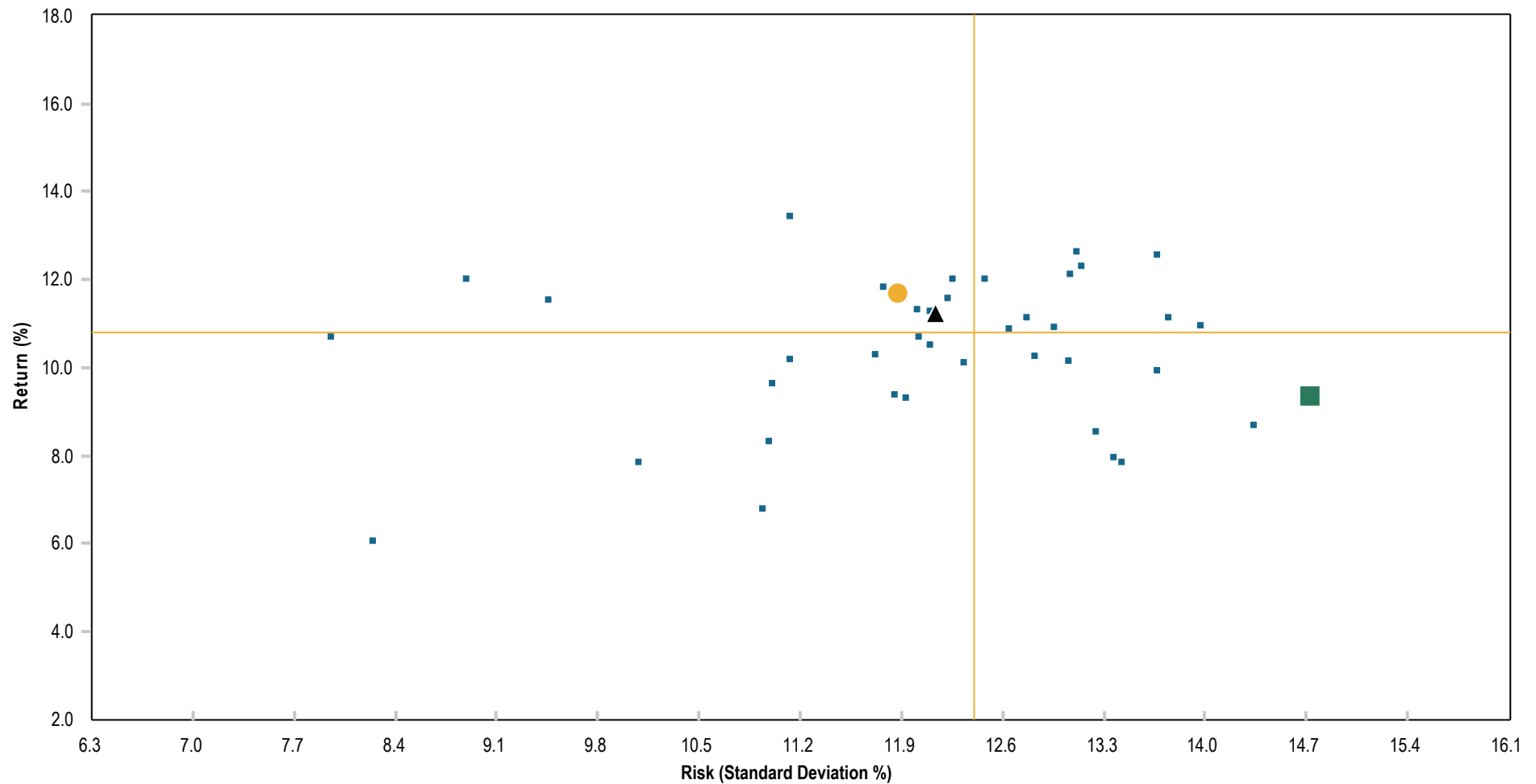
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Total Domestic Equity	-11.11 (83)	23.61 (19)	9.01 (69)	0.66 (47)	10.97 (49)	39.12 (28)	16.25 (48)	1.11 (43)	17.08 (47)	29.17 (44)
● S&P 500 Index	-4.38 (37)	21.83 (34)	11.96 (52)	1.38 (40)	13.69 (18)	32.39 (73)	16.00 (50)	2.11 (25)	15.06 (71)	26.46 (56)
▲ Russell 3000 Index	-5.24 (50)	21.13 (48)	12.74 (48)	0.48 (50)	12.56 (32)	33.55 (66)	16.42 (44)	1.03 (43)	16.93 (53)	28.34 (46)

5th Percentile	-0.13	25.61	20.45	6.38	15.10	46.48	23.62	5.78	24.54	51.35
1st Quartile	-3.57	23.00	14.94	3.65	13.30	40.43	18.95	2.01	20.06	34.84
Median	-5.28	20.91	12.17	0.45	10.80	35.95	15.97	0.32	16.99	27.82
3rd Quartile	-9.77	17.90	8.41	-2.75	7.21	31.68	13.08	-2.23	14.77	23.68
95th Percentile	-14.75	13.36	4.18	-9.67	3.86	25.65	10.00	-10.48	10.29	18.88

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total Domestic Equity	9.35	14.73
● S&P 500 Index	11.70	11.88
▲ Russell 3000 Index	11.24	12.13
— Median	10.80	12.41

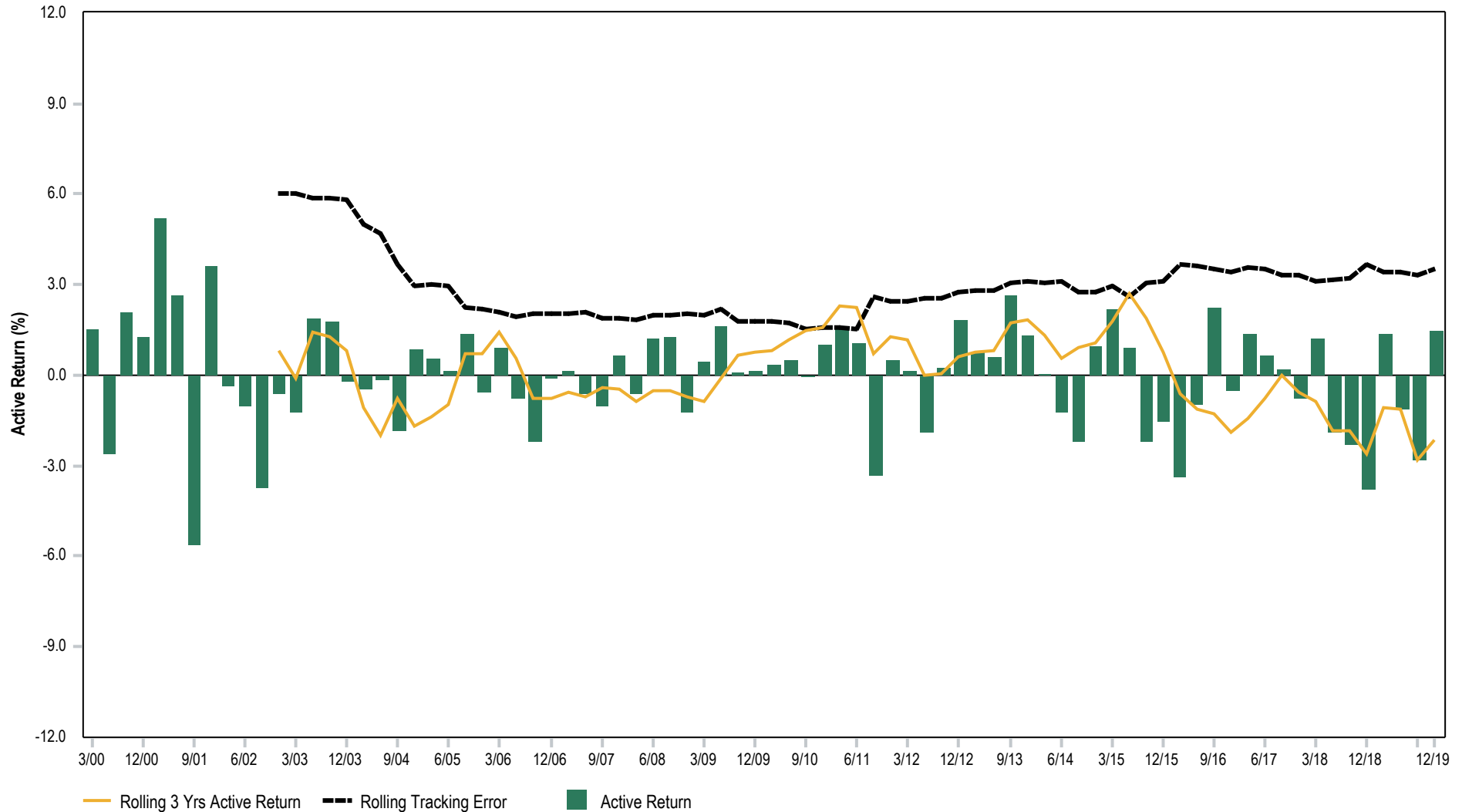
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Total Domestic Equity	10.55	29.71	29.71	12.54	9.35	13.42	12.76	-11.11	23.61	9.01	0.66
S&P 500 Index	9.07	31.49	31.49	15.27	11.70	14.73	13.56	-4.38	21.83	11.96	1.38
Difference	1.48	-1.78	-1.78	-2.73	-2.35	-1.31	-0.80	-6.73	1.78	-2.95	-0.72



Bristol County Retirement System

Total Domestic Equity

1 Quarter Ending December 31, 2019

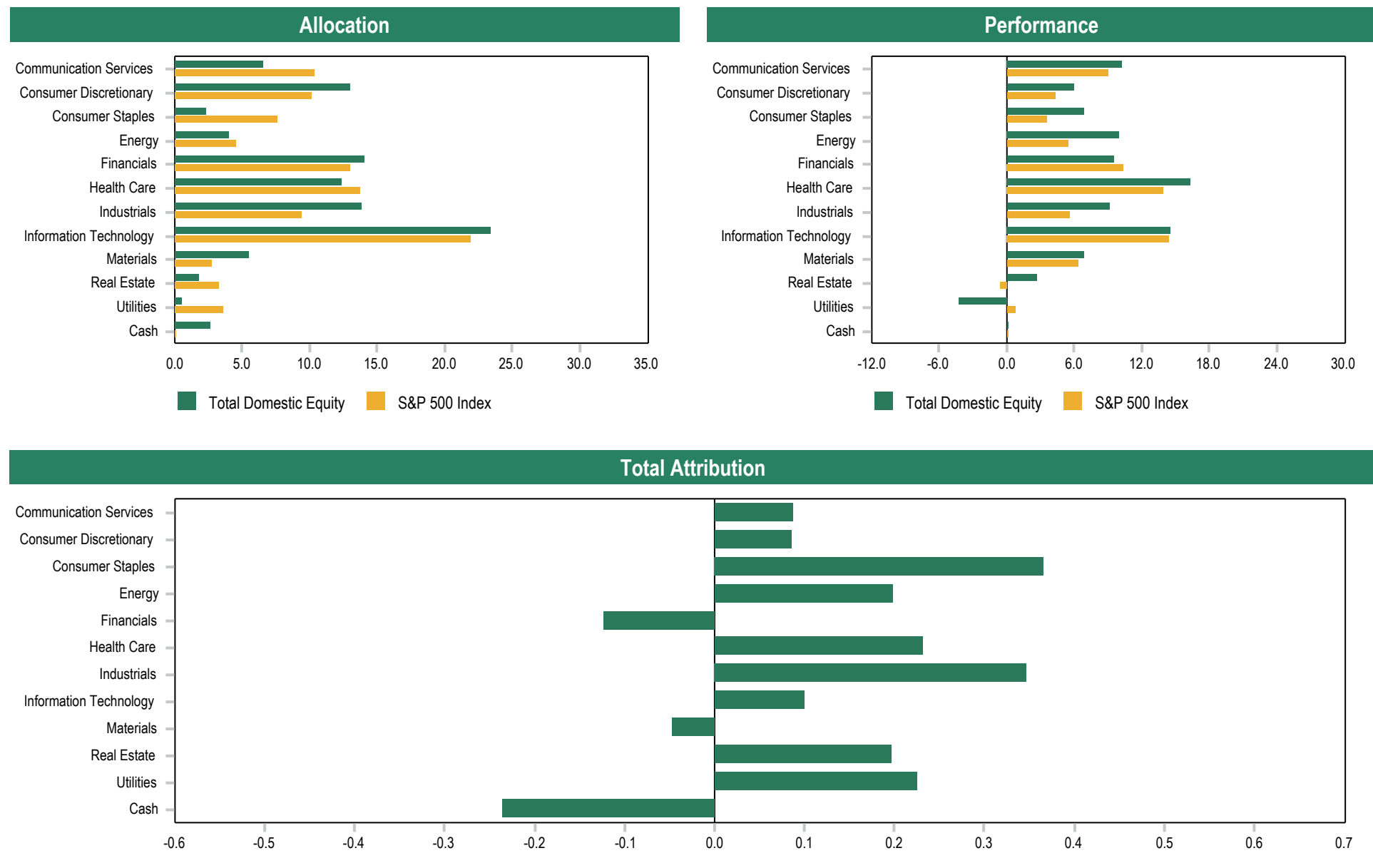
Buy-and-Hold Portfolio 10.44
 Portfolio Trading 0.11
 Actual Return 10.55
 Benchmark Return 9.07
 Actual Active Return 1.48

Stock Selection 1.25
 Sector Selection 0.13
 Interaction 0.05
 Total Selection 1.43

Portfolio Trading 0.11
 Benchmark Trading 0.06
 Active Trading Impact 0.05

Buy & Hold Active Return 1.48

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	
Communication Services	6.58	10.36	10.28	8.97	0.14	0.00	-0.05	0.09
Consumer Discretionary	12.92	10.11	6.01	4.34	0.17	-0.13	0.05	0.09
Consumer Staples	2.37	7.60	6.79	3.51	0.25	0.29	-0.17	0.37
Energy	4.04	4.52	9.97	5.47	0.20	0.02	-0.02	0.20
Financials	14.07	12.94	9.46	10.45	-0.13	0.02	-0.01	-0.12
Health Care	12.34	13.65	16.37	13.97	0.33	-0.07	-0.03	0.23
Industrials	13.83	9.34	9.16	5.52	0.34	-0.16	0.16	0.35
Information Technology	23.41	21.93	14.53	14.45	0.02	0.08	0.00	0.10
Materials	5.53	2.73	6.86	6.38	0.01	-0.07	0.01	-0.05
Real Estate	1.76	3.22	2.70	-0.56	0.11	0.14	-0.05	0.20
Utilities	0.53	3.59	-4.32	0.76	-0.18	0.25	0.16	0.23
Cash	2.62	0.00	0.00	0.00	0.00	-0.24	0.00	-0.24
Total	100.00	100.00	10.44	9.01	1.25	0.13	0.05	1.43



Buy-and-Hold Portfolio 10.44
 Portfolio Trading 0.11
 Actual Return 10.55
 Benchmark Return 9.07
 Actual Active Return 1.48

Stock Selection 2.67
 Style Selection -0.01
 Interaction -1.23
 Total Selection 1.43

Portfolio Trading 0.11
 Benchmark Trading 0.06
 Active Trading Impact 0.05

Buy & Hold Active Return 1.48

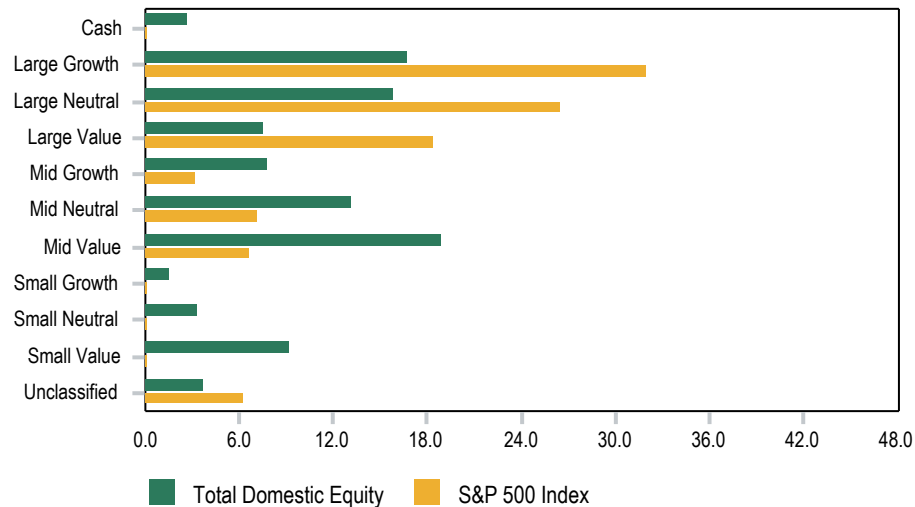
	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Style	Interaction	
Cash	2.62	0.00	0.00	0.00	0.00	-0.24	0.00	-0.24
Large Growth	16.67	32.00	10.86	11.08	-0.07	-0.32	0.03	-0.35
Large Neutral	15.80	26.42	14.54	9.24	1.40	-0.02	-0.56	0.81
Large Value	7.54	18.28	9.70	9.40	0.05	-0.04	-0.03	-0.02
Mid Growth	7.73	3.22	11.79	6.77	0.16	-0.10	0.23	0.29
Mid Neutral	13.18	7.14	7.53	5.83	0.12	-0.19	0.10	0.03
Mid Value	18.86	6.67	10.14	8.65	0.10	-0.04	0.18	0.24
Small Growth	1.56	0.00	-1.51	0.00	0.00	-0.16	0.00	-0.16
Small Neutral	3.29	0.00	10.53	0.00	0.00	0.05	0.00	0.05
Small Value	9.11	0.01	9.71	18.50	0.00	0.86	-0.80	0.06
Unclassified	3.64	6.25	15.92	1.46	0.90	0.20	-0.38	0.72
Total	100.00	100.00	10.44	9.01	2.67	-0.01	-1.23	1.43

Bristol County Retirement System

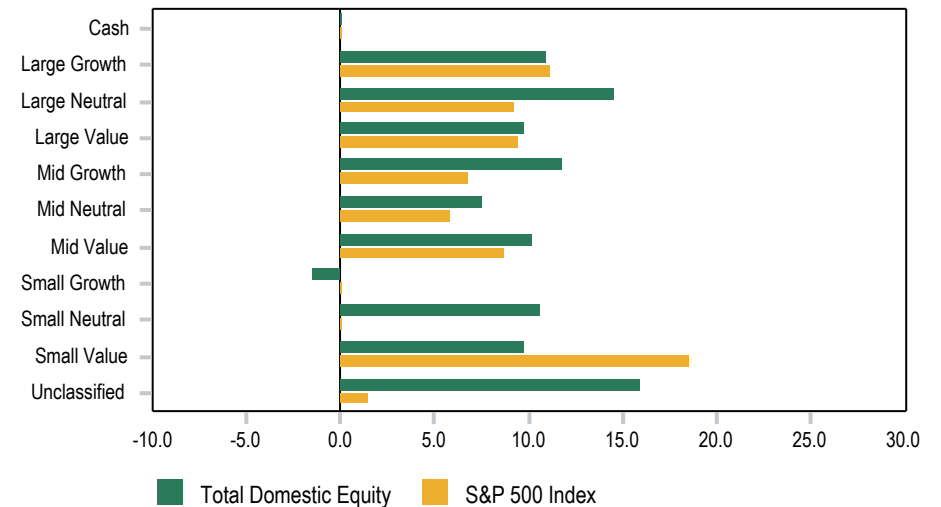
Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019

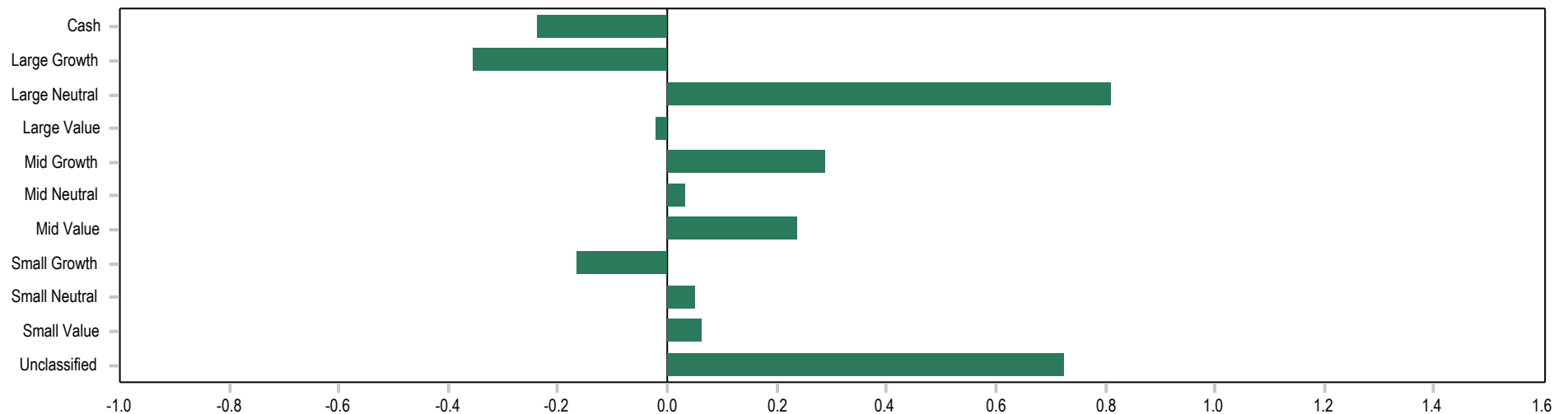
Allocation



Performance



Total Attribution



Bristol County Retirement System

Total Domestic Equity

As of December 31, 2019

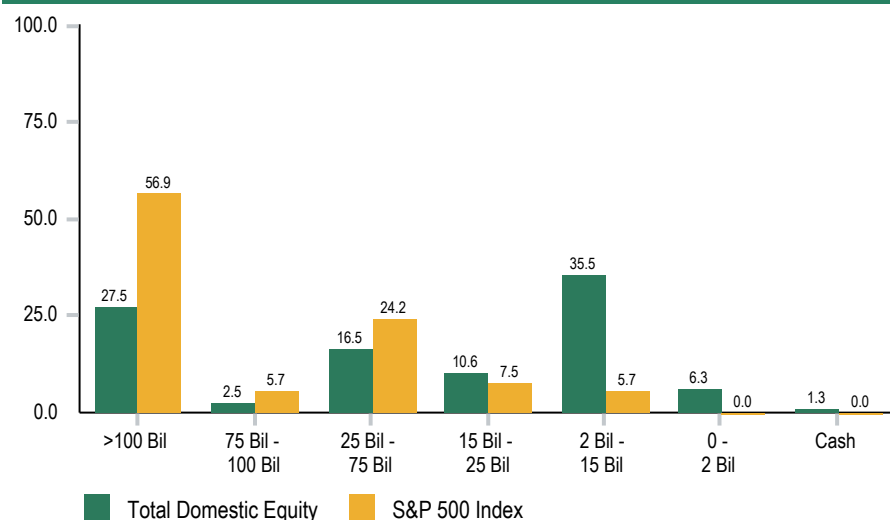
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Amazon.com Inc	2.11	2.88	-0.77	6.45
Facebook Inc	1.83	1.85	-0.02	15.26
Visa Inc	1.48	1.20	0.28	9.42
HCA Healthcare Inc	1.44	0.15	1.29	23.10
Unitedhealth Group Inc	1.38	1.04	0.34	35.80
Adobe Inc	1.29	0.60	0.69	19.39
Alibaba Group Holding Ltd	1.28	0.00	1.28	26.83
Celanese Corp	1.13	0.06	1.07	1.18
NVIDIA Corporation	1.13	0.54	0.59	35.27
Ameriprise Financial Inc	1.05	0.08	0.97	13.96
% of Portfolio	14.12	8.40	5.72	

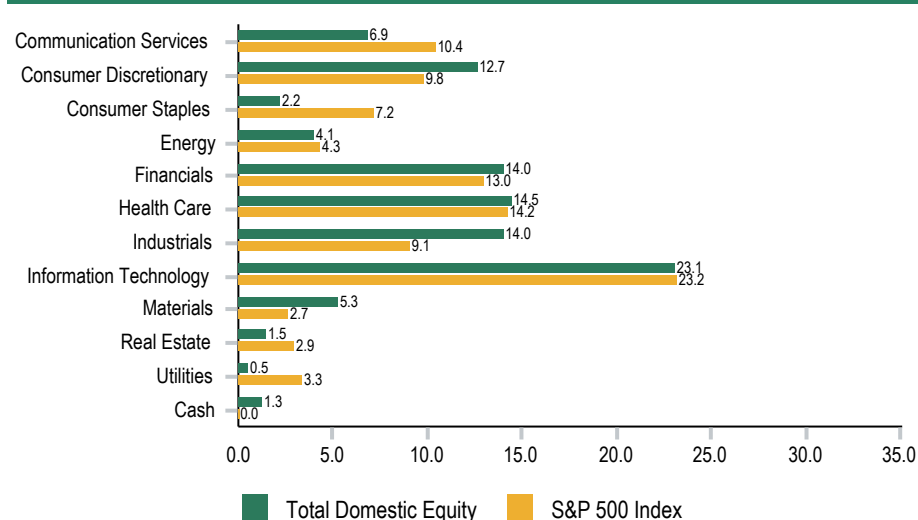
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	119,566,169,271	287,780,704,887
Median Mkt. Cap (\$)	7,014,630,970	23,997,415,970
Price/Earnings ratio	19.36	22.90
Price/Book ratio	3.19	3.66
5 Yr. EPS Growth Rate (%)	16.42	14.27
Current Yield (%)	1.36	1.86
Beta (5 Years, Monthly)	1.19	1.00
Number of Stocks	407	505

Distribution of Market Capitalization (%)



Sector Weights (%)



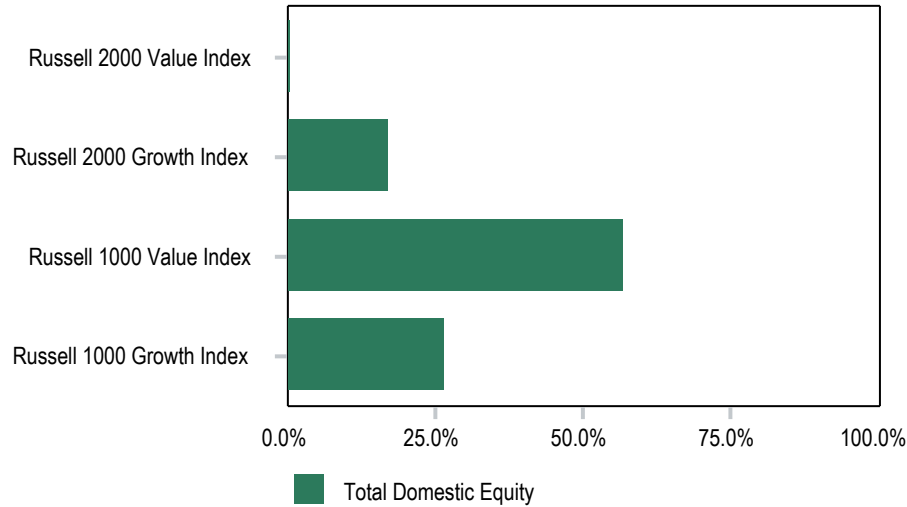
Ten Best Performers

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Cardlytics Inc	0.11	0.00	0.11	87.53
Sarepta Therapeutics Inc	0.39	0.00	0.39	71.32
Ultra Clean Holdings Inc	0.02	0.00	0.02	60.37
Advanced Micro Devices Inc	0.06	0.19	-0.13	58.19
Office Depot Inc	0.04	0.00	0.04	57.77
Qorvo Inc	0.14	0.05	0.09	56.77
Align Technology Inc	0.52	0.07	0.45	54.23
Transocean Ltd	0.11	0.00	0.11	53.92
Pan American Silver Corp	0.20	0.00	0.20	51.37
Eldorado Resorts Inc	0.11	0.00	0.11	49.59
% of Portfolio	1.70	0.31	1.39	

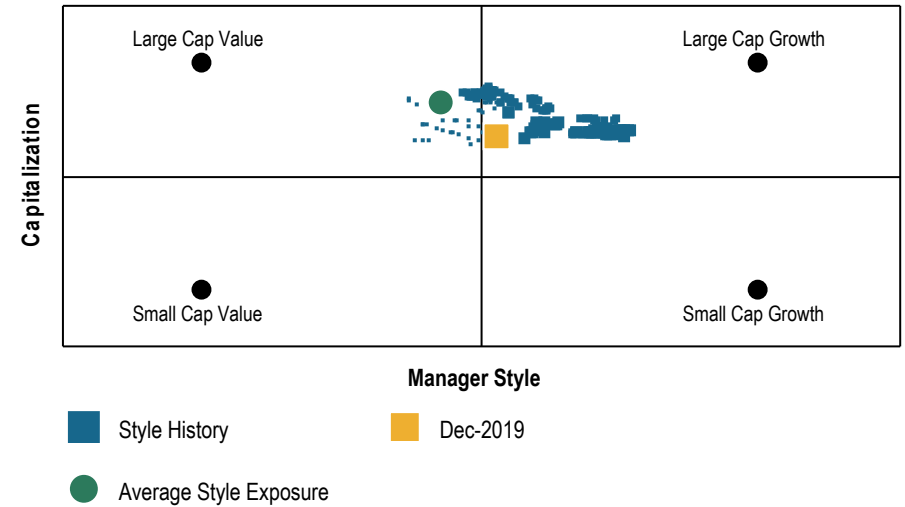
Ten Worst Performers

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
McDermott International Inc.	0.00	0.00	0.00	-66.51
Aqua Metals Inc	0.00	0.00	0.00	-55.57
Neuronetics Inc	0.01	0.00	0.01	-45.97
At Home Group Inc	0.01	0.00	0.01	-42.83
TherapeuticsMD Inc	0.06	0.00	0.06	-33.33
Modine Manufacturing Co	0.01	0.00	0.01	-32.28
Global Eagle Entertainment Inc	0.01	0.00	0.01	-30.75
Gannett Co Inc	0.00	0.00	0.00	-24.46
Kraton Corp	0.07	0.00	0.07	-21.59
AMC Networks Inc	0.07	0.00	0.07	-19.65
% of Portfolio	0.24	0.00	0.24	

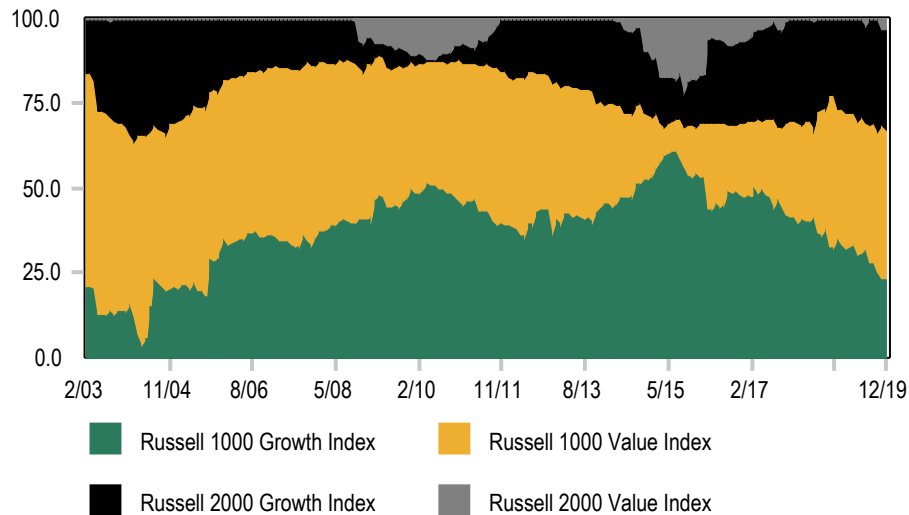
Investment Style Exposure



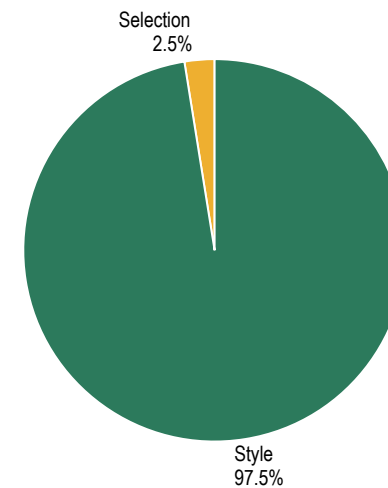
Style Map(ppp)

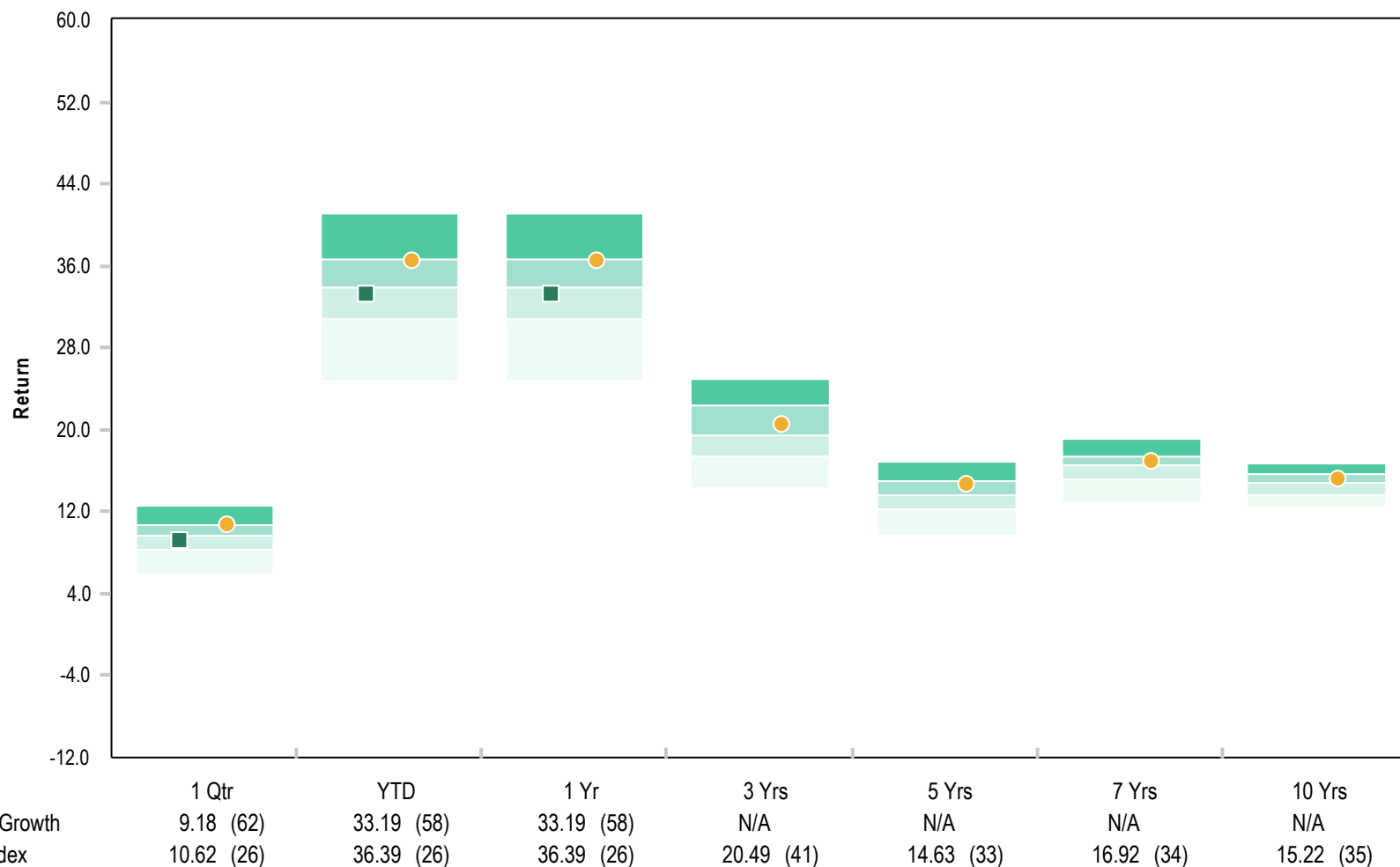


Style History(ppp)



Return Variance





5th Percentile	12.60	41.10	41.10	24.94	16.95	19.07	16.74
1st Quartile	10.68	36.61	36.61	22.31	15.03	17.33	15.63
Median	9.62	33.81	33.81	19.51	13.57	16.45	14.75
3rd Quartile	8.36	30.86	30.86	17.39	12.15	15.17	13.65
95th Percentile	5.82	24.83	24.83	14.23	9.71	12.94	12.33

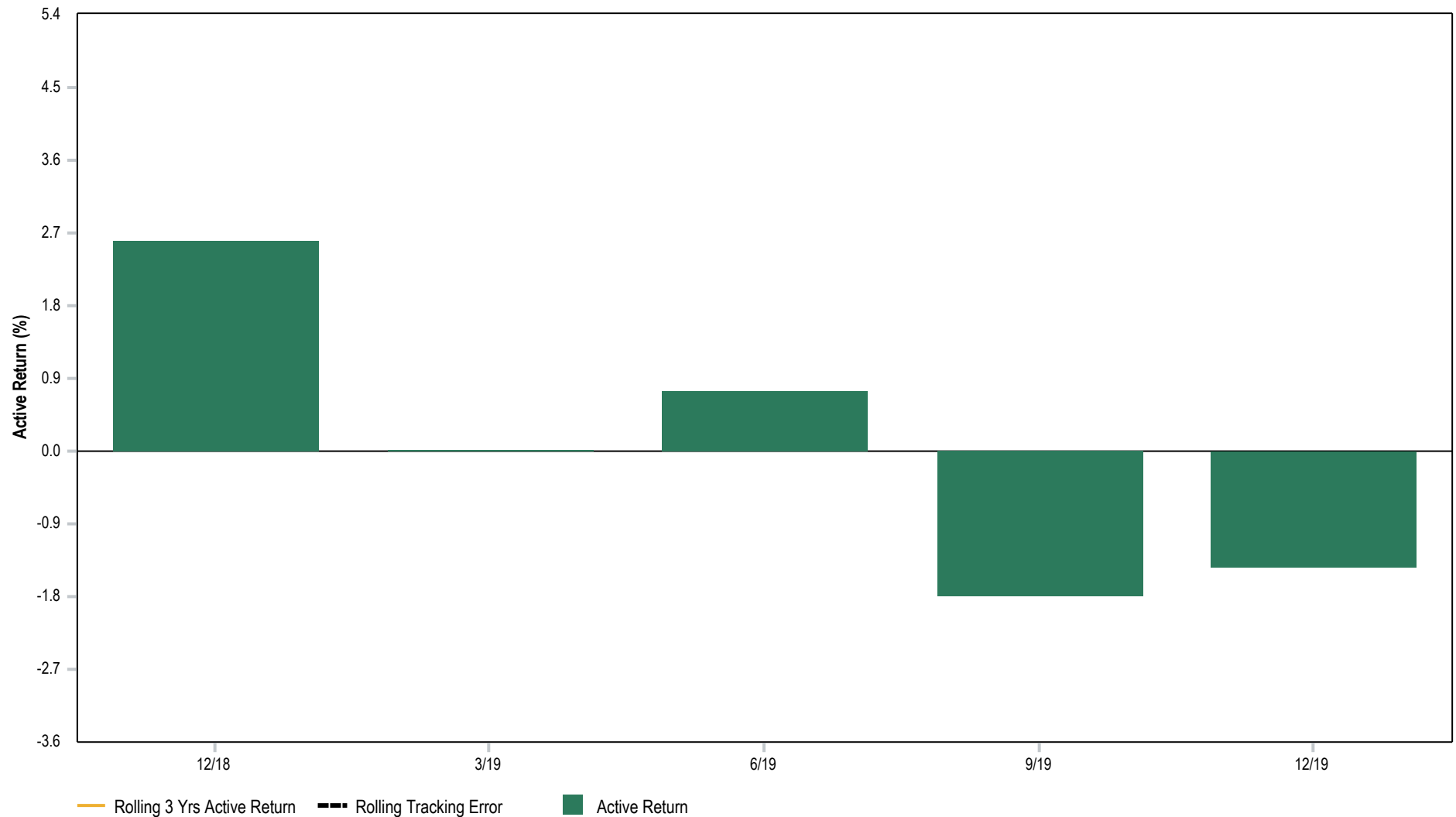
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
ClearBridge Large Cap Growth	9.18	33.19	33.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 1000 Growth Index	10.62	36.39	36.39	20.49	14.63	16.92	15.22	-1.51	30.21	7.08	5.67
Difference	-1.44	-3.20	-3.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



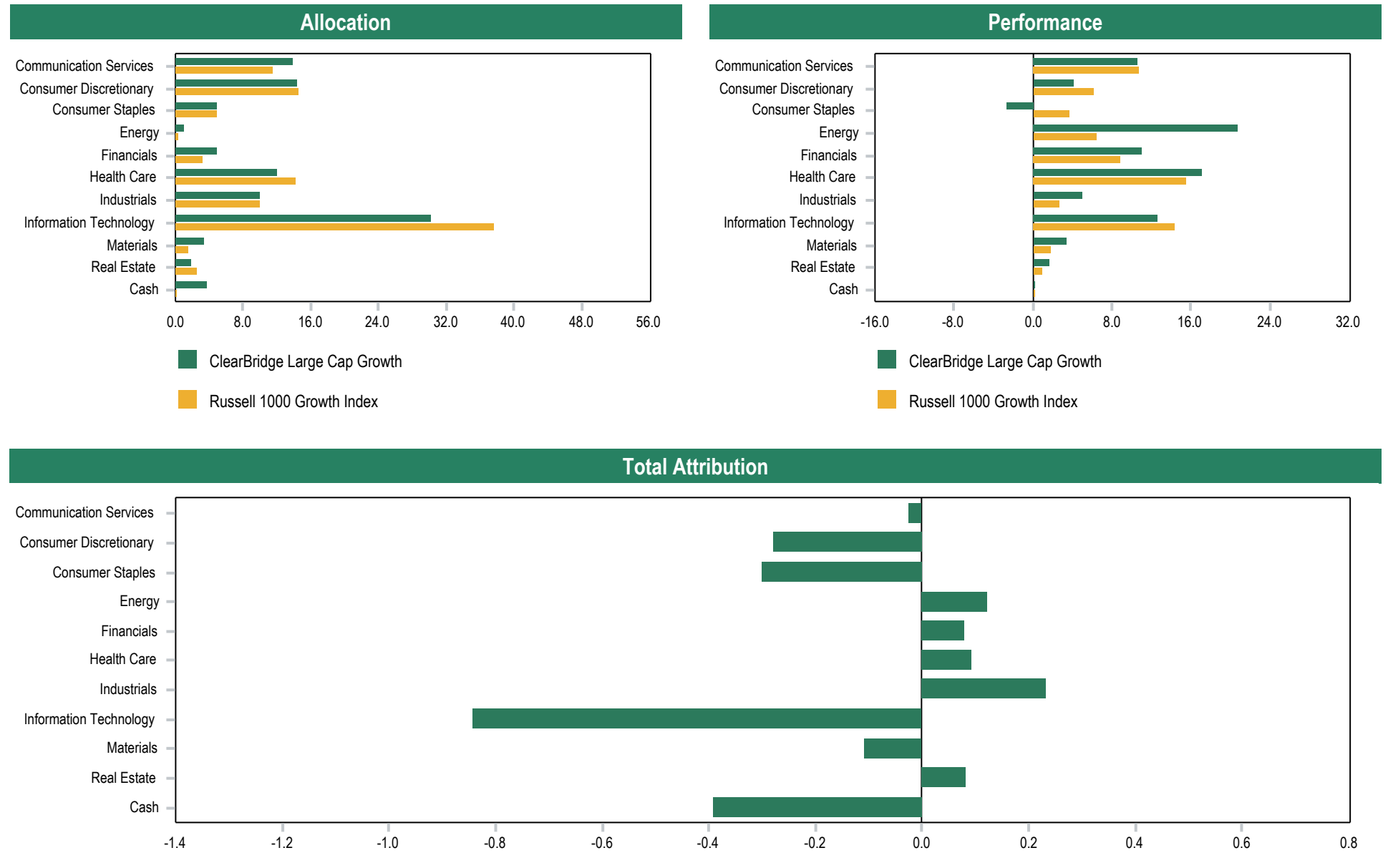
Buy-and-Hold Portfolio 9.17
 Portfolio Trading 0.01
 Actual Return 9.18
 Benchmark Return 10.62
 Actual Active Return -1.44

Stock Selection -0.69
 Sector Selection -0.93
 Interaction 0.28
 Total Selection -1.35

Portfolio Trading 0.01
 Benchmark Trading 0.10
 Active Trading Impact -0.09

Buy & Hold Active Return -1.44

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Stock	Attribution		Total
	Portfolio	Benchmark	Portfolio	Benchmark		Sector	Interaction	
Communication Services	13.77	11.41	10.56	10.78	-0.03	0.01	-0.01	-0.02
Consumer Discretionary	14.39	14.43	4.16	6.13	-0.28	0.00	0.00	-0.28
Consumer Staples	4.86	4.93	-2.68	3.61	-0.31	0.00	0.00	-0.30
Energy	1.08	0.27	20.70	6.36	0.04	-0.03	0.12	0.12
Financials	4.94	3.16	11.08	8.91	0.07	-0.03	0.04	0.08
Health Care	12.01	14.23	17.17	15.49	0.24	-0.11	-0.04	0.09
Industrials	9.92	9.97	4.96	2.65	0.23	0.00	0.00	0.23
Information Technology	30.12	37.58	12.56	14.40	-0.69	-0.29	0.14	-0.84
Materials	3.31	1.45	3.39	1.76	0.02	-0.16	0.03	-0.11
Real Estate	1.88	2.58	1.64	0.90	0.02	0.07	-0.01	0.08
Cash	3.72	0.00	0.00	0.00	0.00	-0.39	0.00	-0.39
Total	100.00	100.00	9.17	10.52	-0.69	-0.93	0.28	-1.35



Buy-and-Hold Portfolio 9.17
 Portfolio Trading 0.01
 Actual Return 9.18
 Benchmark Return 10.62
 Actual Active Return -1.44

Stock Selection -1.94
 Style Selection 0.26
 Interaction 0.33
 Total Selection -1.35

Portfolio Trading 0.01
 Benchmark Trading 0.10
 Active Trading Impact -0.09

Buy & Hold Active Return -1.44

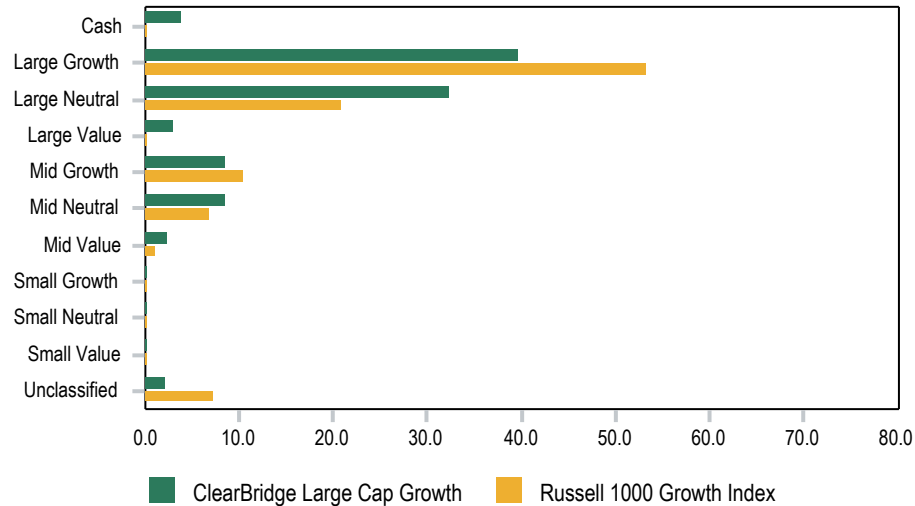
	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Style	Interaction	Total
Cash	3.72	0.00	0.00	0.00	0.00	-0.39	0.00	-0.39
Large Growth	39.61	53.25	9.51	12.28	-1.48	-0.24	0.38	-1.34
Large Neutral	32.18	20.86	11.10	11.27	-0.04	0.09	-0.02	0.03
Large Value	2.95	0.30	11.96	24.64	-0.04	0.37	-0.34	0.00
Mid Growth	8.51	10.36	11.39	8.28	0.32	0.04	-0.06	0.31
Mid Neutral	8.42	6.72	3.13	6.22	-0.21	-0.07	-0.05	-0.33
Mid Value	2.43	0.97	14.97	11.95	0.03	0.02	0.04	0.09
Small Growth	0.00	0.08	0.00	15.57	0.00	0.00	0.00	0.00
Small Neutral	0.00	0.10	0.00	-1.70	0.00	0.01	0.00	0.01
Small Value	0.00	0.05	0.00	1.41	0.00	0.00	0.00	0.00
Unclassified	2.17	7.31	-5.28	2.08	-0.54	0.43	0.38	0.27
Total	100.00	100.00	9.17	10.52	-1.94	0.26	0.33	-1.35

Bristol County Retirement System

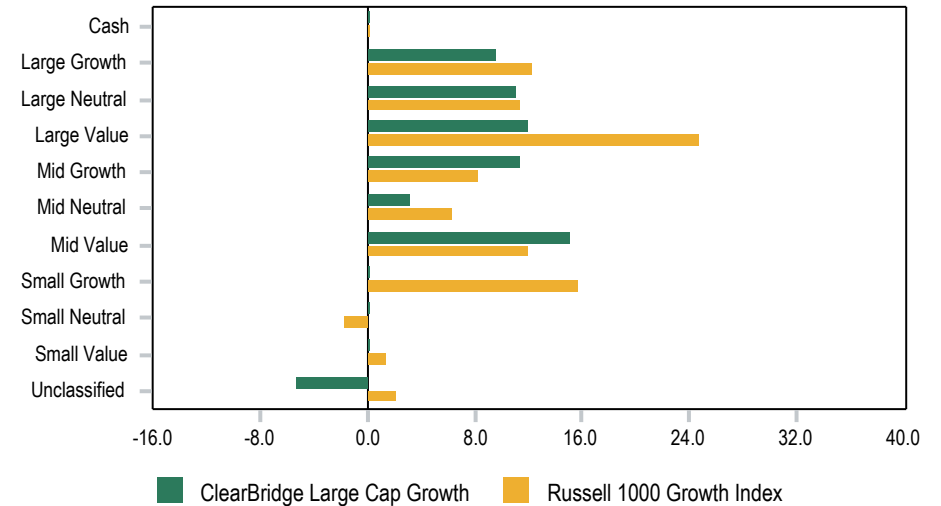
Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019

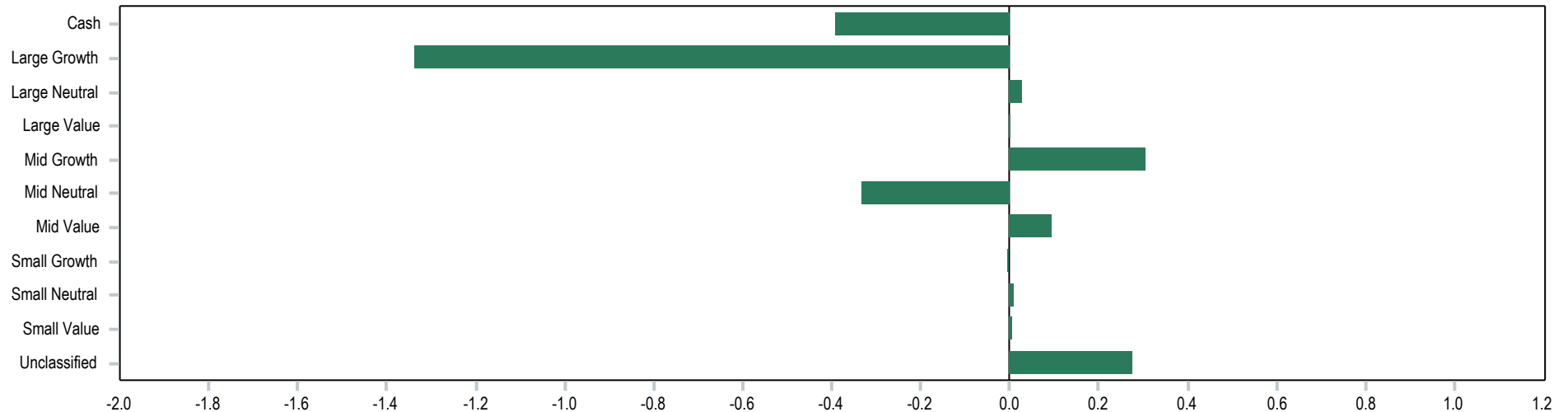
Allocation



Performance



Total Attribution



Bristol County Retirement System

ClearBridge Large Cap Growth

As of December 31, 2019

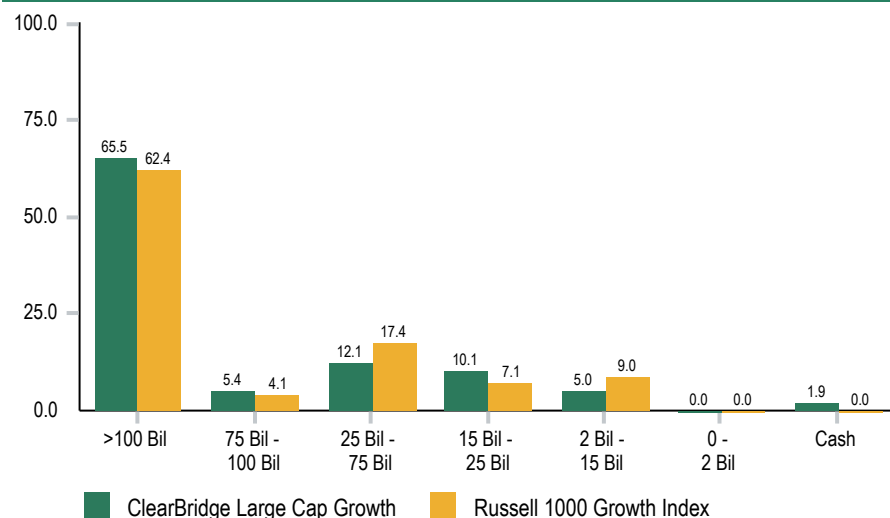
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Amazon.com Inc	6.78	5.00	1.78	6.45
Microsoft Corp	5.22	7.80	-2.58	13.82
Facebook Inc	5.15	3.21	1.94	15.26
Visa Inc	4.42	2.11	2.31	9.42
Apple Inc	3.52	8.54	-5.02	31.50
Unitedhealth Group Inc	3.44	1.82	1.62	35.80
Alphabet Inc	3.06	2.62	0.44	9.68
Adobe Inc	3.02	1.05	1.97	19.39
Zoetis Inc	2.64	0.41	2.23	6.37
Thermo Fisher Scientific Inc	2.61	0.58	2.03	11.60
% of Portfolio	39.86	33.14	6.72	

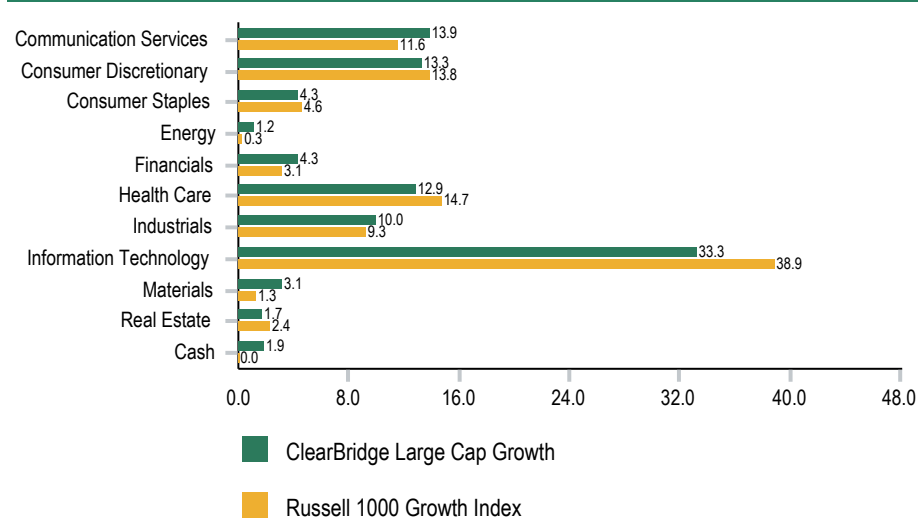
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	337,007,472,748	386,597,171,990
Median Mkt. Cap (\$)	101,866,556,790	13,375,054,250
Price/Earnings ratio	27.68	29.36
Price/Book ratio	5.87	7.87
5 Yr. EPS Growth Rate (%)	24.28	21.83
Current Yield (%)	0.91	1.17
Beta	N/A	1.00
Number of Stocks	48	530

Distribution of Market Capitalization (%)



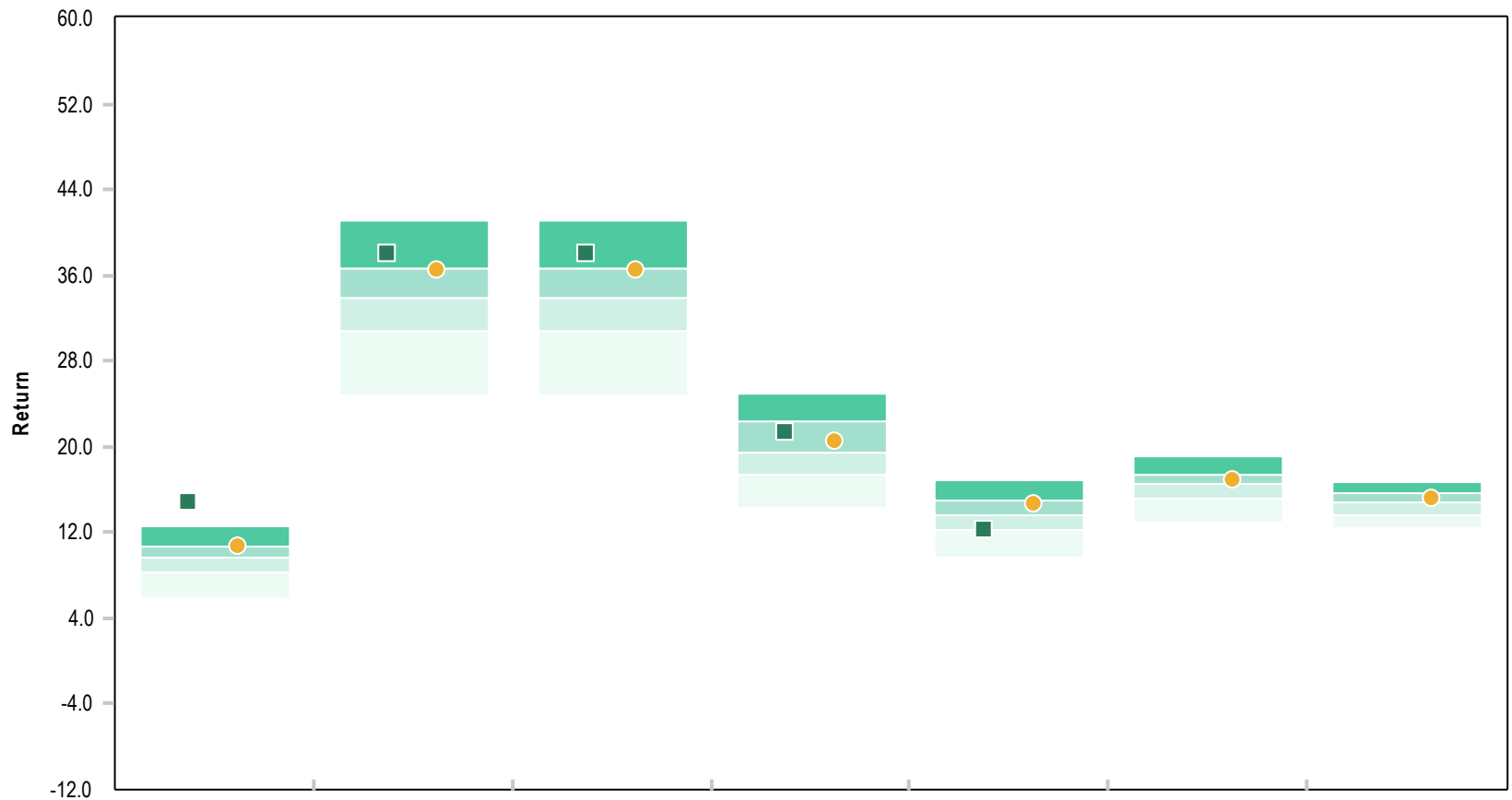
Sector Weights (%)



Bristol County Retirement System

IM U.S. Large Cap Growth Equity (SA+CF)

As of December 31, 2019



■ Columbia
● Russell 1000 Growth Index

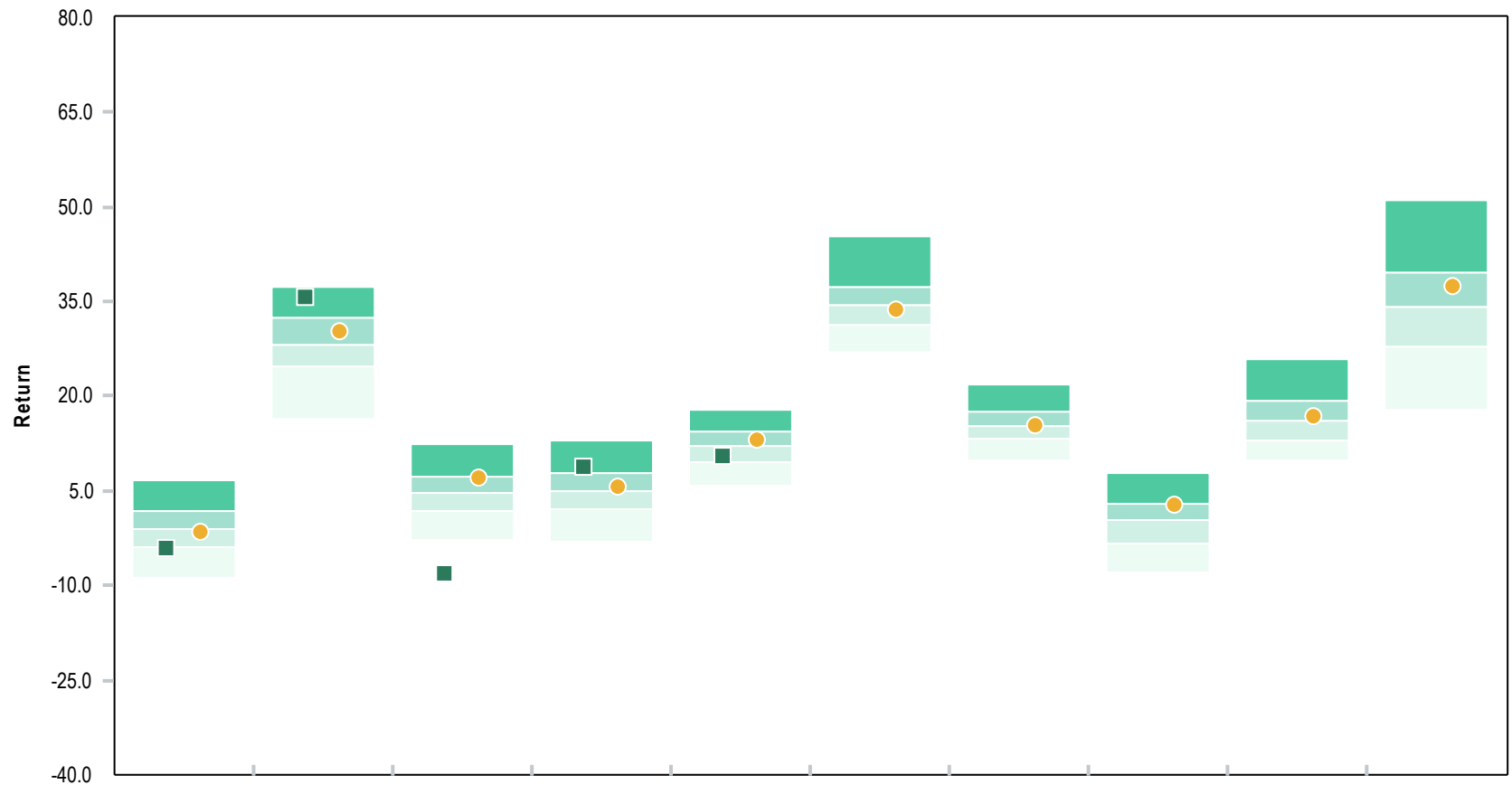
5th Percentile	12.60	41.10	41.10	24.94	16.95	19.07	16.74
1st Quartile	10.68	36.61	36.61	22.31	15.03	17.33	15.63
Median	9.62	33.81	33.81	19.51	13.57	16.45	14.75
3rd Quartile	8.36	30.86	30.86	17.39	12.15	15.17	13.65
95th Percentile	5.82	24.83	24.83	14.23	9.71	12.94	12.33

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Large Cap Growth Equity (SA+CF)

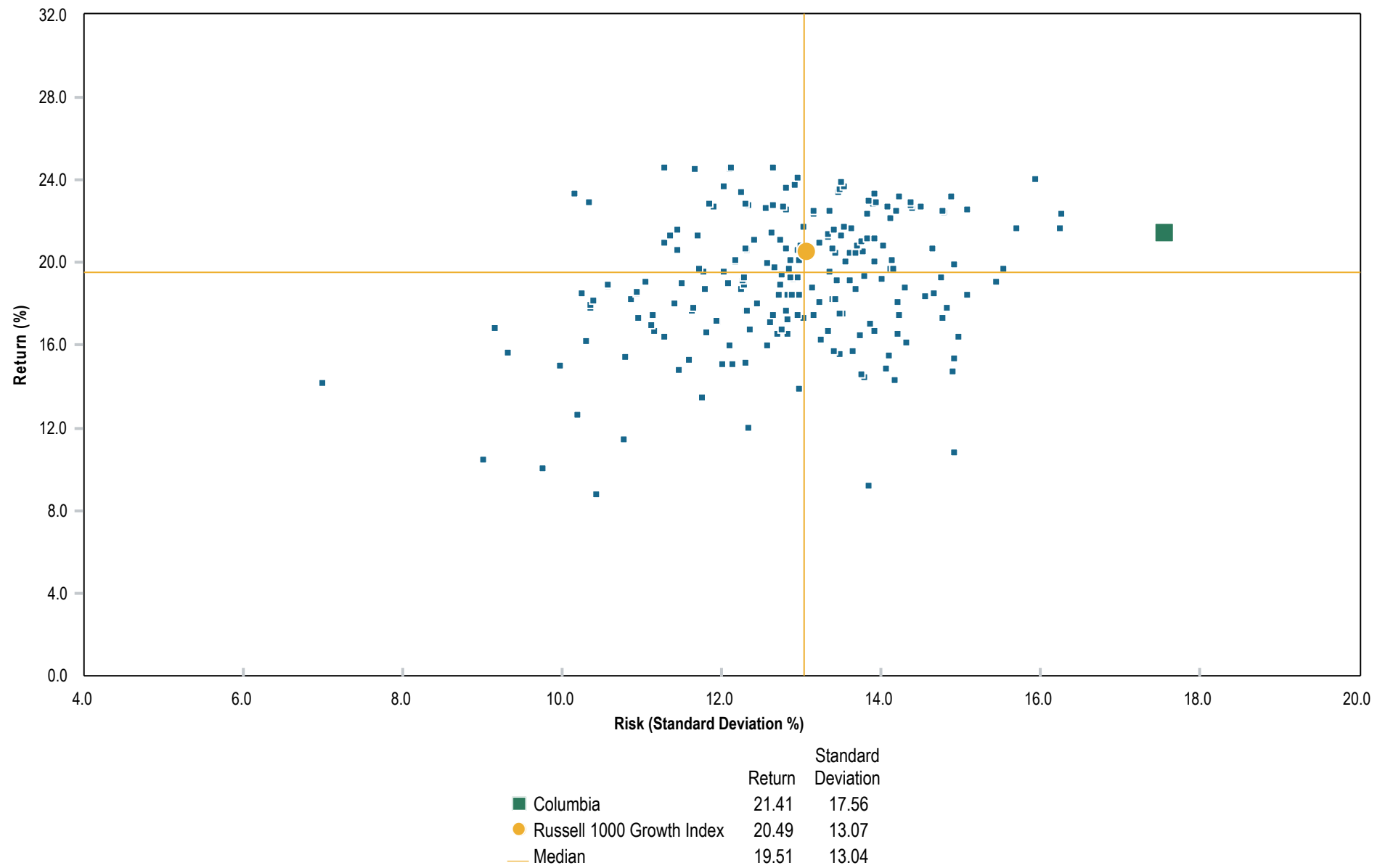
As of December 31, 2019



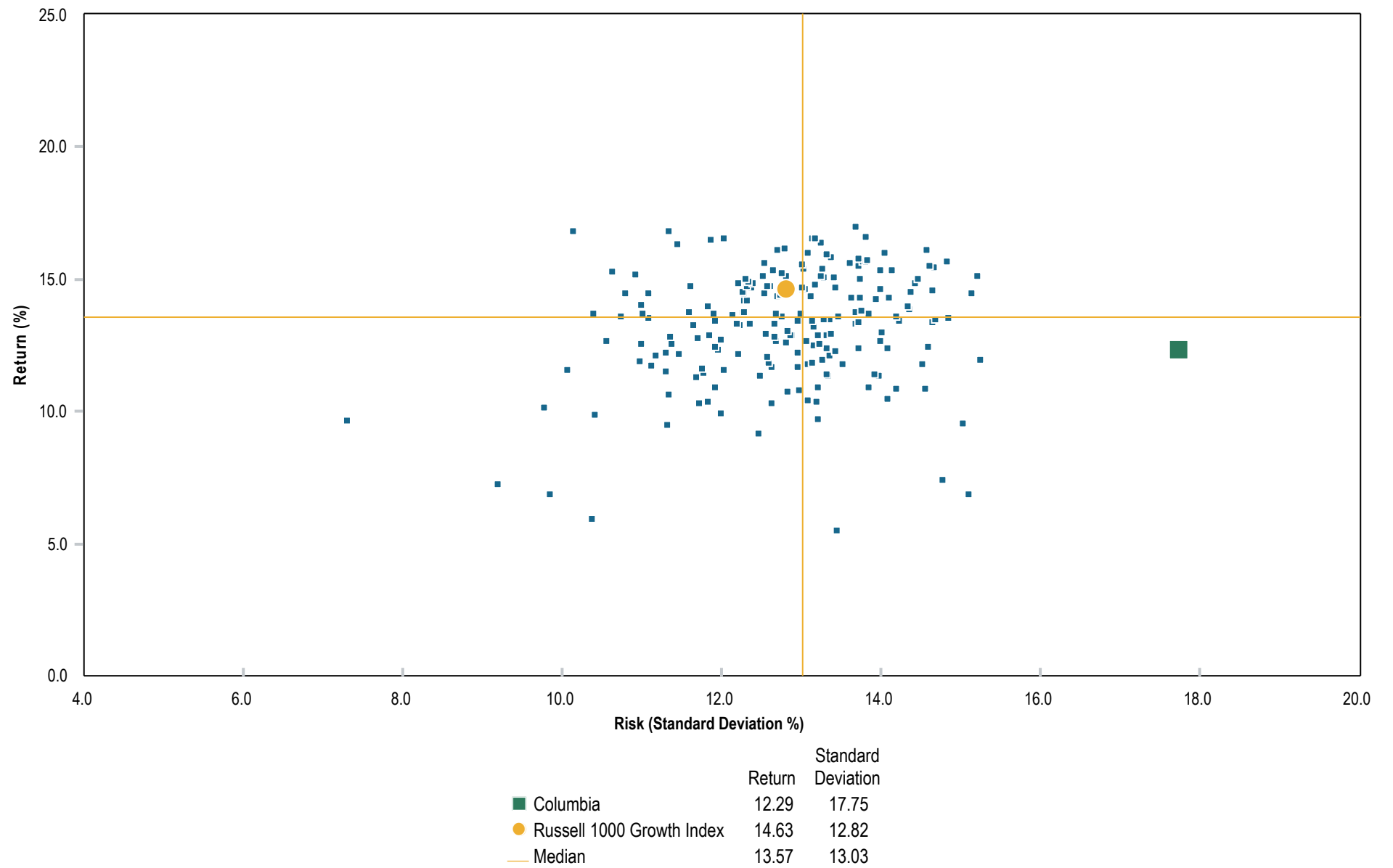
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Columbia	-4.30 (80)	35.56 (10)	-8.17 (100)	8.65 (20)	10.45 (66)	N/A	N/A	N/A	N/A	N/A
● Russell 1000 Growth Index	-1.51 (55)	30.21 (38)	7.08 (27)	5.67 (45)	13.05 (39)	33.48 (59)	15.26 (50)	2.64 (27)	16.71 (46)	37.21 (34)

5th Percentile	6.61	37.37	12.47	12.93	17.80	45.22	21.81	7.95	25.77	51.12
1st Quartile	1.68	32.40	7.37	7.96	14.38	37.46	17.69	2.93	19.29	39.53
Median	-0.94	28.16	4.70	4.88	11.99	34.55	15.19	0.25	16.00	34.15
3rd Quartile	-3.79	24.74	1.80	1.99	9.63	31.29	13.13	-3.26	13.12	27.80
95th Percentile	-8.65	16.35	-2.63	-3.08	5.89	26.93	9.82	-7.85	9.85	17.84

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.



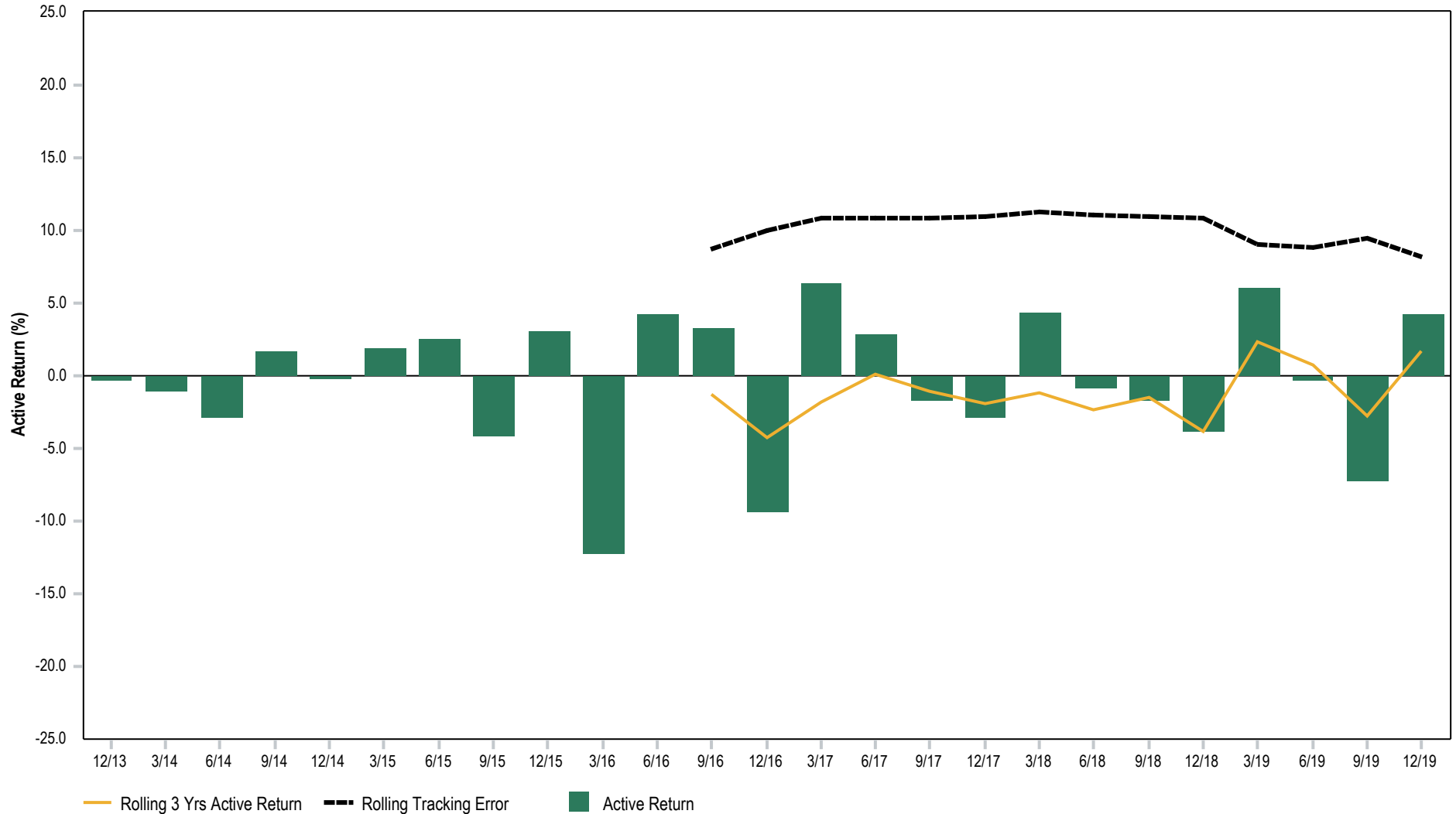
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Columbia	14.83	37.93	37.93	21.41	12.29	N/A	N/A	-4.30	35.56	-8.17	8.65
Russell 1000 Growth Index	10.62	36.39	36.39	20.49	14.63	16.92	15.22	-1.51	30.21	7.08	5.67
Difference	4.21	1.54	1.54	0.92	-2.34	N/A	N/A	-2.79	5.35	-15.25	2.98



Buy-and-Hold Portfolio 14.59
 Portfolio Trading 0.23
 Actual Return 14.83
 Benchmark Return 10.62
 Actual Active Return 4.21

Stock Selection 2.06
 Sector Selection 1.12
 Interaction 0.89
 Total Selection 4.07

Portfolio Trading 0.23
 Benchmark Trading 0.10
 Active Trading Impact 0.13

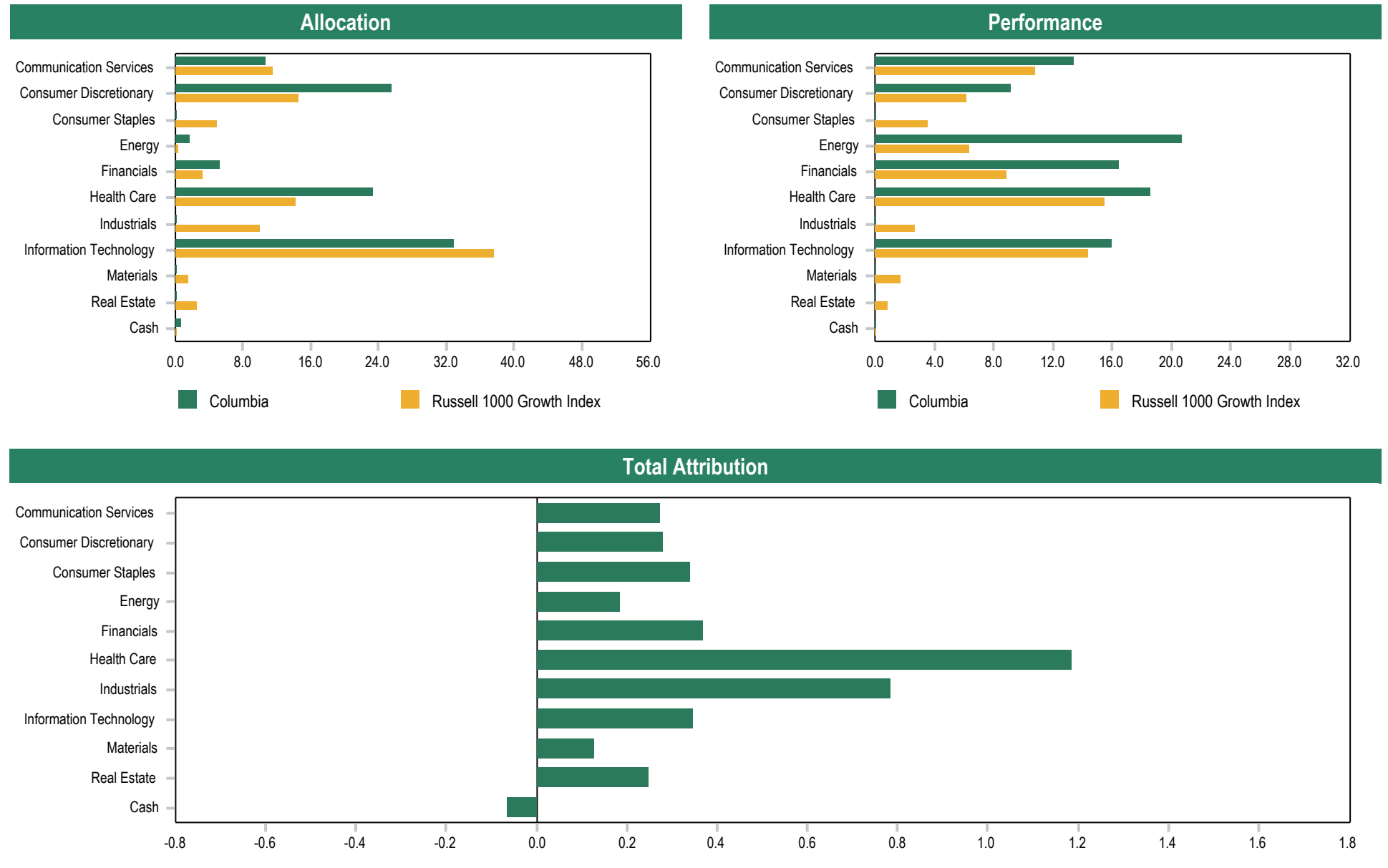
Buy & Hold Active Return 4.21

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Stock	Attribution		Total
	Portfolio	Benchmark	Portfolio	Benchmark		Sector	Interaction	
Communication Services	10.55	11.41	13.39	10.78	0.30	0.00	-0.02	0.27
Consumer Discretionary	25.51	14.43	9.13	6.13	0.43	-0.49	0.33	0.28
Consumer Staples	0.00	4.93	0.00	3.61	0.00	0.34	0.00	0.34
Energy	1.71	0.27	20.70	6.36	0.04	-0.06	0.21	0.19
Financials	5.31	3.16	16.48	8.91	0.24	-0.03	0.16	0.37
Health Care	23.34	14.23	18.64	15.49	0.45	0.45	0.29	1.19
Industrials	0.00	9.97	0.00	2.65	0.00	0.78	0.00	0.78
Information Technology	32.96	37.58	16.00	14.40	0.60	-0.18	-0.07	0.35
Materials	0.00	1.45	0.00	1.76	0.00	0.13	0.00	0.13
Real Estate	0.00	2.58	0.00	0.90	0.00	0.25	0.00	0.25
Cash	0.61	0.00	0.00	0.00	0.00	-0.06	0.00	-0.06
Total	100.00	100.00	14.59	10.52	2.06	1.12	0.89	4.07

Bristol County Retirement System

Buy and Hold Sector Attribution Graph

1 Quarter Ending December 31, 2019



Buy-and-Hold Portfolio 14.59
 Portfolio Trading 0.23
 Actual Return 14.83
 Benchmark Return 10.62
 Actual Active Return 4.21

Stock Selection 7.97
 Style Selection 0.28
 Interaction -4.18
 Total Selection 4.07

Portfolio Trading 0.23
 Benchmark Trading 0.10
 Active Trading Impact 0.13

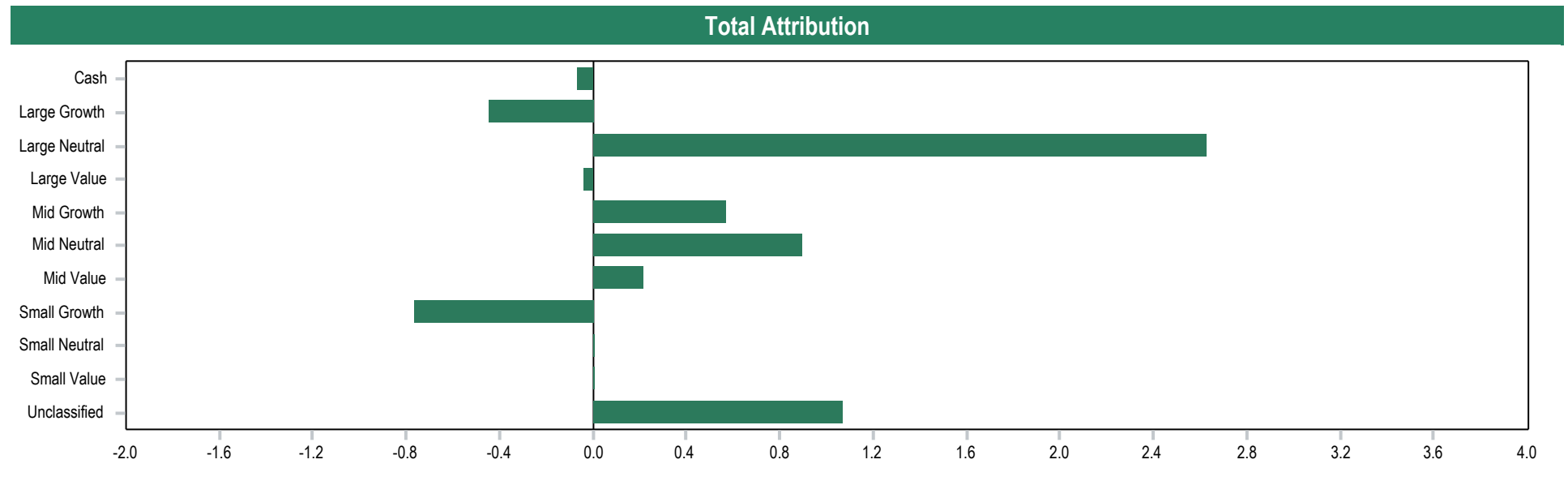
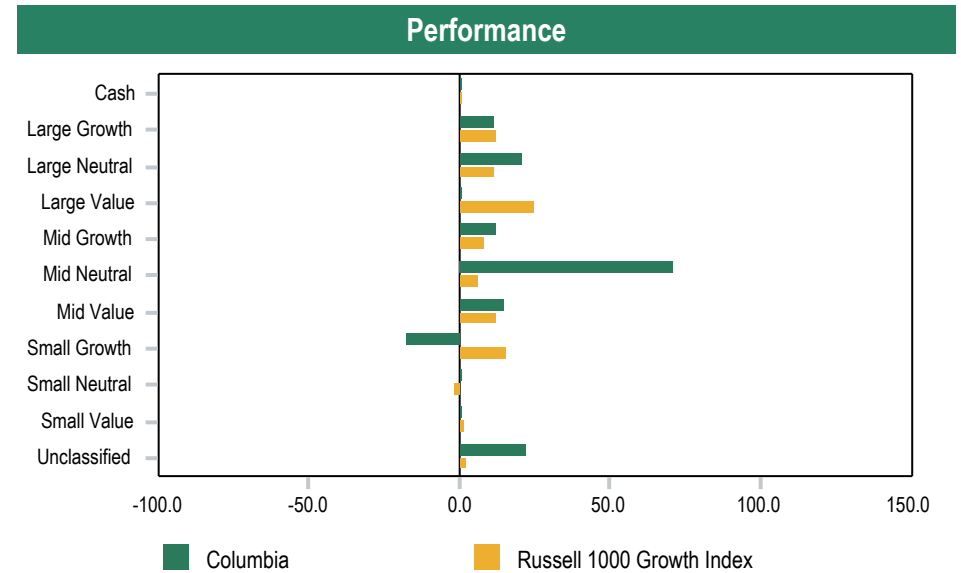
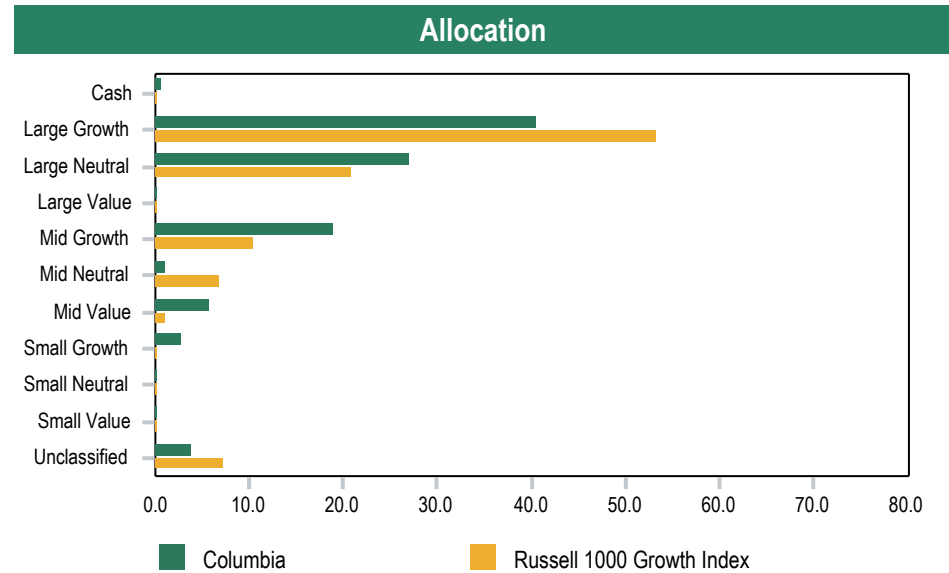
Buy & Hold Active Return 4.21

	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Style	Interaction	
Cash	0.61	0.00	0.00	0.00	0.00	-0.06	0.00	-0.06
Large Growth	40.44	53.25	11.73	12.28	-0.30	-0.23	0.07	-0.45
Large Neutral	26.88	20.86	20.89	11.27	2.01	0.05	0.58	2.63
Large Value	0.00	0.30	0.00	24.64	0.00	-0.04	0.00	-0.04
Mid Growth	18.84	10.36	12.31	8.28	0.42	-0.19	0.34	0.57
Mid Neutral	1.00	6.72	71.32	6.22	4.38	0.25	-3.72	0.90
Mid Value	5.63	0.97	14.61	11.95	0.03	0.07	0.12	0.22
Small Growth	2.72	0.08	-17.58	15.57	-0.03	0.13	-0.88	-0.77
Small Neutral	0.00	0.10	0.00	-1.70	0.00	0.01	0.00	0.01
Small Value	0.00	0.05	0.00	1.41	0.00	0.00	0.00	0.00
Unclassified	3.87	7.31	22.19	2.08	1.47	0.29	-0.69	1.07
Total	100.00	100.00	14.59	10.52	7.97	0.28	-4.18	4.07

Bristol County Retirement System

Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019



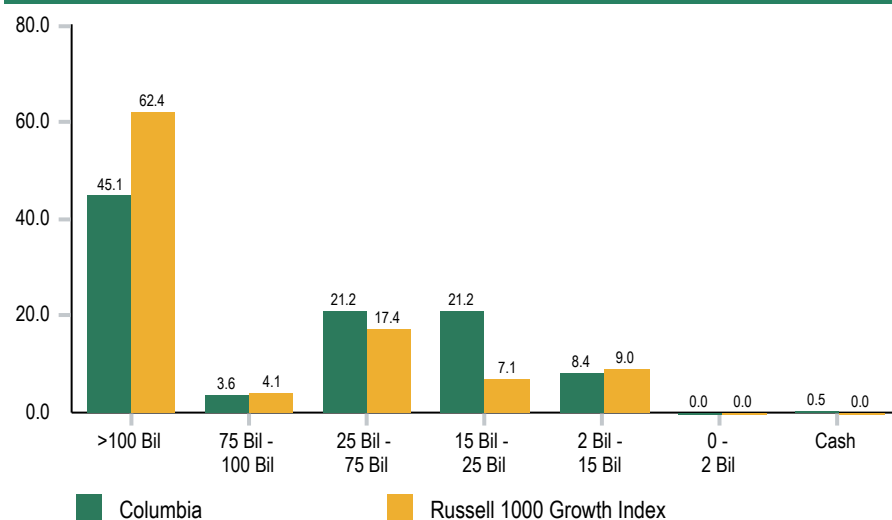
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Alibaba Group Holding Ltd	4.72	0.00	4.72	26.83
Facebook Inc	4.39	3.21	1.18	15.26
Amazon.com Inc	4.24	5.00	-0.76	6.45
NVIDIA Corporation	4.03	0.90	3.13	35.27
salesforce.com Inc	3.83	0.88	2.95	9.57
Activision Blizzard Inc	3.80	0.02	3.78	12.28
Unitedhealth Group Inc	3.76	1.82	1.94	35.80
Bristol-Myers Squibb Co	3.75	0.58	3.17	27.63
Nike Inc	3.72	0.82	2.90	8.15
Adobe Inc	3.71	1.05	2.66	19.39
% of Portfolio	39.95	14.28	25.67	

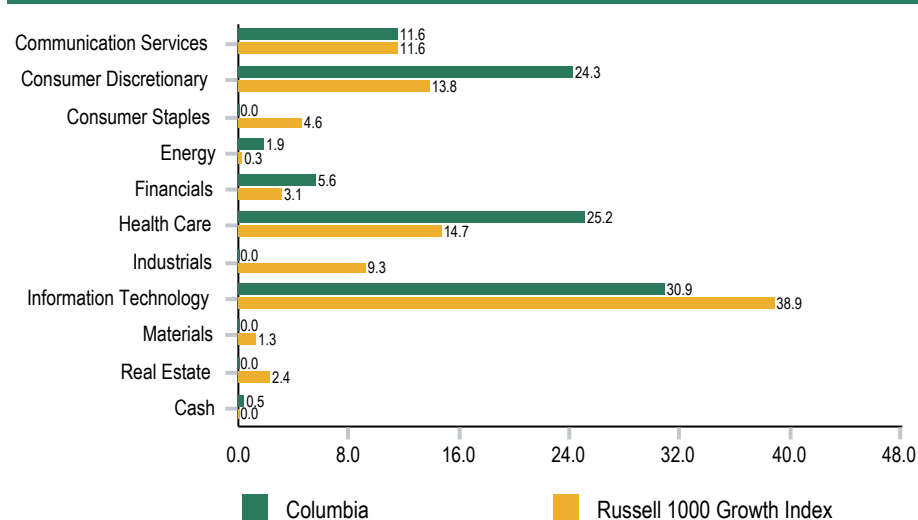
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	166,646,549,160	386,597,171,990
Median Mkt. Cap (\$)	48,765,780,000	13,375,054,250
Price/Earnings ratio	34.87	29.36
Price/Book ratio	6.81	7.87
5 Yr. EPS Growth Rate (%)	28.83	21.83
Current Yield (%)	0.41	1.17
Beta (5 Years, Monthly)	1.27	1.00
Number of Stocks	34	530

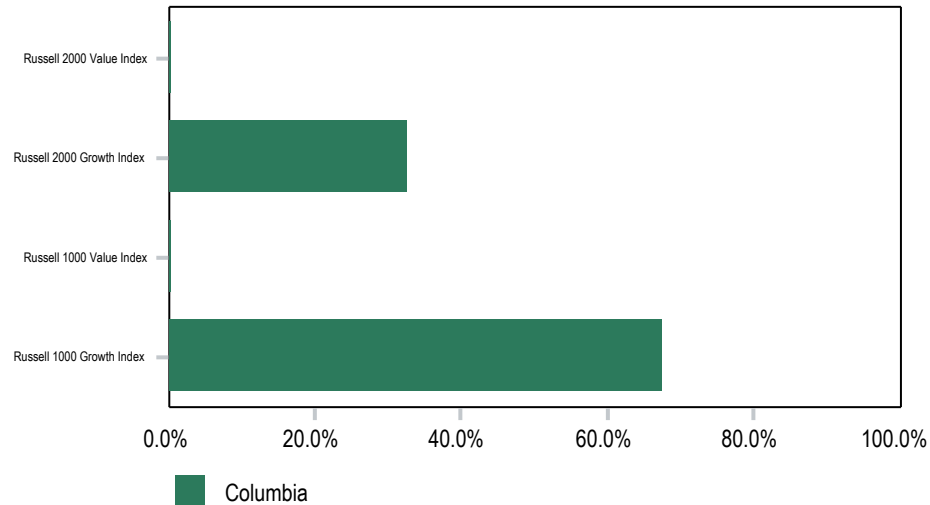
Distribution of Market Capitalization (%)



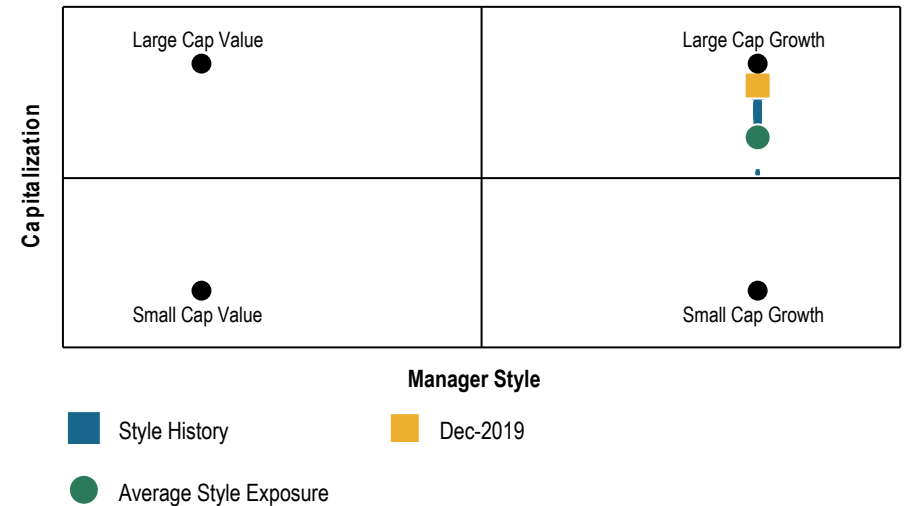
Sector Weights (%)



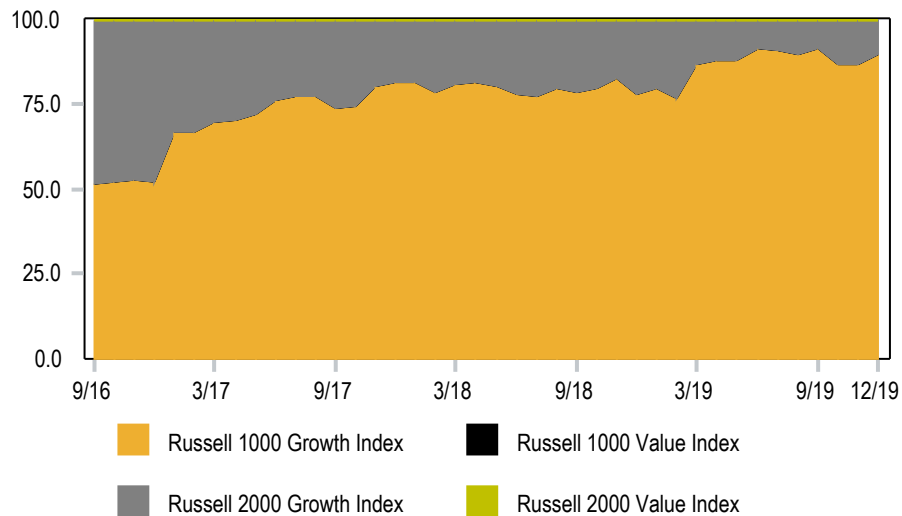
Investment Style Exposure



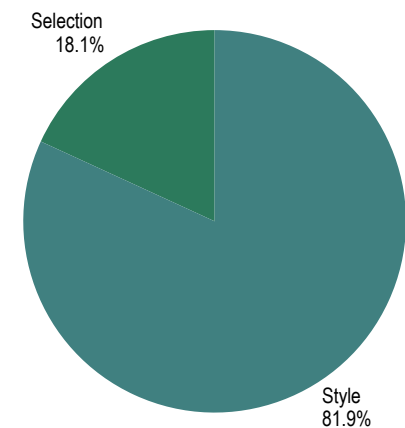
Style Map(ppp)

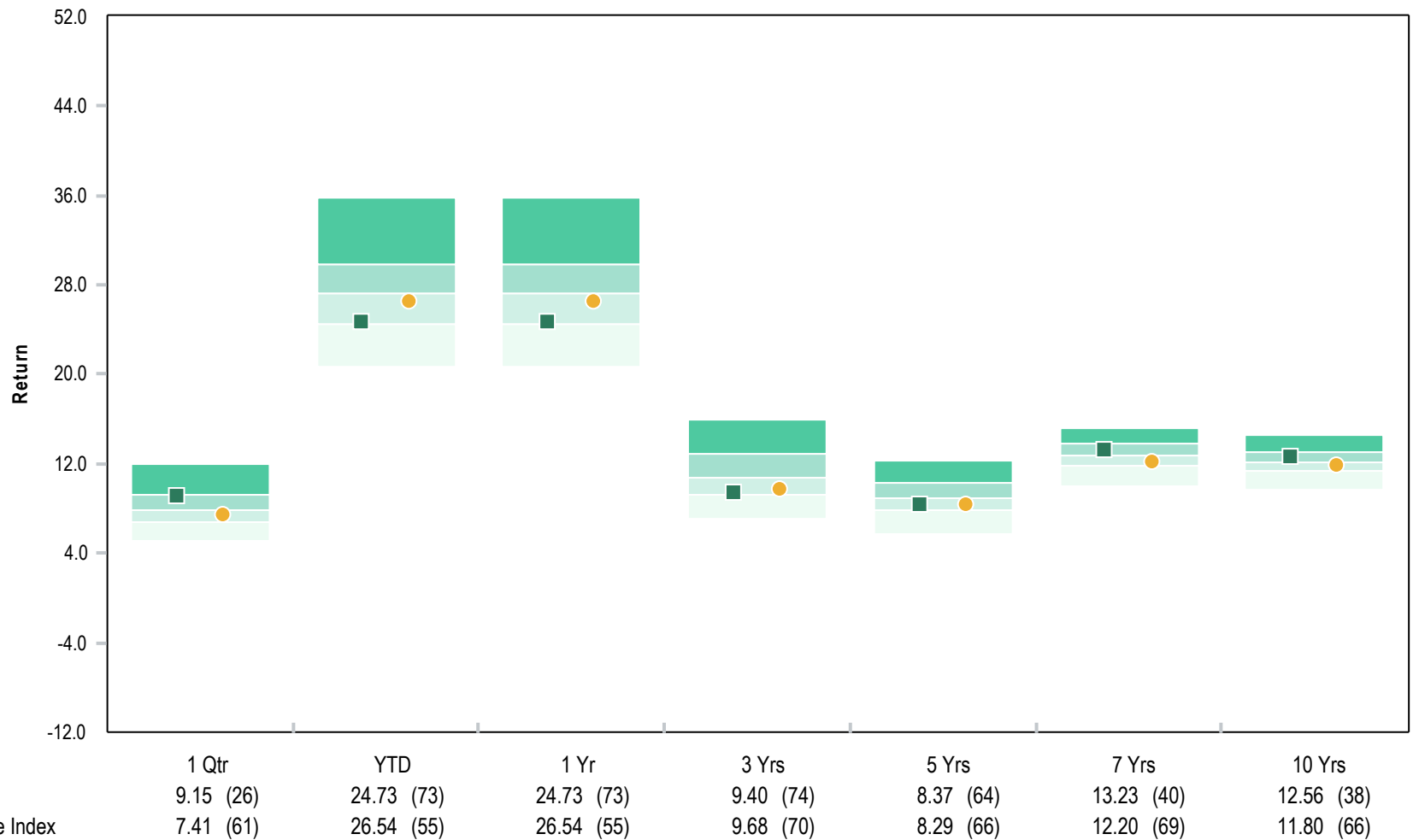


Style History(ppp)



Return Variance





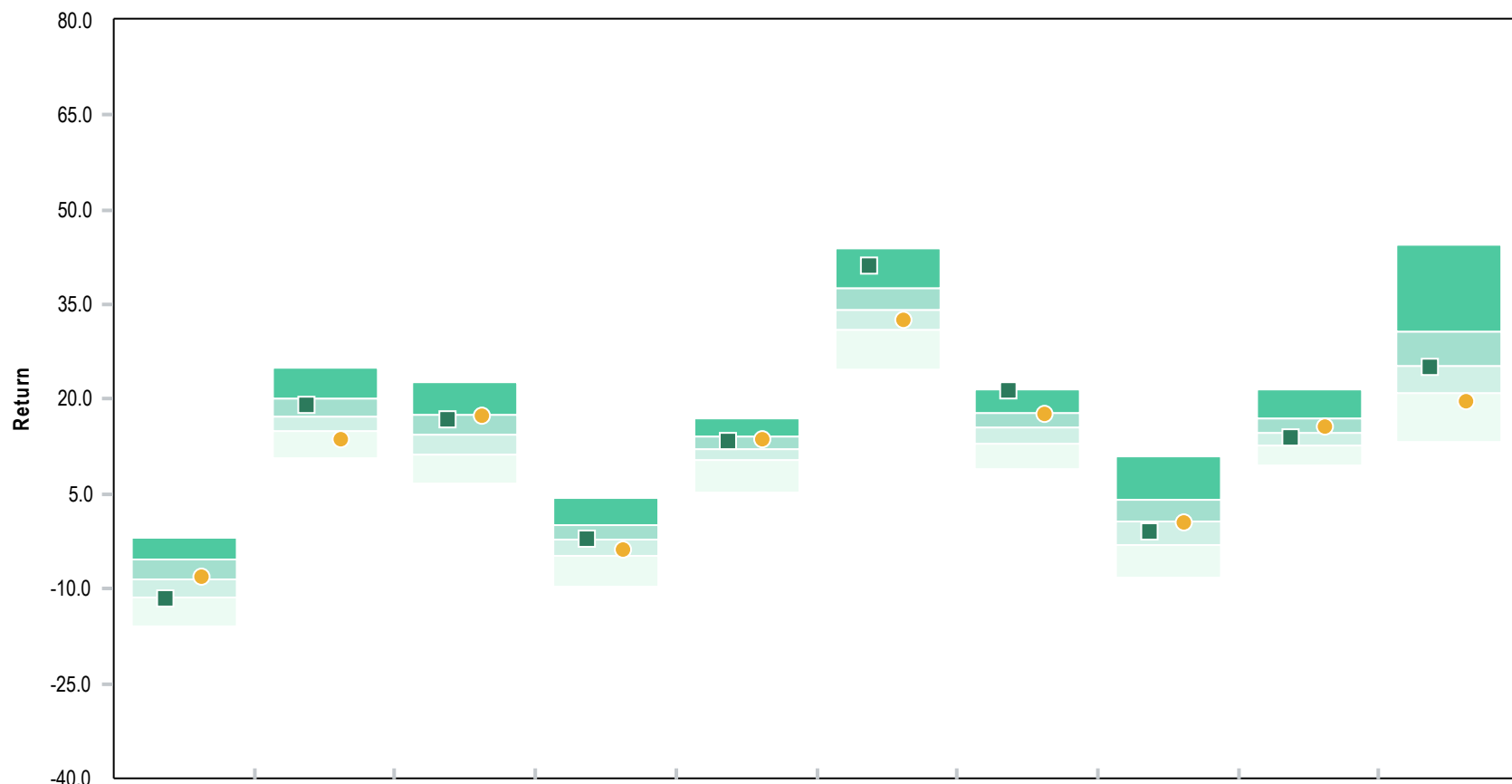
5th Percentile	11.91	35.80	35.80	15.91	12.33	15.25	14.53
1st Quartile	9.20	29.87	29.87	12.89	10.23	13.77	13.02
Median	7.92	27.32	27.32	10.76	8.94	12.78	12.15
3rd Quartile	6.72	24.51	24.51	9.27	7.78	11.87	11.37
95th Percentile	5.11	20.64	20.64	7.09	5.67	9.92	9.68

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Large Cap Value Equity (SA+CF)

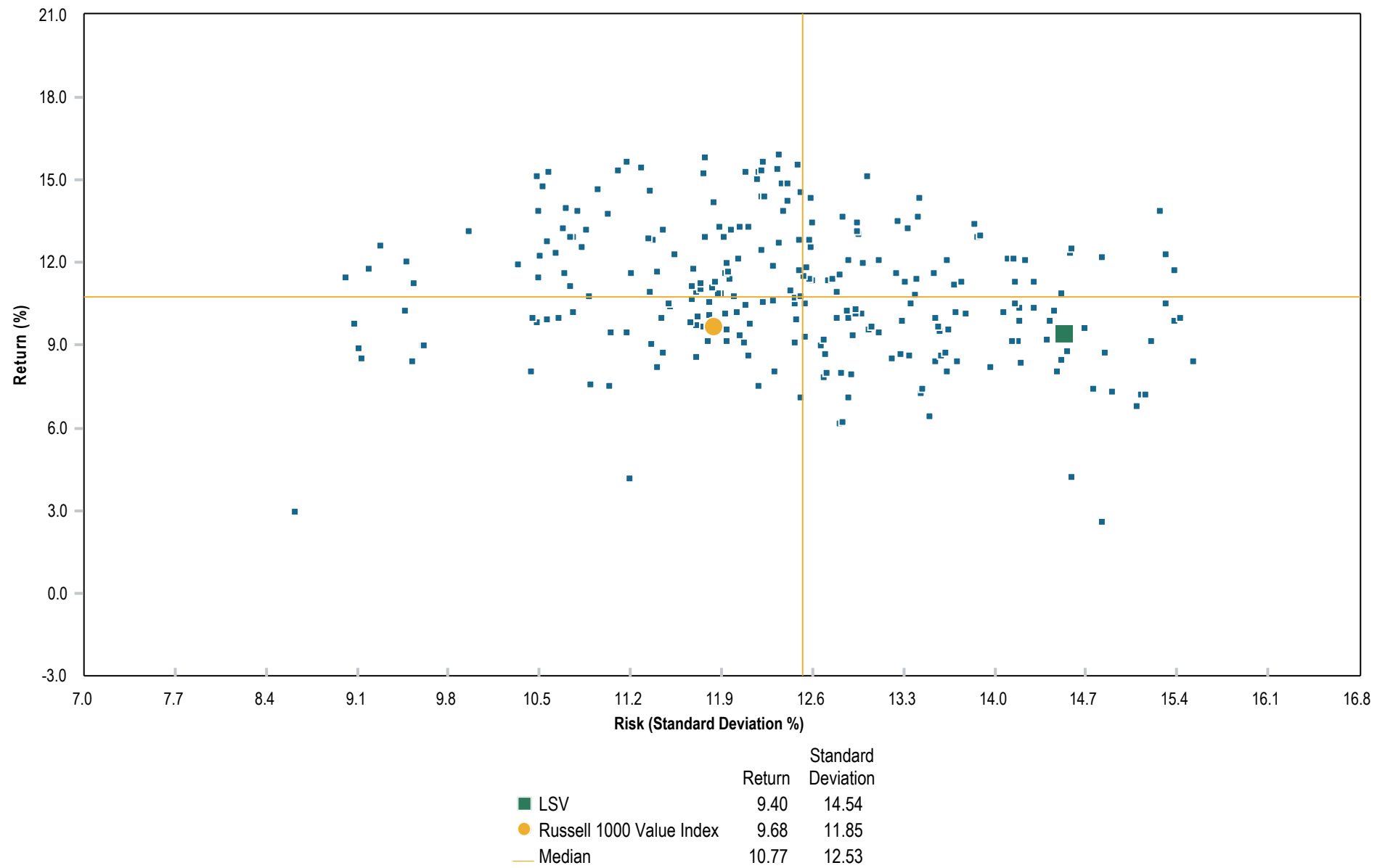
As of December 31, 2019



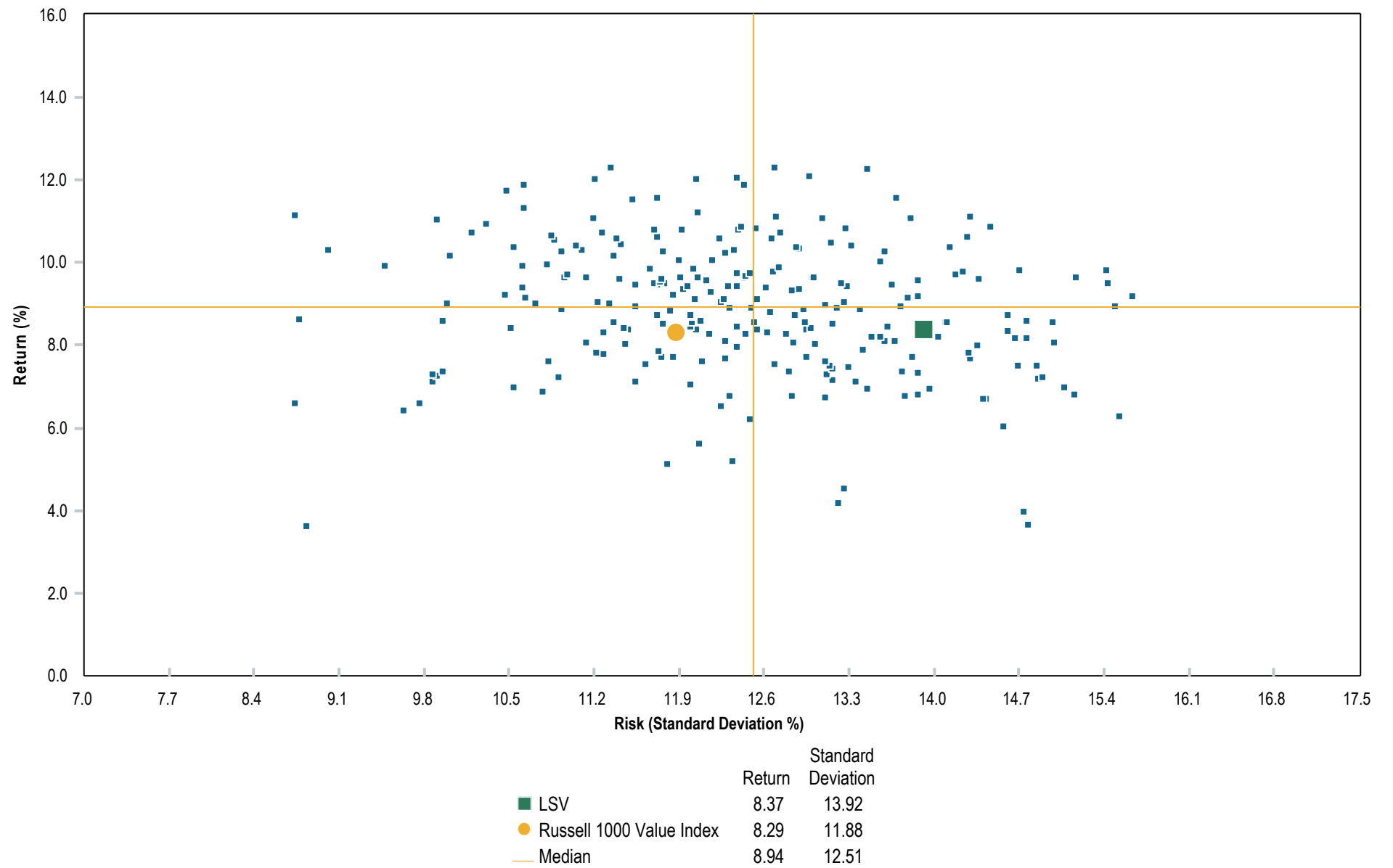
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ LSV	-11.72 (78)	18.89 (35)	16.66 (30)	-2.14 (49)	13.25 (37)	40.94 (12)	21.22 (7)	-0.94 (63)	13.94 (59)	24.91 (53)
● Russell 1000 Value Index	-8.27 (50)	13.66 (88)	17.34 (26)	-3.83 (69)	13.45 (35)	32.53 (62)	17.51 (29)	0.39 (53)	15.51 (41)	19.69 (80)

5th Percentile	-1.97	24.98	22.62	4.28	17.01	43.98	21.67	10.90	21.43	44.46
1st Quartile	-5.30	20.16	17.54	0.13	14.06	37.72	17.99	4.23	16.89	30.80
Median	-8.35	17.24	14.52	-2.25	12.14	34.22	15.66	0.63	14.66	25.21
3rd Quartile	-11.43	15.12	11.29	-4.74	10.30	31.07	12.92	-2.99	12.84	20.95
95th Percentile	-15.90	10.65	6.60	-9.63	5.18	24.84	8.91	-8.26	9.59	13.33

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.



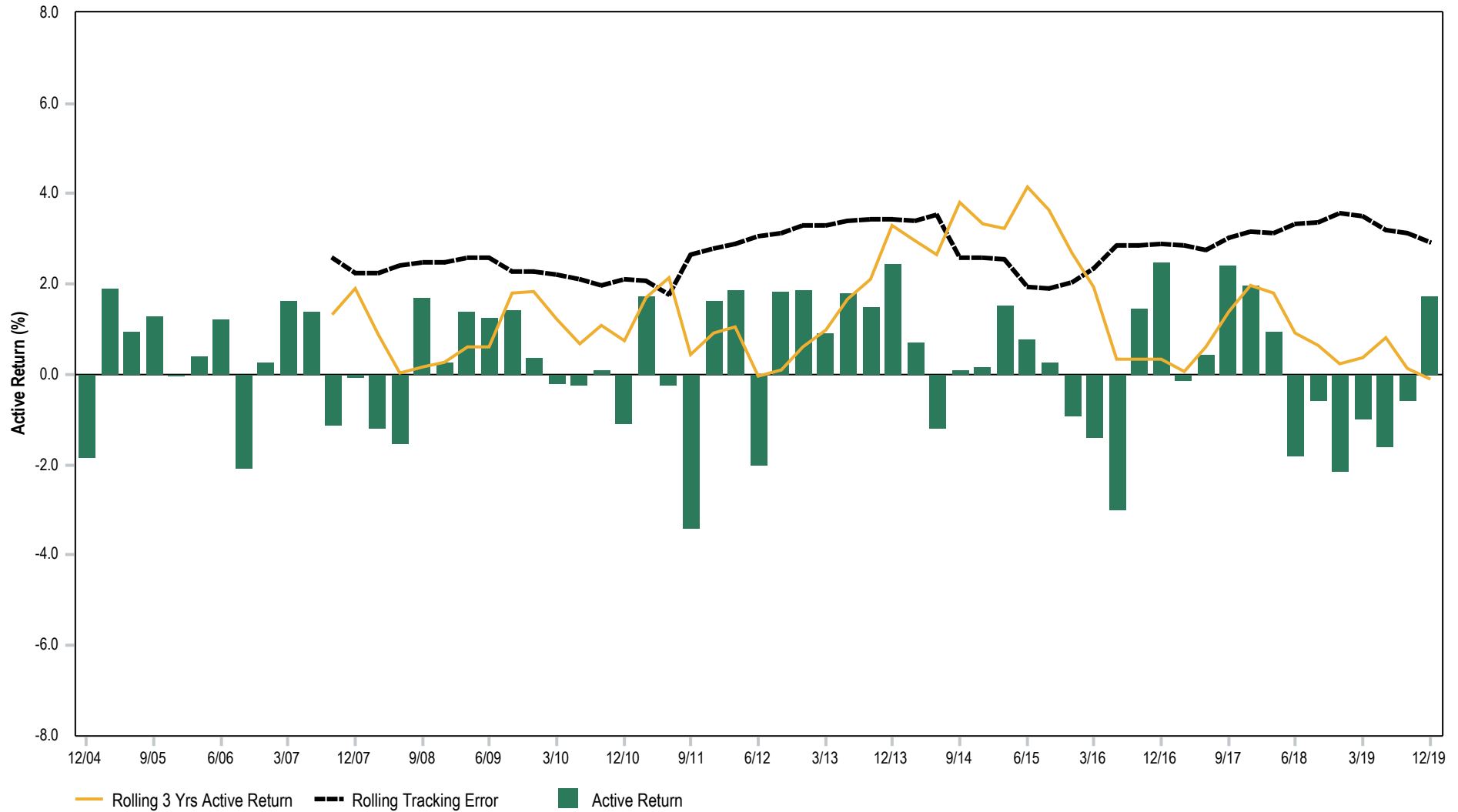
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
LSV	9.15	24.73	24.73	9.40	8.37	13.23	12.56	-11.72	18.89	16.66	-2.14
Russell 1000 Value Index	7.41	26.54	26.54	9.68	8.29	12.20	11.80	-8.27	13.66	17.34	-3.83
Difference	1.74	-1.81	-1.81	-0.28	0.08	1.03	0.76	-3.45	5.23	-0.68	1.69



Buy-and-Hold Portfolio 9.17
 Portfolio Trading -0.02
 Actual Return 9.15
 Benchmark Return 7.41
 Actual Active Return 1.74

Stock Selection 0.73
 Sector Selection 0.84
 Interaction 0.19
 Total Selection 1.76

Portfolio Trading -0.02
 Benchmark Trading 0.00
 Active Trading Impact -0.03

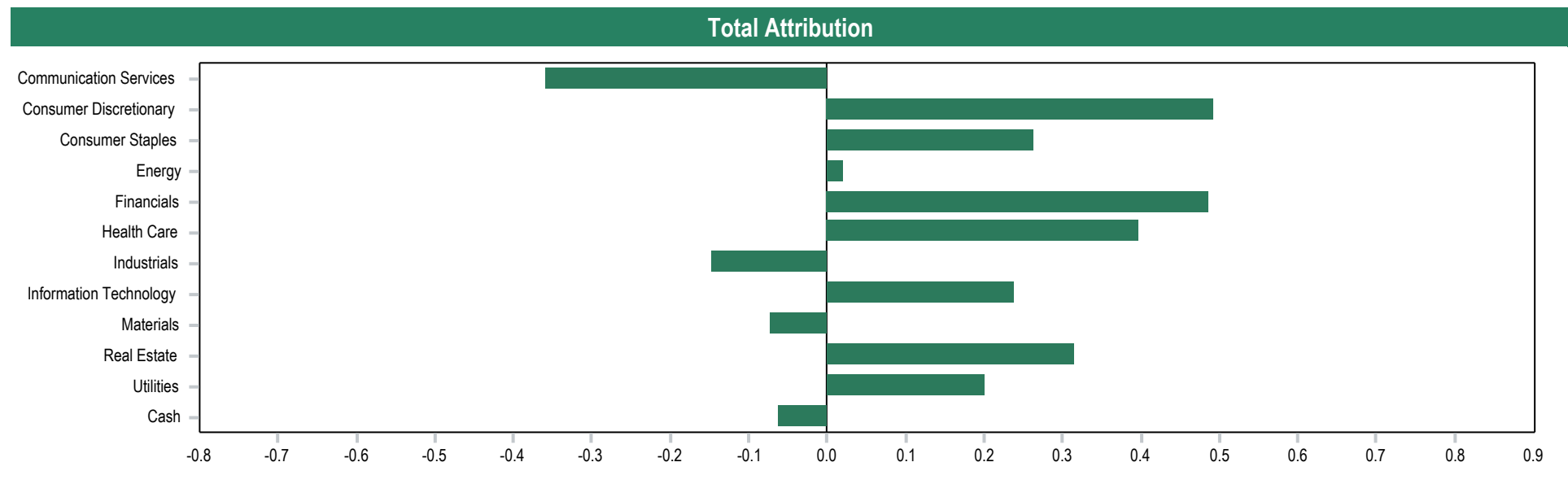
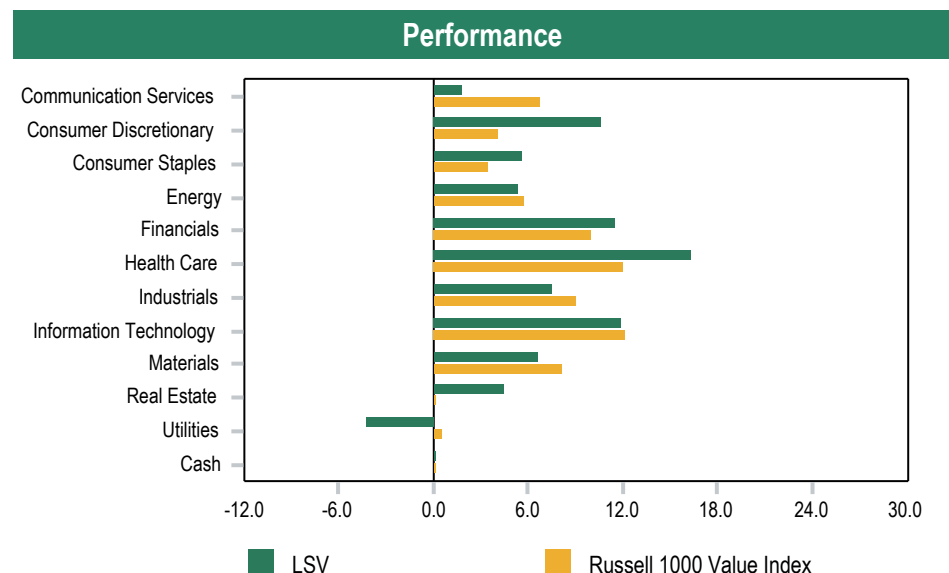
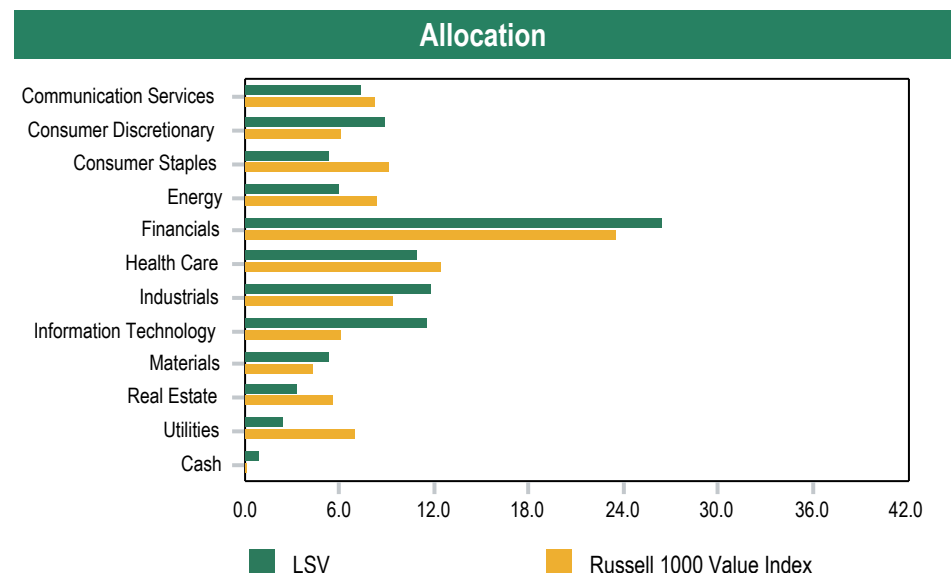
Buy & Hold Active Return 1.74

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	
Communication Services	7.32	8.19	1.78	6.75	-0.41	0.01	0.04	-0.36
Consumer Discretionary	8.84	6.09	10.70	4.11	0.40	-0.09	0.18	0.49
Consumer Staples	5.29	9.17	5.59	3.49	0.19	0.15	-0.08	0.26
Energy	5.93	8.37	5.38	5.72	-0.03	0.04	0.01	0.02
Financials	26.46	23.56	11.53	9.97	0.37	0.07	0.05	0.49
Health Care	10.93	12.40	16.27	12.02	0.53	-0.07	-0.06	0.40
Industrials	11.83	9.41	7.44	9.01	-0.15	0.04	-0.04	-0.15
Information Technology	11.54	6.02	11.95	12.18	-0.01	0.26	-0.01	0.24
Materials	5.33	4.29	6.56	8.07	-0.06	0.01	-0.02	-0.07
Real Estate	3.27	5.51	4.45	-0.04	0.25	0.17	-0.10	0.31
Utilities	2.40	7.01	-4.32	0.54	-0.34	0.32	0.22	0.20
Cash	0.86	0.00	0.00	0.00	0.00	-0.06	0.00	-0.06
Total	100.00	100.00	9.17	7.41	0.73	0.84	0.19	1.76

Bristol County Retirement System

Buy and Hold Sector Attribution Graph

1 Quarter Ending December 31, 2019



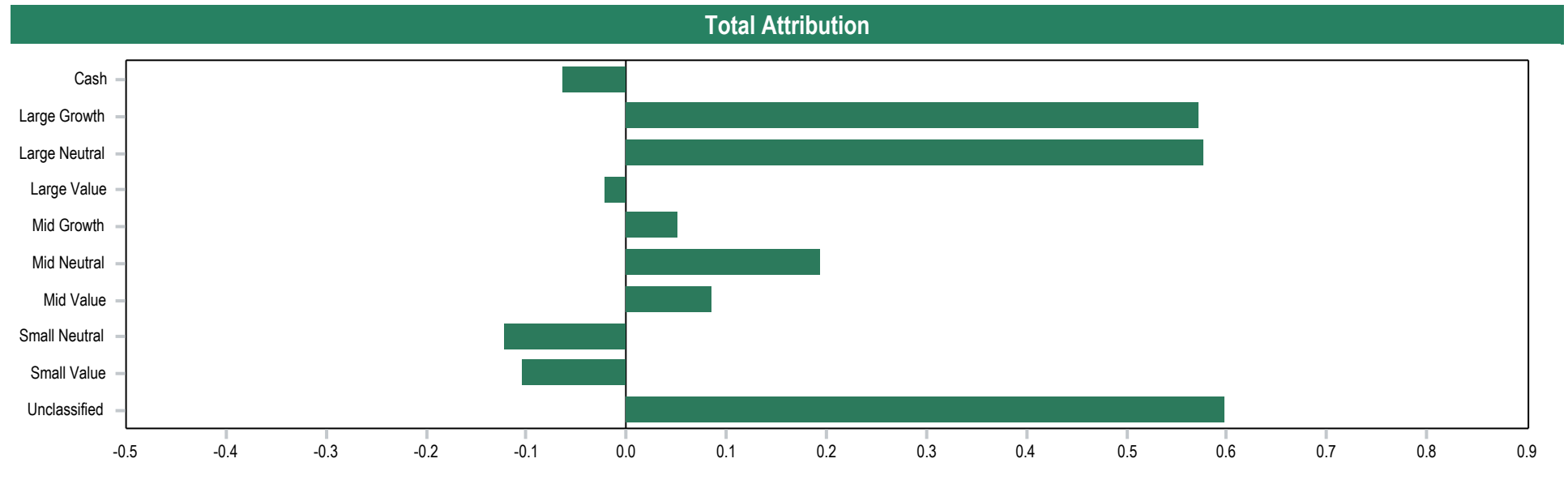
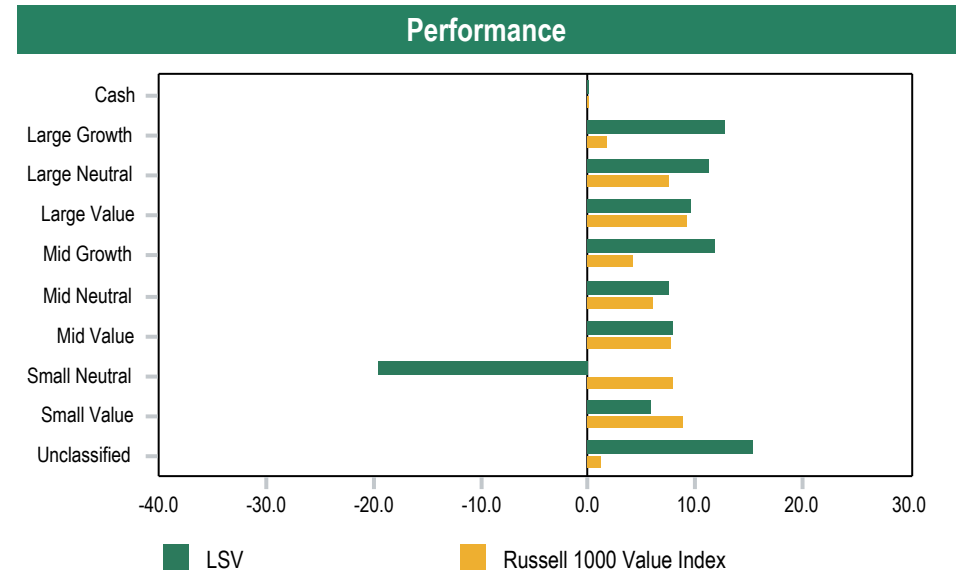
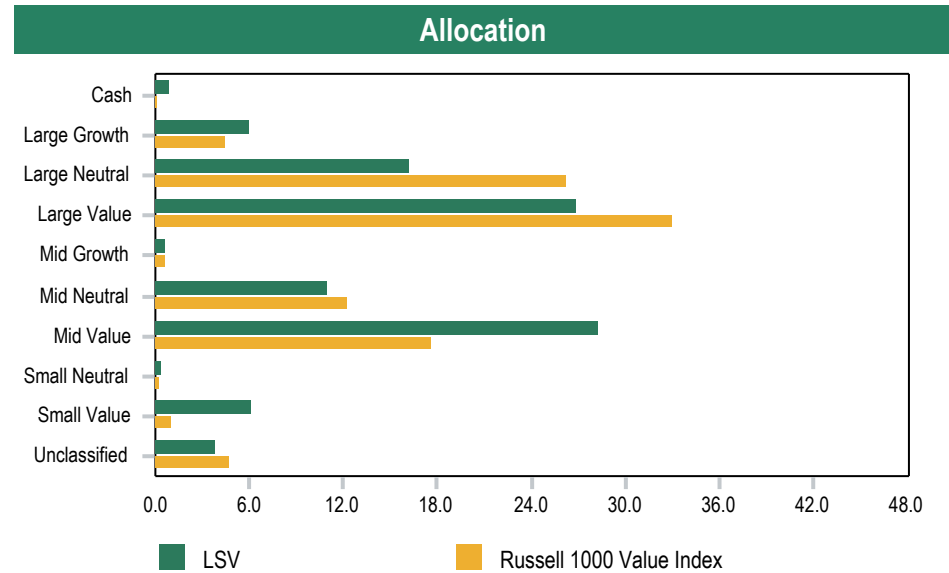
Buy-and-Hold Portfolio 9.17
 Portfolio Trading -0.02
 Actual Return 9.15
 Benchmark Return 7.41
 Actual Active Return 1.74

Stock Selection 2.41
 Style Selection -0.10
 Interaction -0.55
 Total Selection 1.76

Portfolio Trading -0.02
 Benchmark Trading 0.00
 Active Trading Impact -0.03

Buy & Hold Active Return 1.74

	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Stock	Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark		Style	Interaction	Total
Cash	0.86	0.00	0.00	0.00	0.00	-0.06	0.00	-0.06
Large Growth	5.93	4.46	12.79	1.74	0.49	-0.08	0.16	0.57
Large Neutral	16.18	26.19	11.29	7.60	0.97	-0.02	-0.37	0.58
Large Value	26.81	33.03	9.59	9.24	0.11	-0.11	-0.02	-0.02
Mid Growth	0.69	0.65	11.82	4.22	0.05	0.00	0.00	0.05
Mid Neutral	10.92	12.18	7.57	5.97	0.20	0.02	-0.02	0.19
Mid Value	28.22	17.55	7.94	7.78	0.03	0.04	0.02	0.09
Small Neutral	0.45	0.25	-19.65	7.90	-0.07	0.00	-0.05	-0.12
Small Value	6.11	1.01	5.95	8.88	-0.03	0.08	-0.15	-0.10
Unclassified	3.84	4.67	15.37	1.15	0.66	0.05	-0.12	0.60
Total	100.00	100.00	9.17	7.41	2.41	-0.10	-0.55	1.76



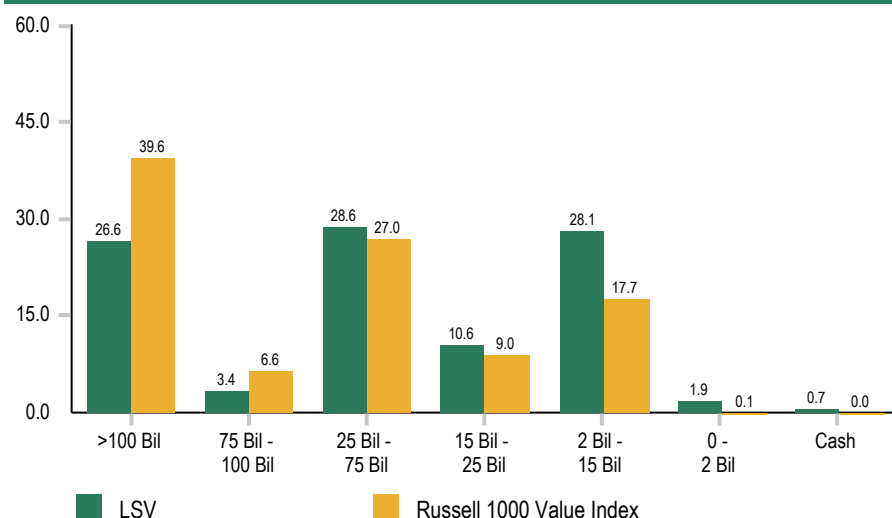
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
JPMorgan Chase & Co	3.10	3.02	0.08	19.40
Intel Corp	2.58	1.81	0.77	16.78
Verizon Communications Inc	2.35	1.77	0.58	2.78
Citigroup Inc	2.29	1.21	1.08	16.45
Bank of America Corp	2.25	1.99	0.26	21.40
Pfizer Inc	2.10	1.51	0.59	10.11
Amgen Inc	1.87	0.08	1.79	25.40
Citizens Financial Group Inc	1.47	0.12	1.35	15.97
AT&T Inc	1.47	1.98	-0.51	4.70
HCA Healthcare Inc	1.43	0.11	1.32	23.10
% of Portfolio	20.91	13.60	7.31	

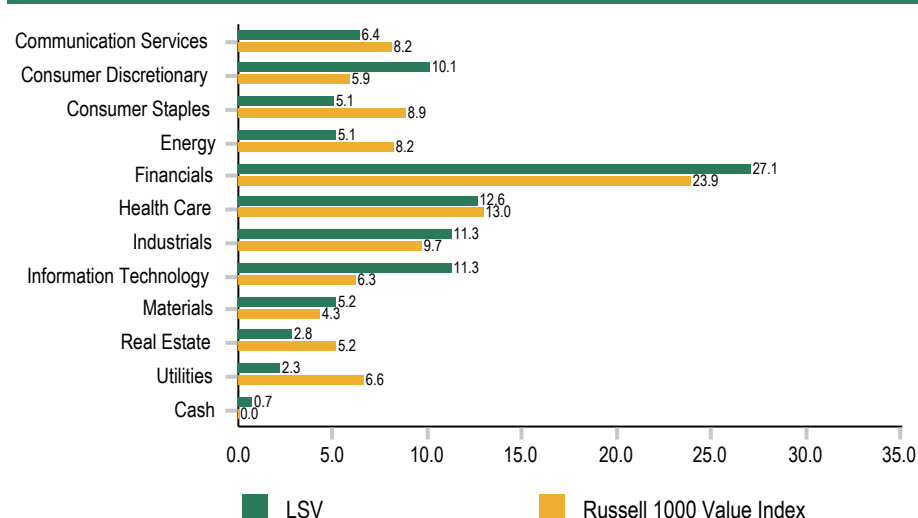
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	86,935,030,201	131,913,417,271
Median Mkt. Cap (\$)	15,642,980,020	9,882,157,095
Price/Earnings ratio	13.70	18.40
Price/Book ratio	2.23	2.26
5 Yr. EPS Growth Rate (%)	8.96	6.25
Current Yield (%)	2.85	2.50
Beta (5 Years, Monthly)	1.15	1.00
Number of Stocks	146	764

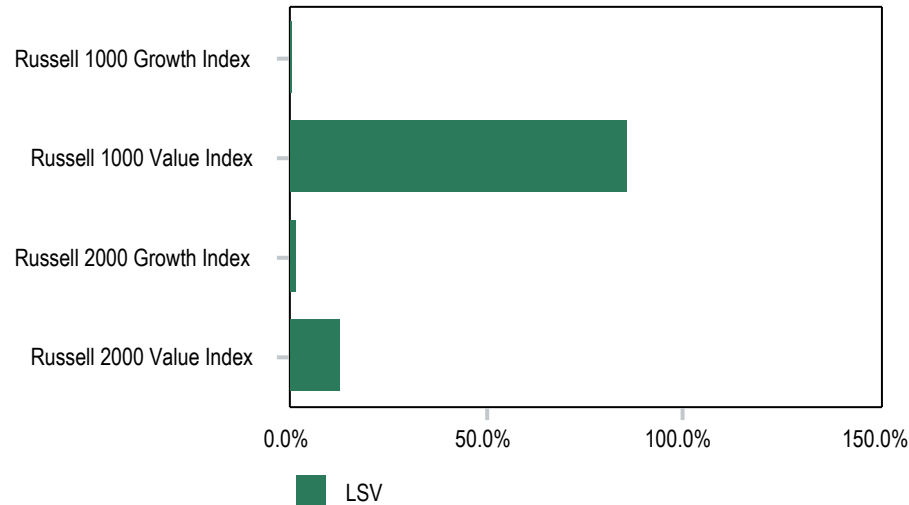
Distribution of Market Capitalization (%)



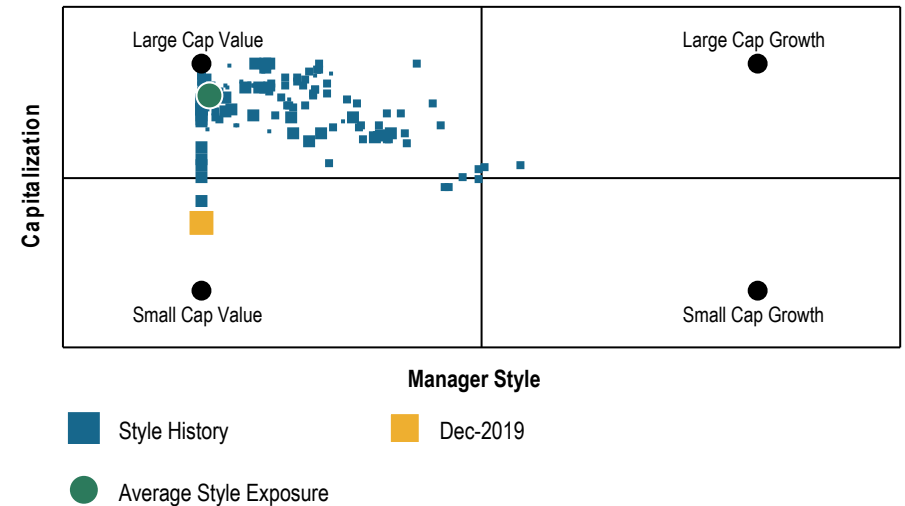
Sector Weights (%)



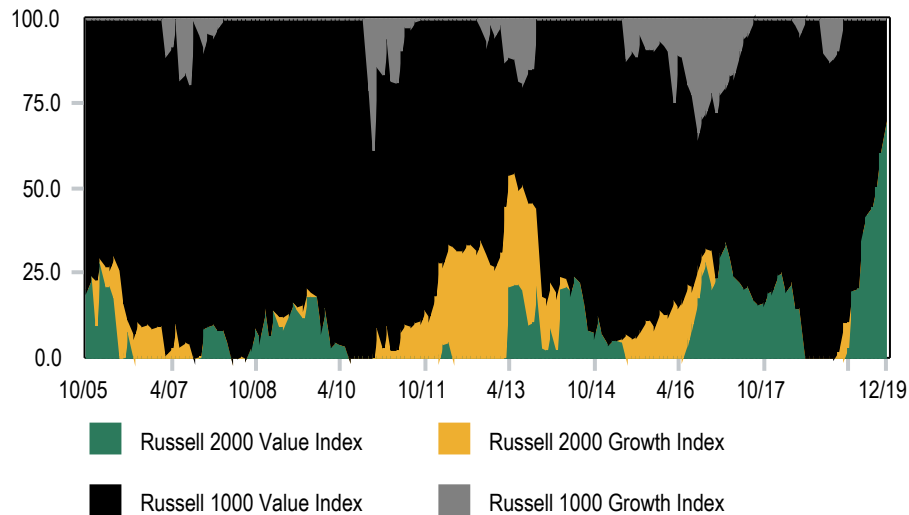
Investment Style Exposure



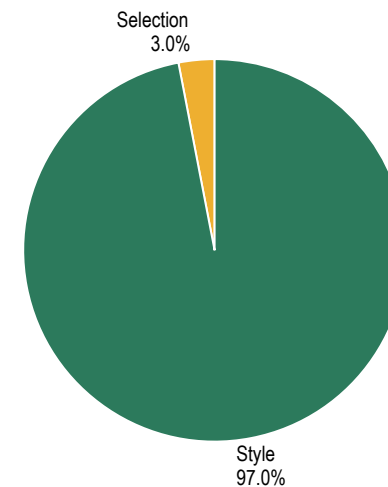
Style Map(ppp)



Style History(ppp)



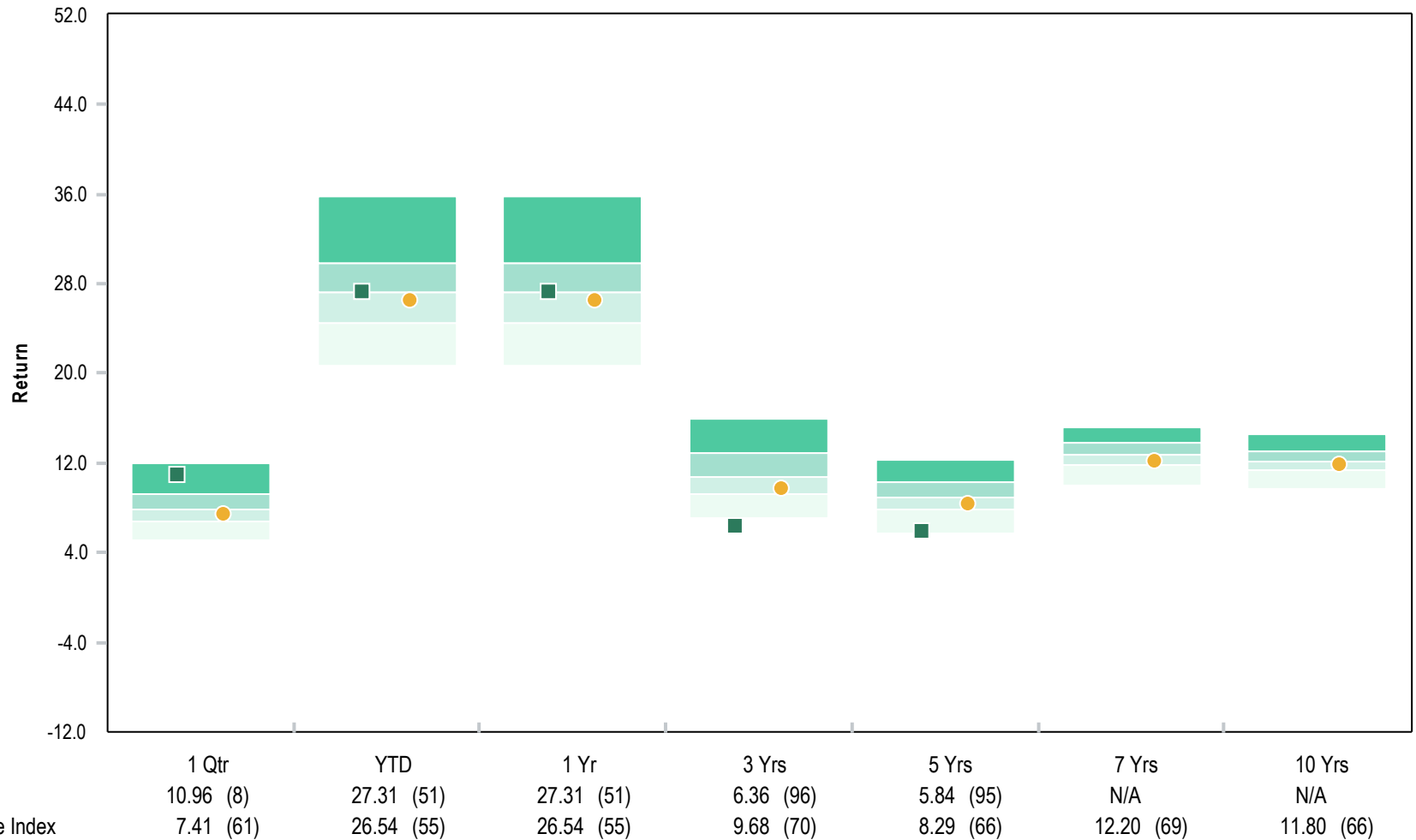
Return Variance



Bristol County Retirement System

IM U.S. Large Cap Value Equity (SA+CF)

As of December 31, 2019



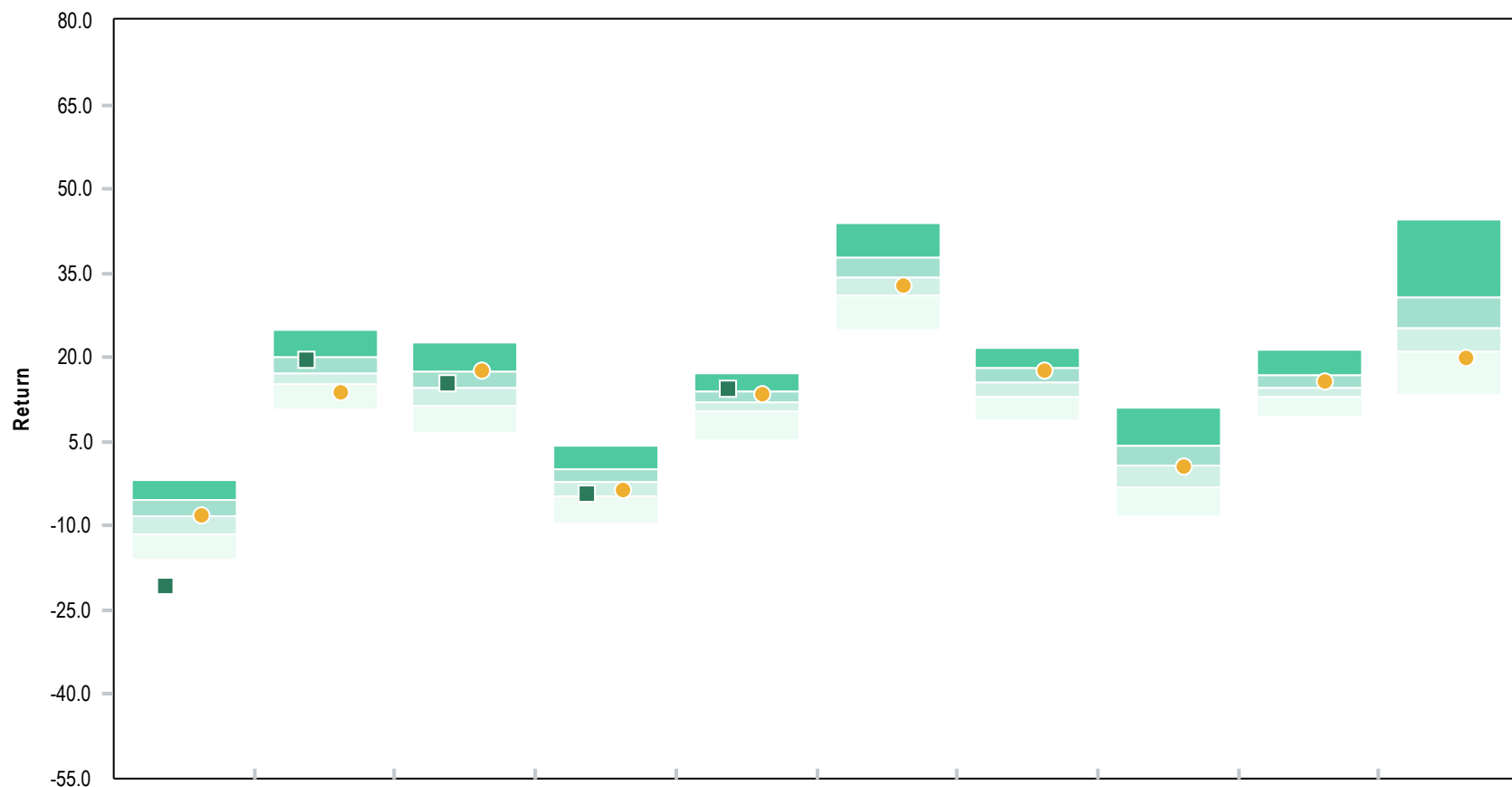
5th Percentile	11.91	35.80	35.80	15.91	12.33	15.25	14.53
1st Quartile	9.20	29.87	29.87	12.89	10.23	13.77	13.02
Median	7.92	27.32	27.32	10.76	8.94	12.78	12.15
3rd Quartile	6.72	24.51	24.51	9.27	7.78	11.87	11.37
95th Percentile	5.11	20.64	20.64	7.09	5.67	9.92	9.68

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Large Cap Value Equity (SA+CF)

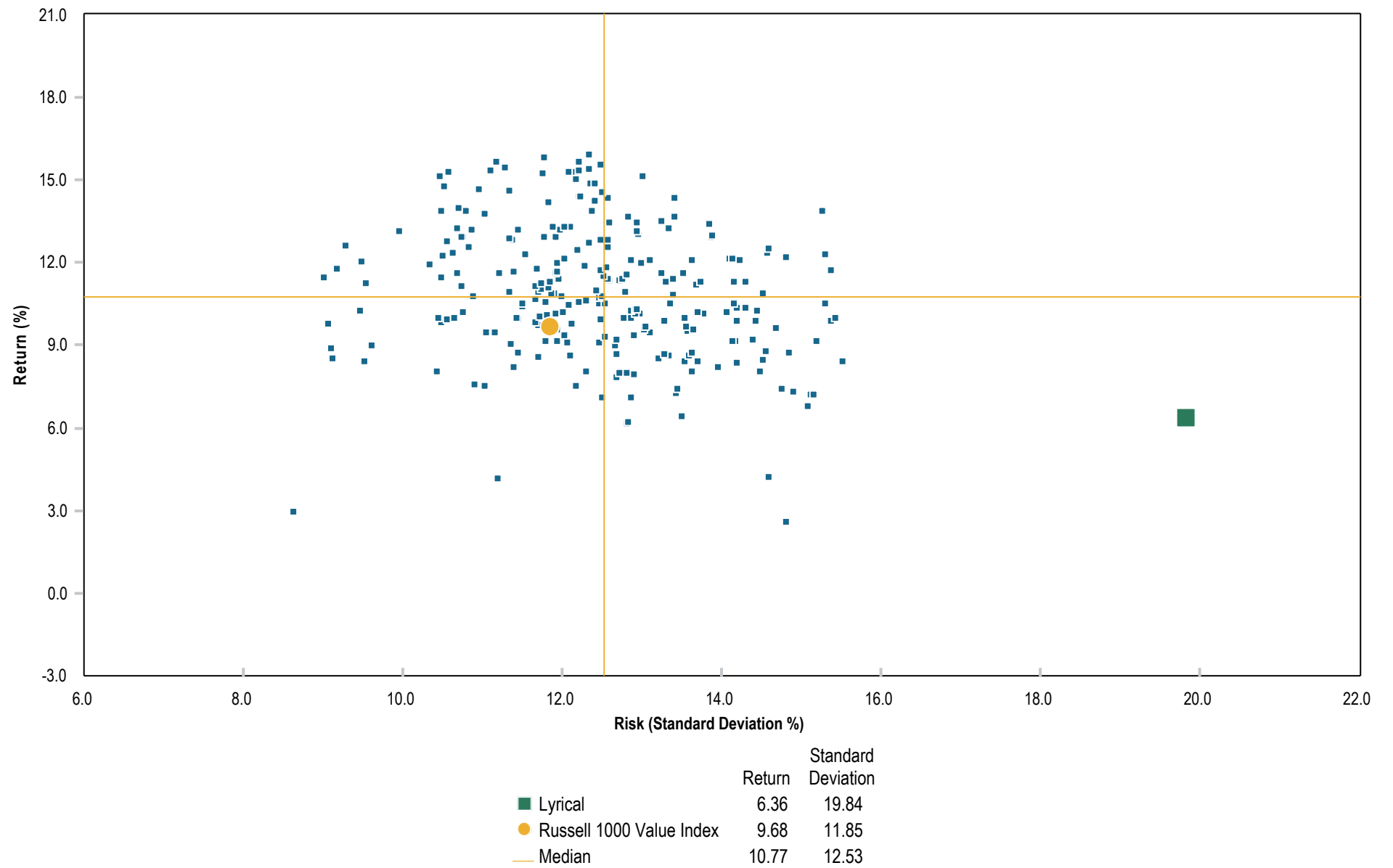
As of December 31, 2019



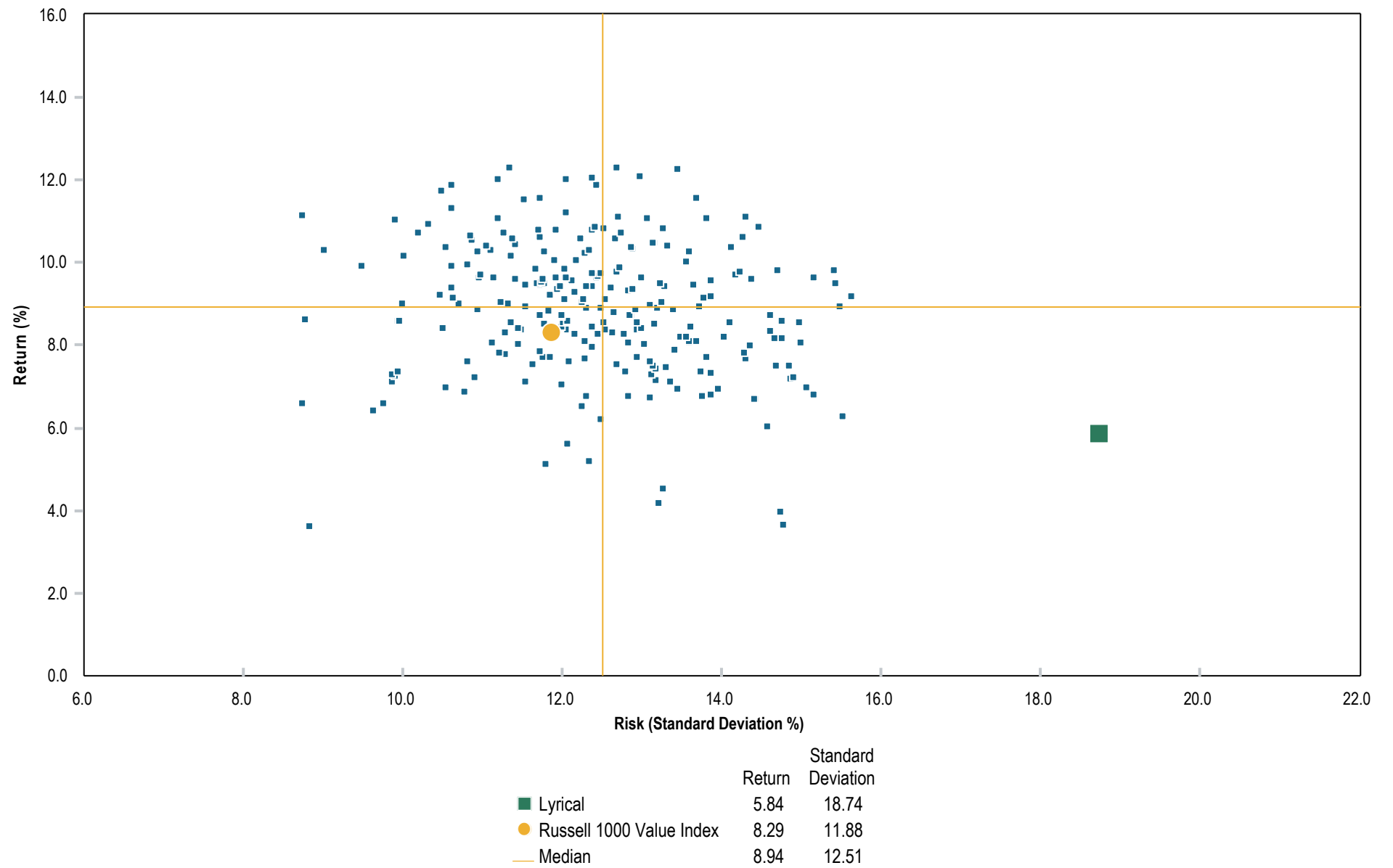
■ Lyrical
● Russell 1000 Value Index

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Lyrical	-20.80 (100)	19.32 (32)	15.33 (43)	-4.25 (73)	14.28 (23)	N/A	N/A	N/A	N/A	N/A
Russell 1000 Value Index	-8.27 (50)	13.66 (88)	17.34 (26)	-3.83 (69)	13.45 (35)	32.53 (62)	17.51 (29)	0.39 (53)	15.51 (41)	19.69 (80)
5th Percentile	-1.97	24.98	22.62	4.28	17.01	43.98	21.67	10.90	21.43	44.46
1st Quartile	-5.30	20.16	17.54	0.13	14.06	37.72	17.99	4.23	16.89	30.80
Median	-8.35	17.24	14.52	-2.25	12.14	34.22	15.66	0.63	14.66	25.21
3rd Quartile	-11.43	15.12	11.29	-4.74	10.30	31.07	12.92	-2.99	12.84	20.95
95th Percentile	-15.90	10.65	6.60	-9.63	5.18	24.84	8.91	-8.26	9.59	13.33

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.



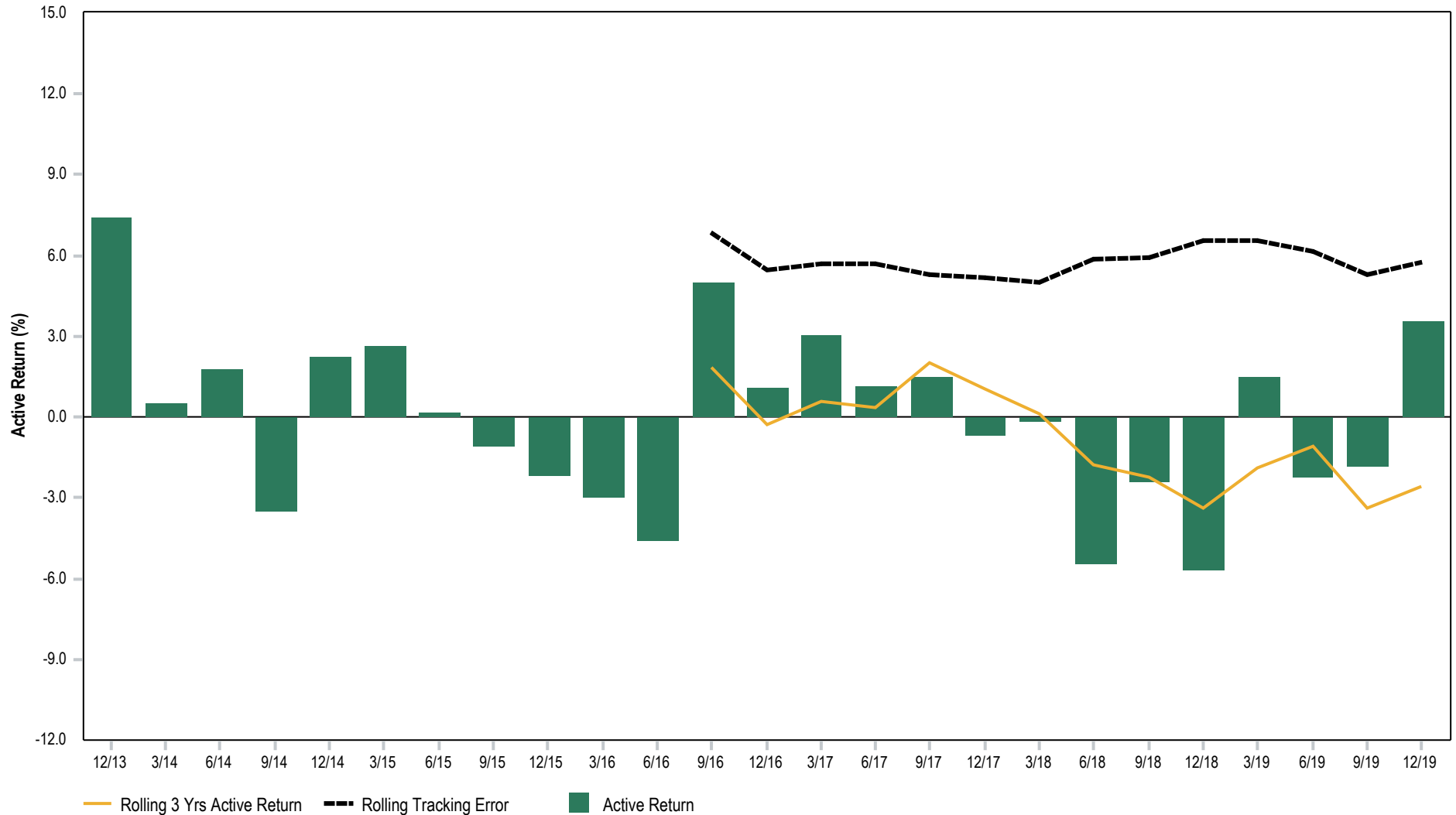
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Lyrical	10.96	27.31	27.31	6.36	5.84	N/A	N/A	-20.80	19.32	15.33	-4.25
Russell 1000 Value Index	7.41	26.54	26.54	9.68	8.29	12.20	11.80	-8.27	13.66	17.34	-3.83
Difference	3.55	0.77	0.77	-3.32	-2.45	N/A	N/A	-12.53	5.66	-2.01	-0.42



Buy-and-Hold Portfolio 10.60
 Portfolio Trading 0.36
 Actual Return 10.96
 Benchmark Return 7.41
 Actual Active Return 3.55

Stock Selection 0.92
 Sector Selection 1.72
 Interaction 0.55
 Total Selection 3.19

Portfolio Trading 0.36
 Benchmark Trading 0.00
 Active Trading Impact 0.36

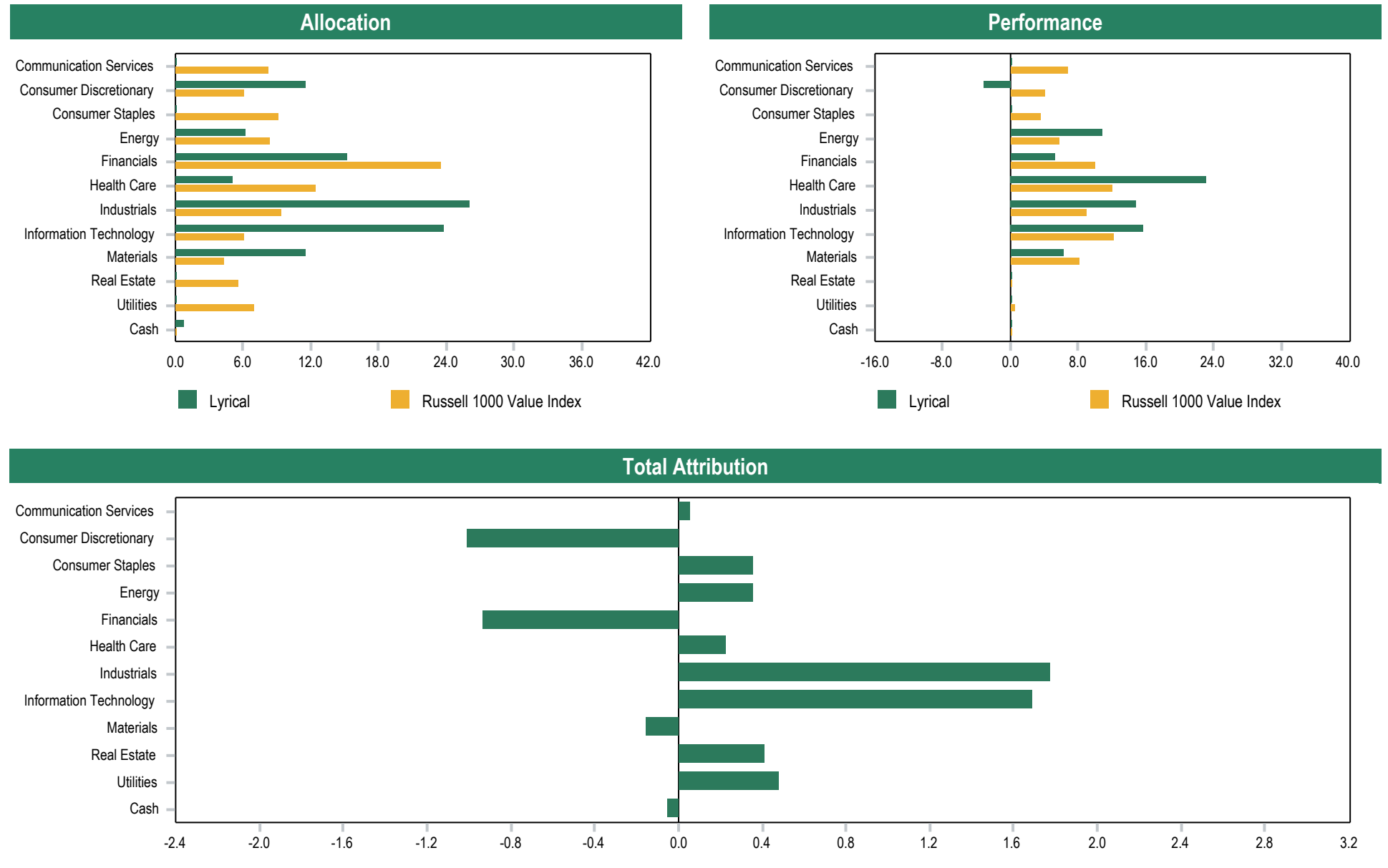
Buy & Hold Active Return 3.55

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Attribution			
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	Total
Communication Services	0.00	8.19	0.00	6.75	0.00	0.05	0.00	0.05
Consumer Discretionary	11.48	6.09	-3.13	4.11	-0.44	-0.18	-0.39	-1.01
Consumer Staples	0.00	9.17	0.00	3.49	0.00	0.36	0.00	0.36
Energy	6.21	8.37	10.81	5.72	0.43	0.04	-0.11	0.35
Financials	15.16	23.56	5.22	9.97	-1.12	-0.22	0.40	-0.94
Health Care	5.10	12.40	23.10	12.02	1.37	-0.34	-0.81	0.23
Industrials	26.04	9.41	14.80	9.01	0.54	0.27	0.96	1.77
Information Technology	23.72	6.02	15.73	12.18	0.21	0.85	0.63	1.69
Materials	11.57	4.29	6.30	8.07	-0.08	0.05	-0.13	-0.16
Real Estate	0.00	5.51	0.00	-0.04	0.00	0.41	0.00	0.41
Utilities	0.00	7.01	0.00	0.54	0.00	0.48	0.00	0.48
Cash	0.72	0.00	0.00	0.00	0.00	-0.05	0.00	-0.05
Total	100.00	100.00	10.60	7.41	0.92	1.72	0.55	3.19

Bristol County Retirement System

Buy and Hold Sector Attribution Graph

1 Quarter Ending December 31, 2019



Buy-and-Hold Portfolio 10.60
 Portfolio Trading 0.36
 Actual Return 10.96
 Benchmark Return 7.41
 Actual Active Return 3.55

Stock Selection 3.92
 Style Selection -0.57
 Interaction -0.16
 Total Selection 3.19

Portfolio Trading 0.36
 Benchmark Trading 0.00
 Active Trading Impact 0.36

Buy & Hold Active Return 3.55

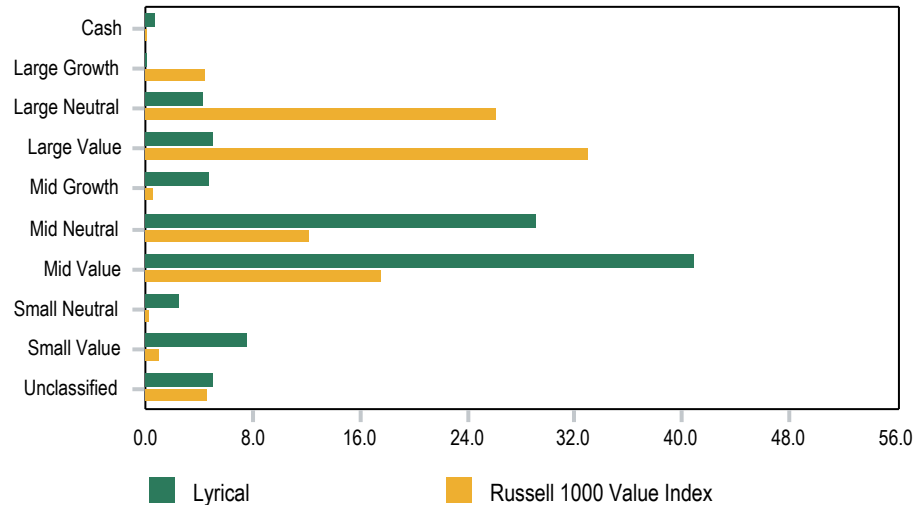
	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Stock	Attribution		Total
	Portfolio	Benchmark	Portfolio	Benchmark		Style	Interaction	
Cash	0.72	0.00	0.00	0.00	0.00	-0.05	0.00	-0.05
Large Growth	0.00	4.46	0.00	1.74	0.00	0.25	0.00	0.25
Large Neutral	4.27	26.19	15.64	7.60	2.10	-0.04	-1.76	0.30
Large Value	5.05	33.03	9.07	9.24	-0.06	-0.51	0.05	-0.52
Mid Growth	4.82	0.65	9.81	4.22	0.04	-0.13	0.23	0.14
Mid Neutral	29.18	12.18	7.27	5.97	0.16	-0.24	0.22	0.14
Mid Value	40.85	17.55	11.37	7.78	0.63	0.09	0.84	1.55
Small Neutral	2.50	0.25	14.08	7.90	0.02	0.01	0.14	0.17
Small Value	7.51	1.01	9.32	8.88	0.00	0.10	0.03	0.13
Unclassified	5.10	4.67	23.10	1.15	1.02	-0.03	0.10	1.09
Total	100.00	100.00	10.60	7.41	3.92	-0.57	-0.16	3.19

Bristol County Retirement System

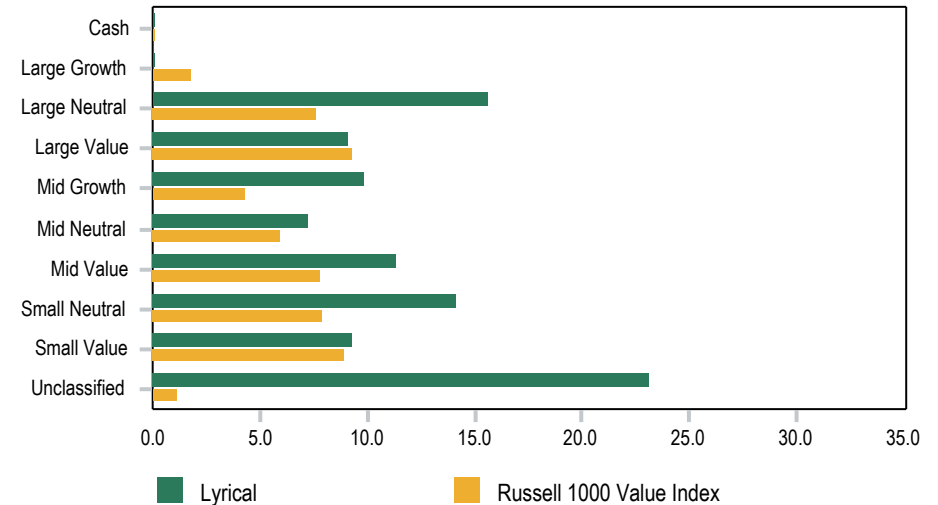
Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019

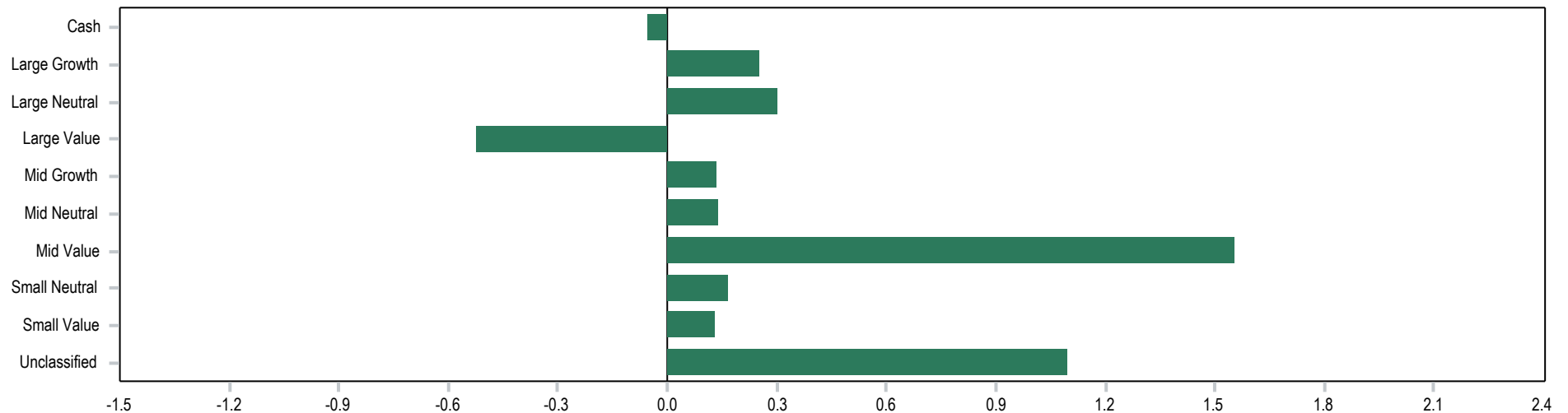
Allocation



Performance



Total Attribution



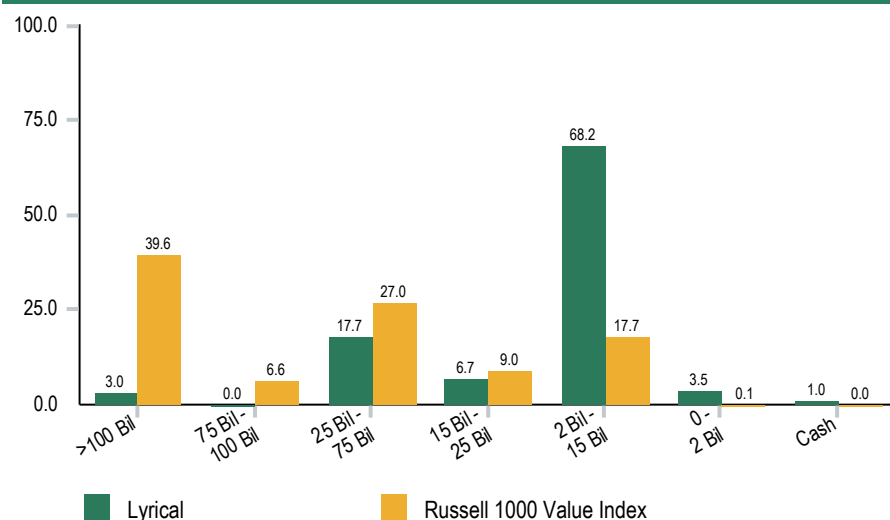
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
HCA Healthcare Inc	5.55	0.11	5.44	23.10
AerCap Holdings NV	5.00	0.00	5.00	12.27
Assurant Inc.	4.97	0.05	4.92	4.68
Crown Holdings Inc	4.89	0.03	4.86	9.81
Celanese Corp	4.72	0.10	4.62	1.18
Ameriprise Financial Inc	4.23	0.13	4.10	13.96
XPO Logistics Inc	4.19	0.02	4.17	11.36
Air Lease Corp	3.79	0.03	3.76	13.99
United Rentals Inc.	3.73	0.03	3.70	33.80
Centene Corp	3.68	0.03	3.65	45.33
% of Portfolio	44.75	0.53	44.22	

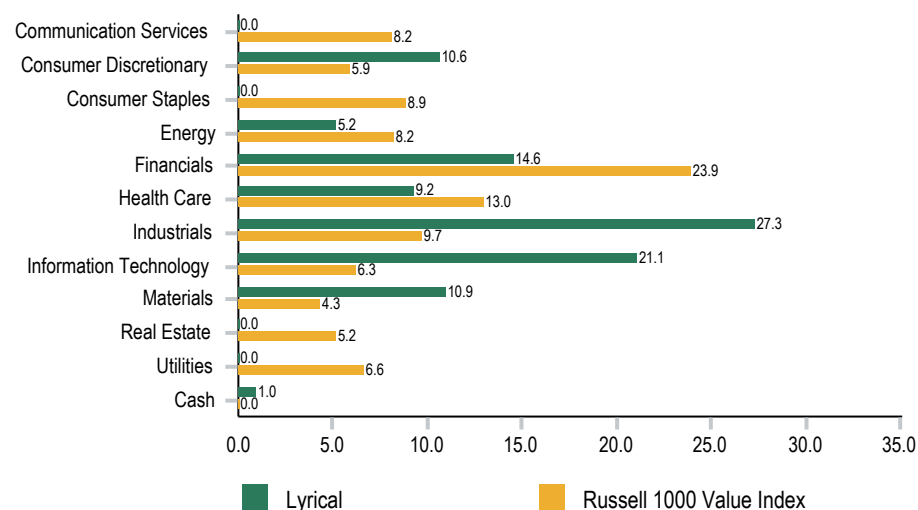
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	17,638,942,844	131,913,417,271
Median Mkt. Cap (\$)	6,901,988,260	9,882,157,095
Price/Earnings ratio	14.65	18.40
Price/Book ratio	2.40	2.26
5 Yr. EPS Growth Rate (%)	9.56	6.25
Current Yield (%)	1.31	2.50
Beta (5 Years, Monthly)	1.46	1.00
Number of Stocks	34	764

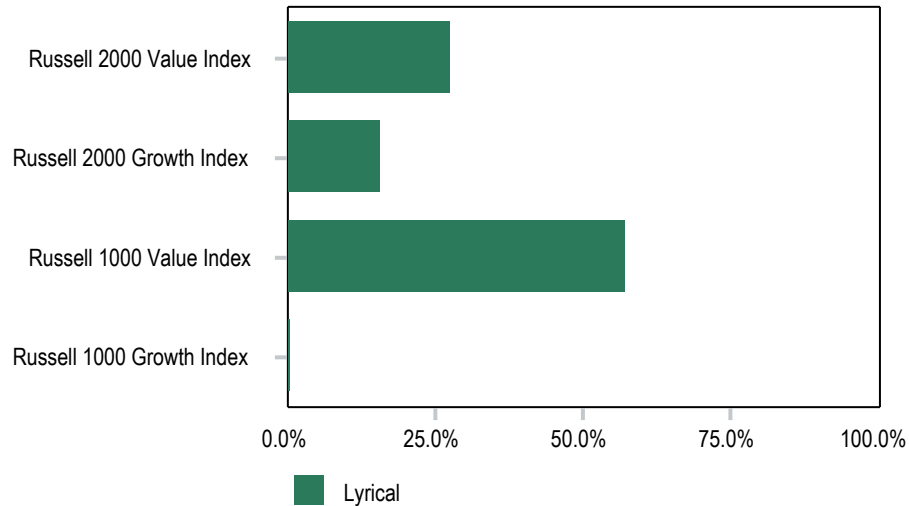
Distribution of Market Capitalization (%)



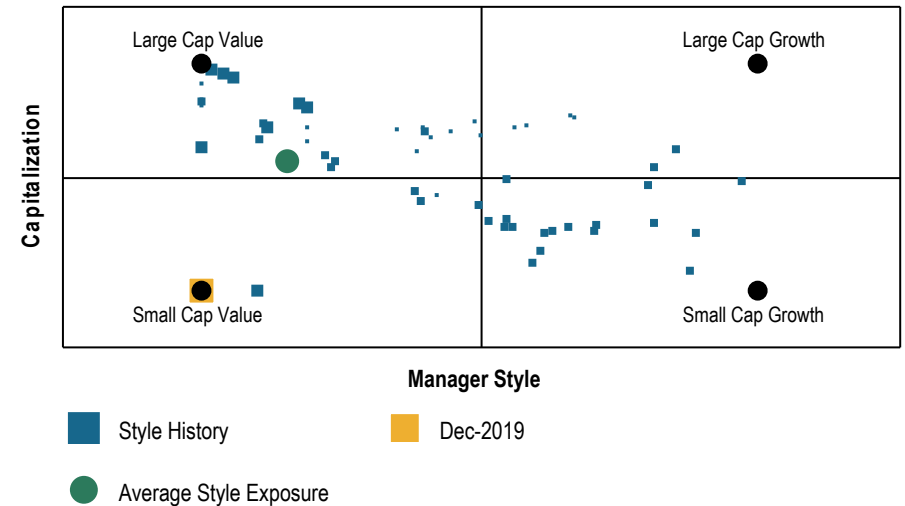
Sector Weights (%)



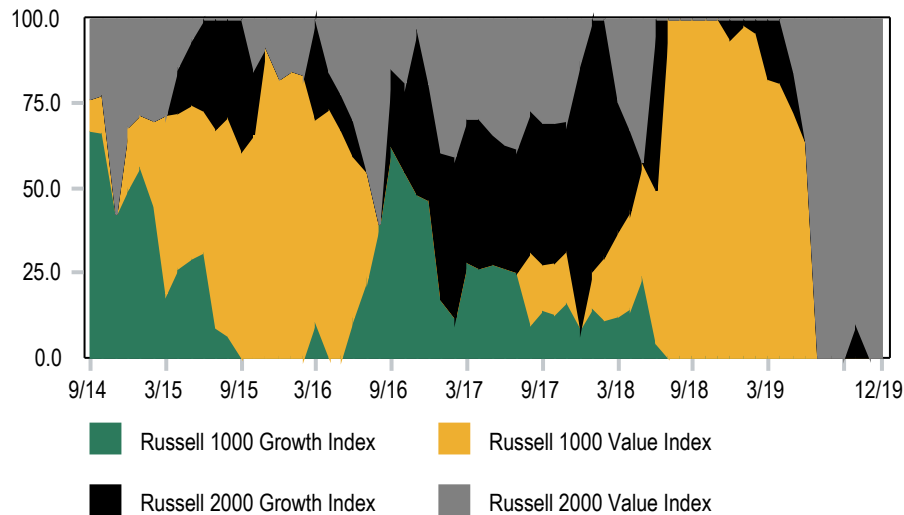
Investment Style Exposure



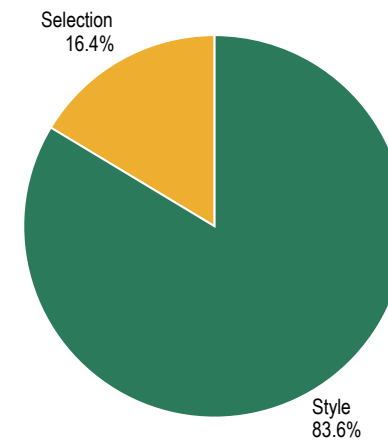
Style Map(ppp)



Style History(ppp)



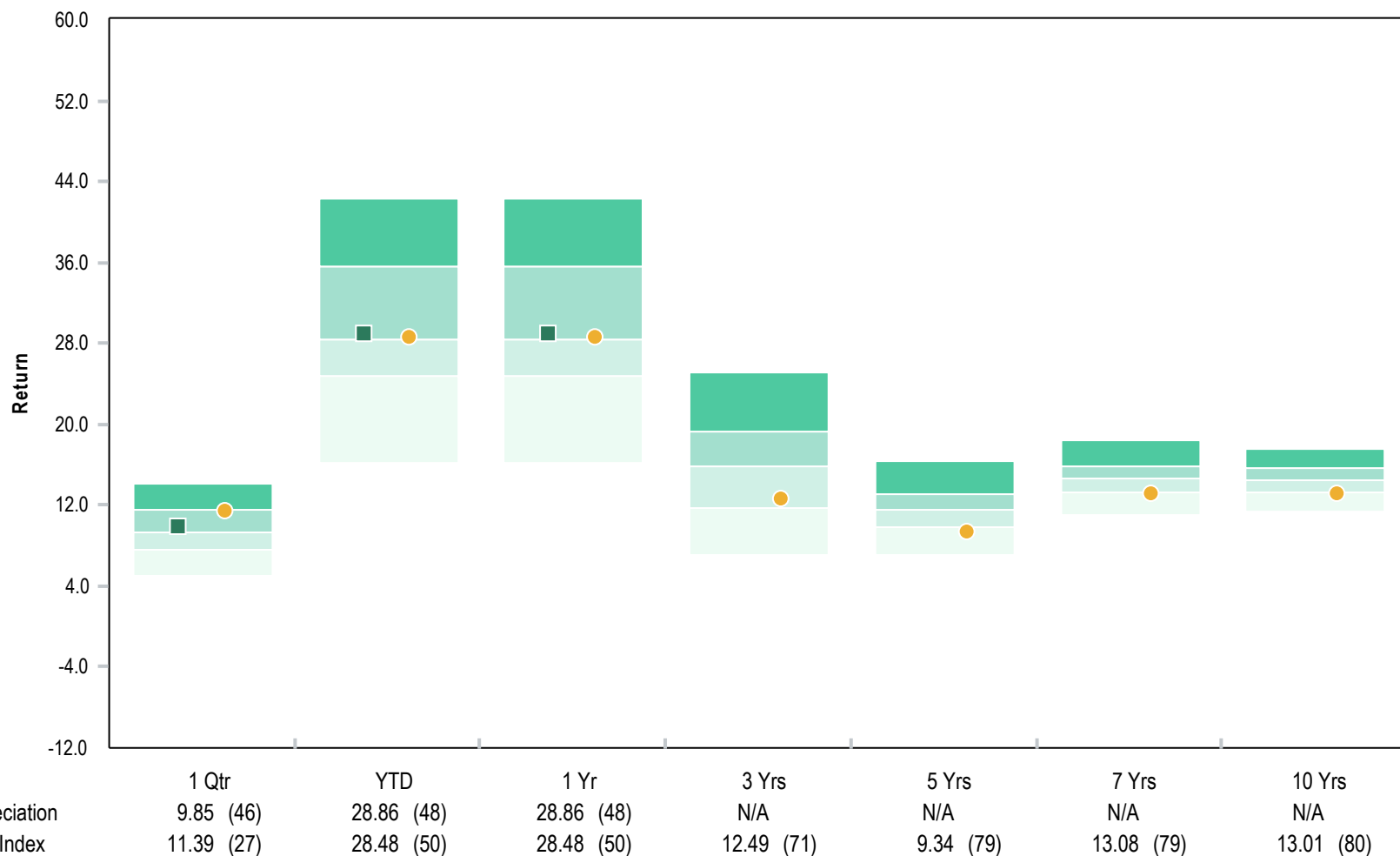
Return Variance



Bristol County Retirement System

IM U.S. Small Cap Growth Equity (SA+CF)

As of December 31, 2019



5th Percentile	14.04	42.34	42.34	25.13	16.39	18.40	17.52
1st Quartile	11.50	35.54	35.54	19.24	13.11	15.89	15.63
Median	9.36	28.42	28.42	15.80	11.48	14.67	14.43
3rd Quartile	7.53	24.74	24.74	11.76	9.75	13.31	13.33
95th Percentile	4.96	16.19	16.19	7.10	7.07	11.02	11.43

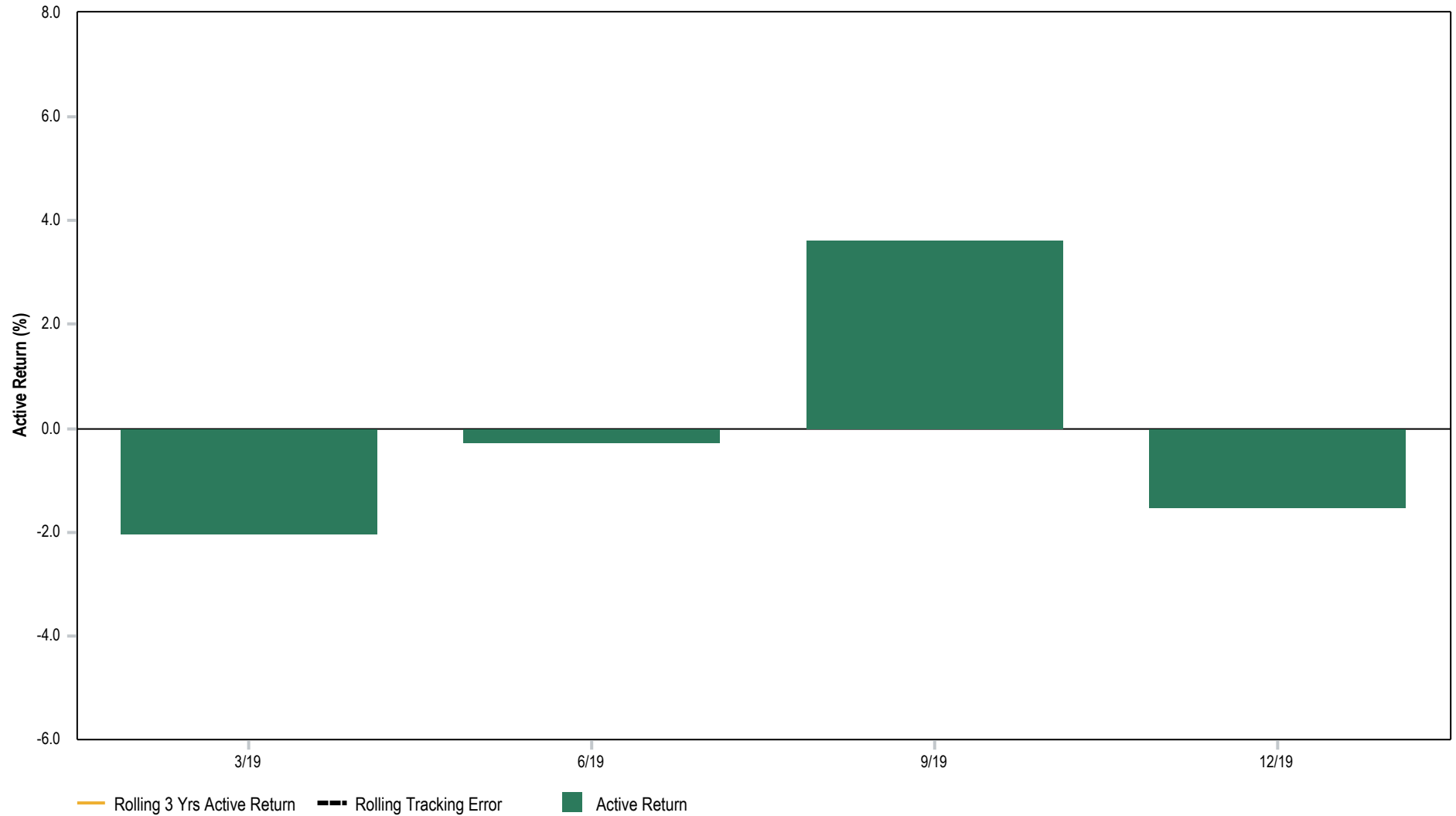
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Frontier Capital Appreciation	9.85	28.86	28.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Russell 2000 Growth Index	11.39	28.48	28.48	12.49	9.34	13.08	13.01	-9.31	22.17	11.32	-1.38
Difference	-1.54	0.38	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



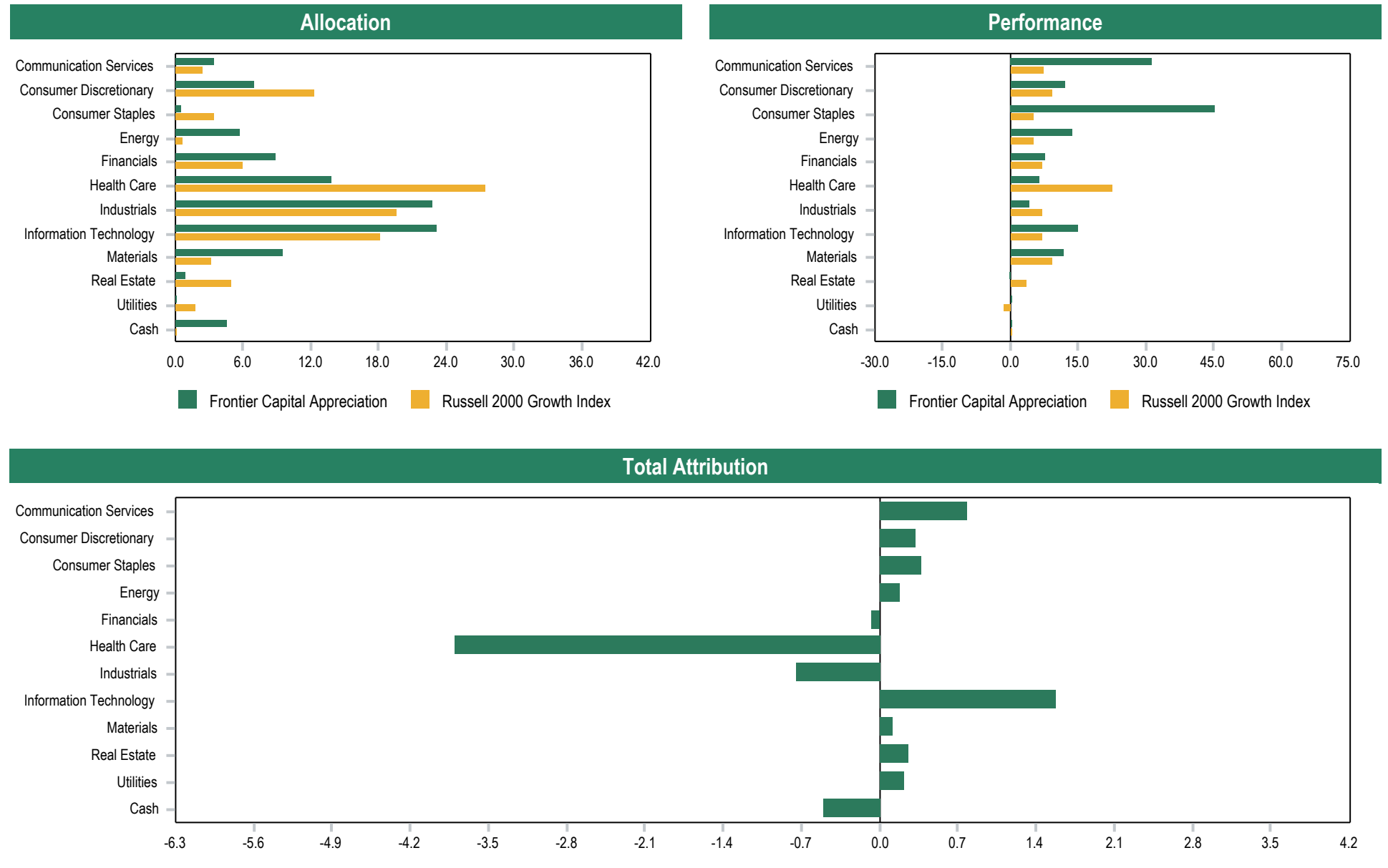
Buy-and-Hold Portfolio 9.95
 Portfolio Trading -0.10
 Actual Return 9.85
 Benchmark Return 11.39
 Actual Active Return -1.55

Stock Selection -1.28
 Sector Selection -2.18
 Interaction 2.19
 Total Selection -1.28

Portfolio Trading -0.10
 Benchmark Trading 0.17
 Active Trading Impact -0.27

Buy & Hold Active Return -1.55

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	
Communication Services	3.41	2.46	31.42	7.46	0.59	-0.04	0.23	0.78
Consumer Discretionary	6.89	12.32	12.06	9.07	0.37	0.12	-0.16	0.32
Consumer Staples	0.50	3.47	45.18	5.24	1.38	0.18	-1.18	0.38
Energy	5.66	0.68	13.71	5.00	0.06	-0.31	0.43	0.18
Financials	8.83	5.99	7.63	7.06	0.03	-0.12	0.02	-0.07
Health Care	13.78	27.47	6.35	22.64	-4.47	-1.56	2.23	-3.81
Industrials	22.77	19.63	4.17	6.85	-0.53	-0.14	-0.08	-0.75
Information Technology	23.15	18.12	14.77	7.04	1.40	-0.21	0.39	1.58
Materials	9.52	3.19	11.90	9.32	0.08	-0.12	0.16	0.13
Real Estate	0.93	4.89	-0.42	3.65	-0.20	0.30	0.16	0.26
Utilities	0.00	1.79	0.00	-1.49	0.00	0.23	0.00	0.23
Cash	4.56	0.00	0.00	0.00	0.00	-0.51	0.00	-0.51
Total	100.00	100.00	9.95	11.23	-1.28	-2.18	2.19	-1.28



Buy-and-Hold Portfolio 9.95
 Portfolio Trading -0.10
 Actual Return 9.85
 Benchmark Return 11.39
 Actual Active Return -1.55

Stock Selection -0.75
 Style Selection -3.43
 Interaction 2.90
 Total Selection -1.28

Portfolio Trading -0.10
 Benchmark Trading 0.17
 Active Trading Impact -0.27

Buy & Hold Active Return -1.55

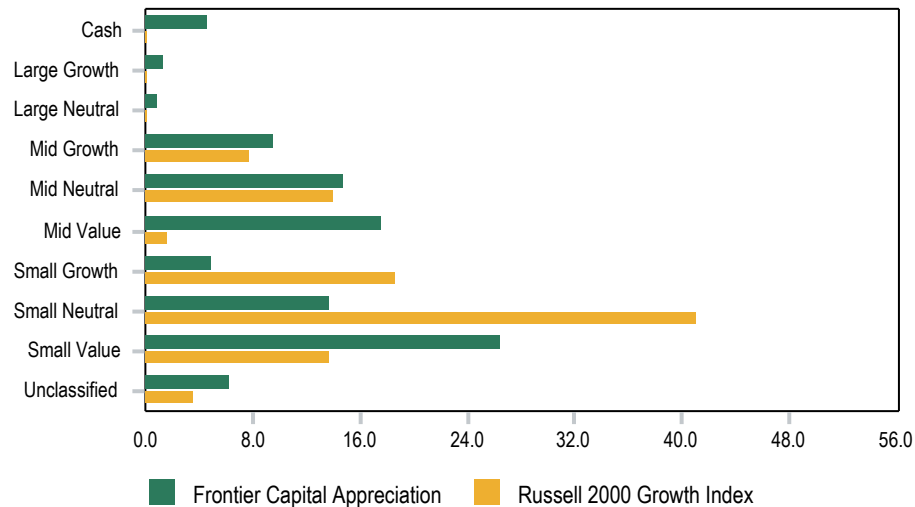
	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Stock	Attribution		Total
	Portfolio	Benchmark	Portfolio	Benchmark		Style	Interaction	
Cash	4.56	0.00	0.00	0.00	0.00	-0.51	0.00	-0.51
Large Growth	1.40	0.00	19.70	0.00	0.00	0.12	0.00	0.12
Large Neutral	0.95	0.00	14.95	0.00	0.00	0.04	0.00	0.04
Mid Growth	9.52	7.77	13.67	5.94	0.60	-0.09	0.14	0.64
Mid Neutral	14.73	13.91	6.66	6.52	0.02	-0.04	0.00	-0.02
Mid Value	17.53	1.56	11.74	-1.87	0.21	-2.09	2.17	0.29
Small Growth	4.90	18.60	17.10	14.54	0.48	-0.45	-0.35	-0.33
Small Neutral	13.73	40.94	8.38	12.68	-1.76	-0.40	1.17	-0.99
Small Value	26.40	13.65	9.42	9.35	0.01	-0.24	0.01	-0.22
Unclassified	6.29	3.57	11.47	20.06	-0.31	0.24	-0.23	-0.30
Total	100.00	100.00	9.95	11.23	-0.75	-3.43	2.90	-1.28

Bristol County Retirement System

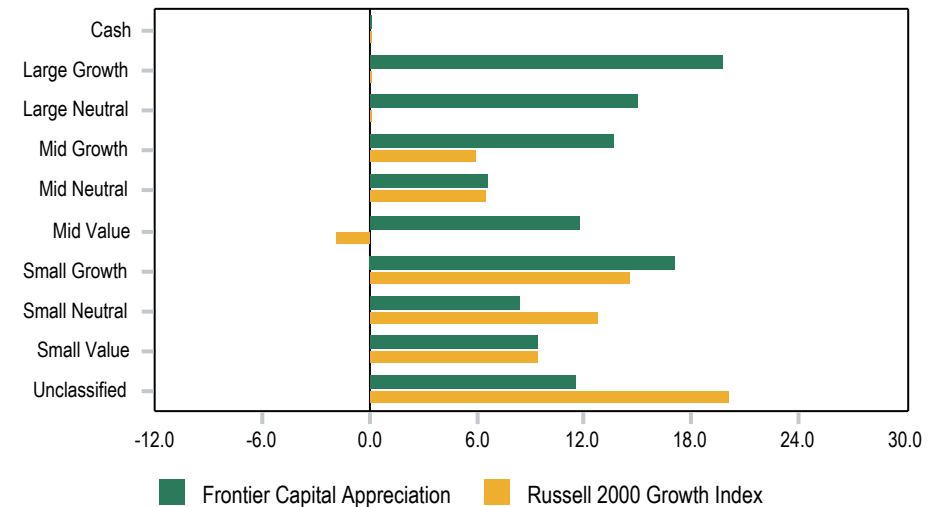
Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019

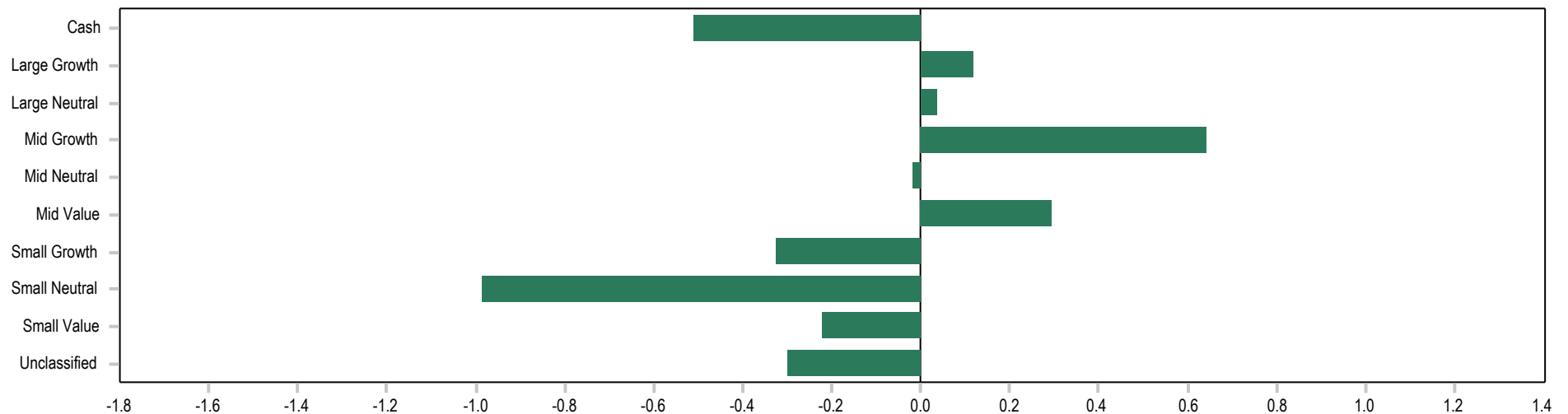
Allocation



Performance



Total Attribution



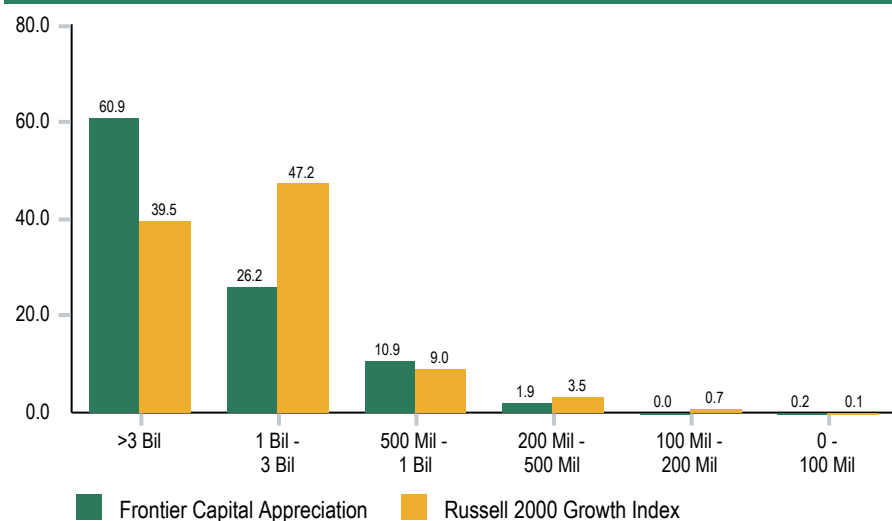
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
United Airlines Holdings Inc	3.01	0.00	3.01	-0.36
Insulet Corp	2.17	0.00	2.17	3.80
Tutor Perini Corp	2.08	0.00	2.08	-10.26
Pan American Silver Corp	2.00	0.00	2.00	51.37
KBR Inc	1.89	0.00	1.89	24.62
Monolithic Power Systems Inc	1.84	0.00	1.84	14.64
Cooper Cos Inc (The)	1.76	0.00	1.76	8.18
Cogent Communications Holdings Inc	1.75	0.26	1.49	20.66
DexCom Inc	1.75	0.00	1.75	46.57
American Airlines Group Inc	1.68	0.00	1.68	6.68
% of Portfolio	19.93	0.26	19.67	

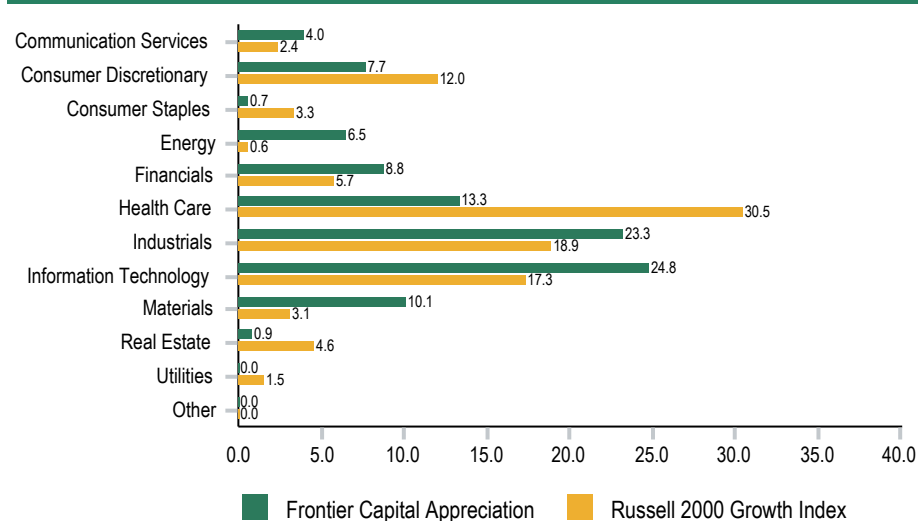
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	6,989,993,889	2,738,103,491
Median Mkt. Cap (\$)	3,082,013,920	927,393,740
Price/Earnings ratio	19.74	26.69
Price/Book ratio	2.65	4.18
5 Yr. EPS Growth Rate (%)	11.97	13.54
Current Yield (%)	0.83	0.73
Beta	N/A	1.00
Number of Stocks	139	1,172

Distribution of Market Capitalization (%)



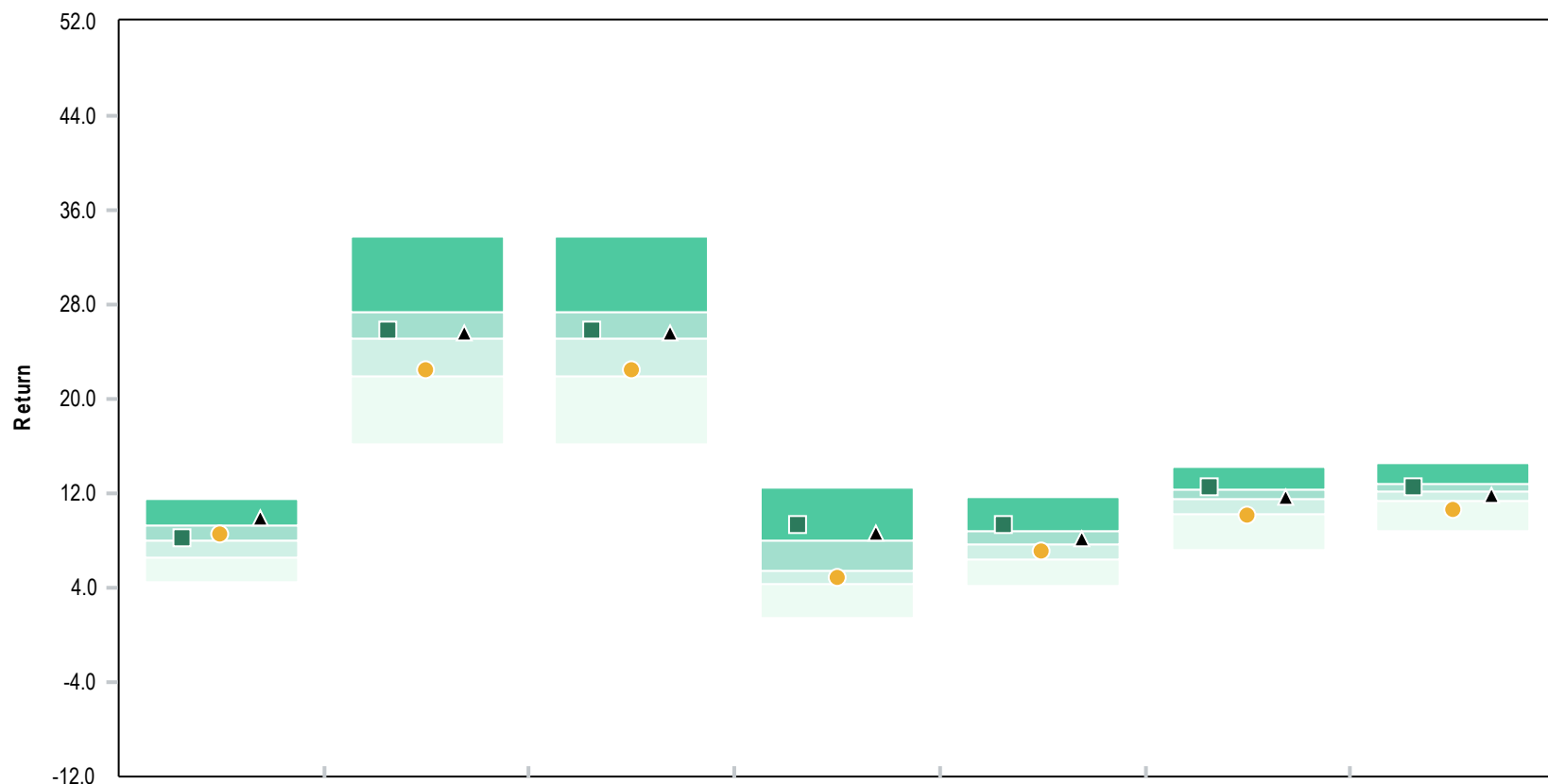
Sector Weights (%)



Bristol County Retirement System

IM U.S. Small Cap Value Equity (SA+CF)

As of December 31, 2019



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Earnest Partners	8.13 (48)	25.79 (42)	25.79 (42)	9.35 (15)	9.21 (20)	12.50 (23)	12.49 (34)
● Russell 2000 Value Index	8.49 (38)	22.39 (74)	22.39 (74)	4.77 (67)	6.99 (61)	10.13 (78)	10.56 (85)
▲ Russell 2000 Index	9.94 (14)	25.53 (45)	25.53 (45)	8.59 (19)	8.23 (35)	11.65 (43)	11.83 (60)

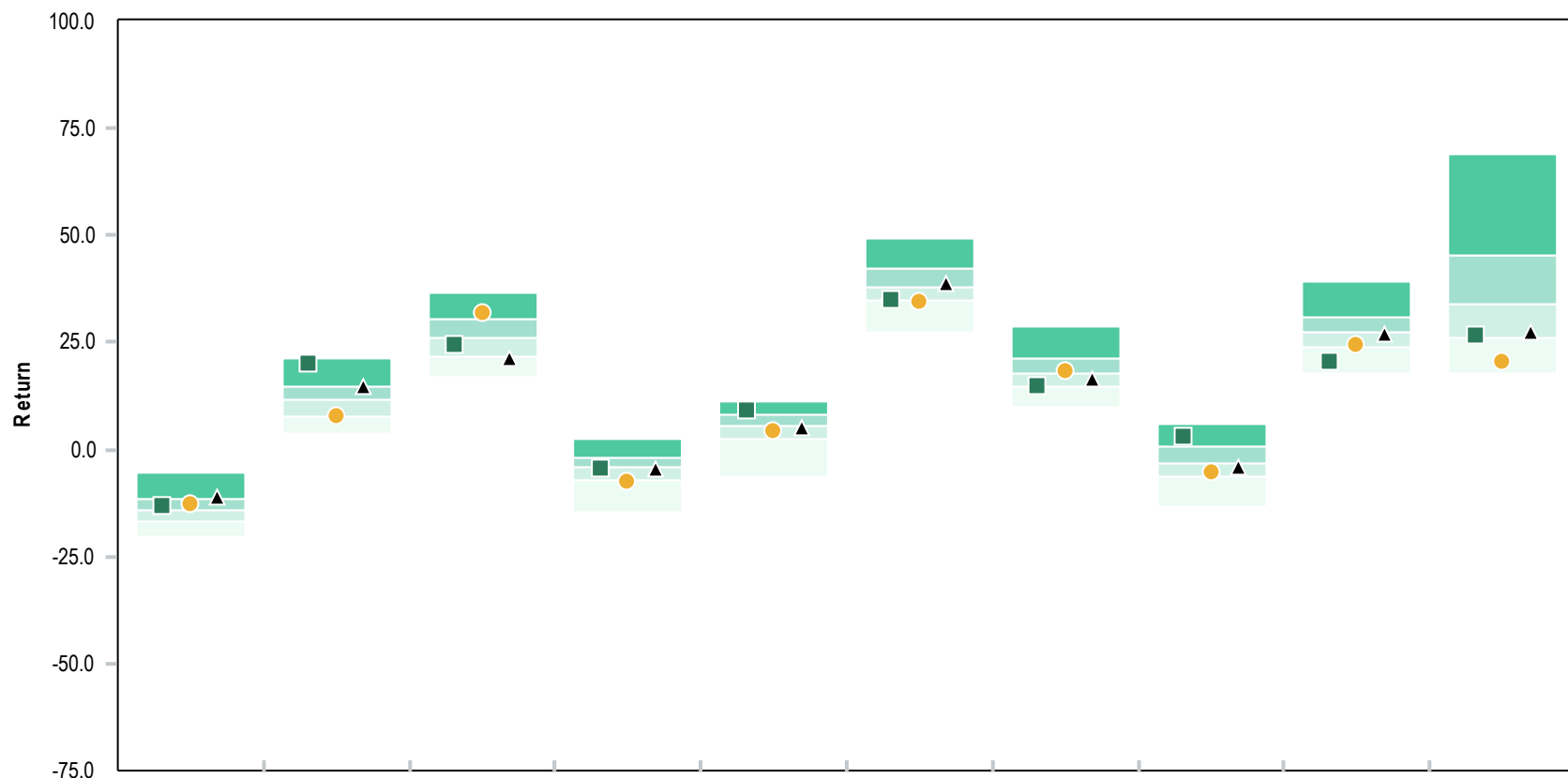
5th Percentile	11.48	33.78	33.78	12.41	11.71	14.24	14.57
1st Quartile	9.22	27.35	27.35	7.94	8.80	12.29	12.84
Median	7.96	25.07	25.07	5.48	7.66	11.49	12.08
3rd Quartile	6.53	21.97	21.97	4.39	6.42	10.28	11.31
95th Percentile	4.53	16.18	16.18	1.39	4.16	7.25	8.80

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Small Cap Value Equity (SA+CF)

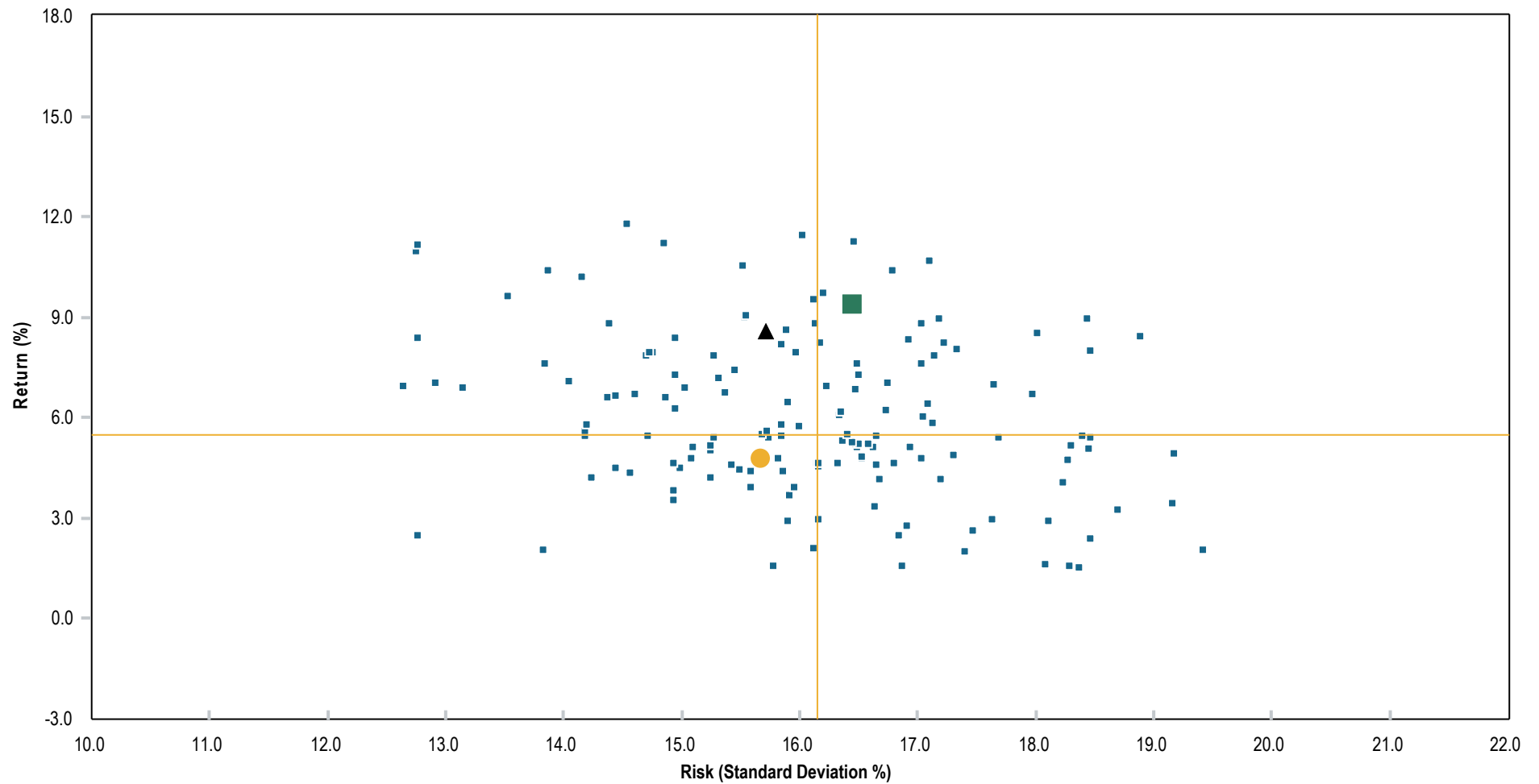
As of December 31, 2019



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Earnest Partners	-13.38 (40)	20.01 (7)	24.39 (61)	-4.51 (54)	8.89 (14)	34.88 (75)	14.90 (74)	2.76 (12)	20.45 (90)	26.39 (74)
● Russell 2000 Value Index	-12.86 (36)	7.84 (75)	31.74 (16)	-7.47 (78)	4.22 (65)	34.52 (76)	18.05 (47)	-5.50 (69)	24.50 (71)	20.58 (87)
▲ Russell 2000 Index	-11.01 (23)	14.65 (25)	21.31 (78)	-4.41 (52)	4.89 (58)	38.82 (47)	16.35 (61)	-4.18 (61)	26.85 (55)	27.17 (71)

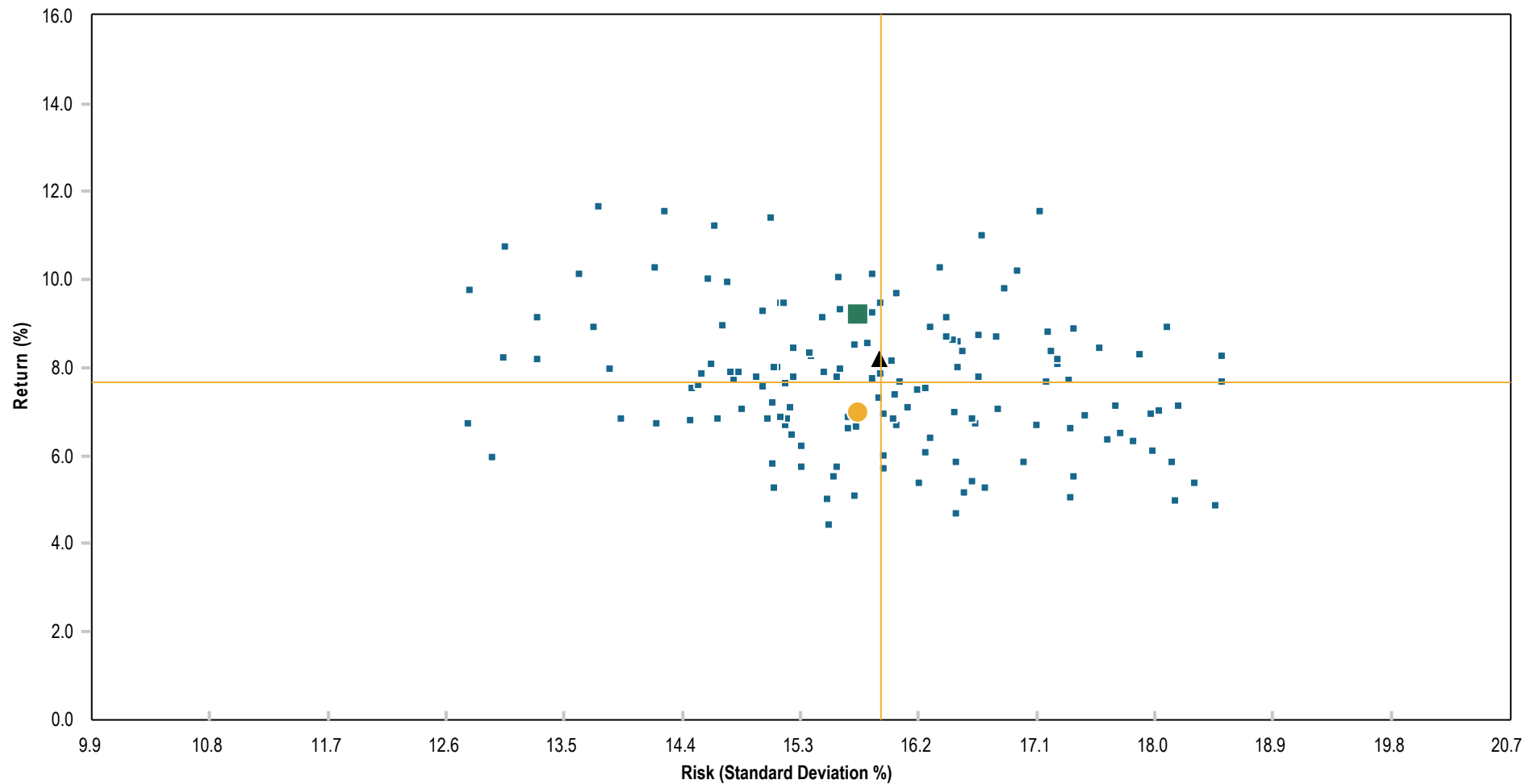
5th Percentile	-5.53	21.37	36.55	2.31	11.25	49.31	28.62	6.11	39.01	68.77
1st Quartile	-11.61	14.59	30.27	-1.84	7.94	42.31	21.19	0.71	31.06	45.11
Median	-14.30	11.58	26.11	-4.30	5.71	38.09	17.56	-3.17	27.52	34.03
3rd Quartile	-16.95	7.77	21.57	-6.98	2.26	34.61	14.71	-6.40	23.72	25.90
95th Percentile	-20.39	3.57	16.66	-14.61	-6.21	27.38	10.00	-13.10	17.67	17.54

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Earnest Partners	9.35	16.45
● Russell 2000 Value Index	4.77	15.68
▲ Russell 2000 Index	8.59	15.71
— Median	5.48	16.14

Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Earnest Partners	9.21	15.74
● Russell 2000 Value Index	6.99	15.74
▲ Russell 2000 Index	8.23	15.90
— Median	7.66	15.91

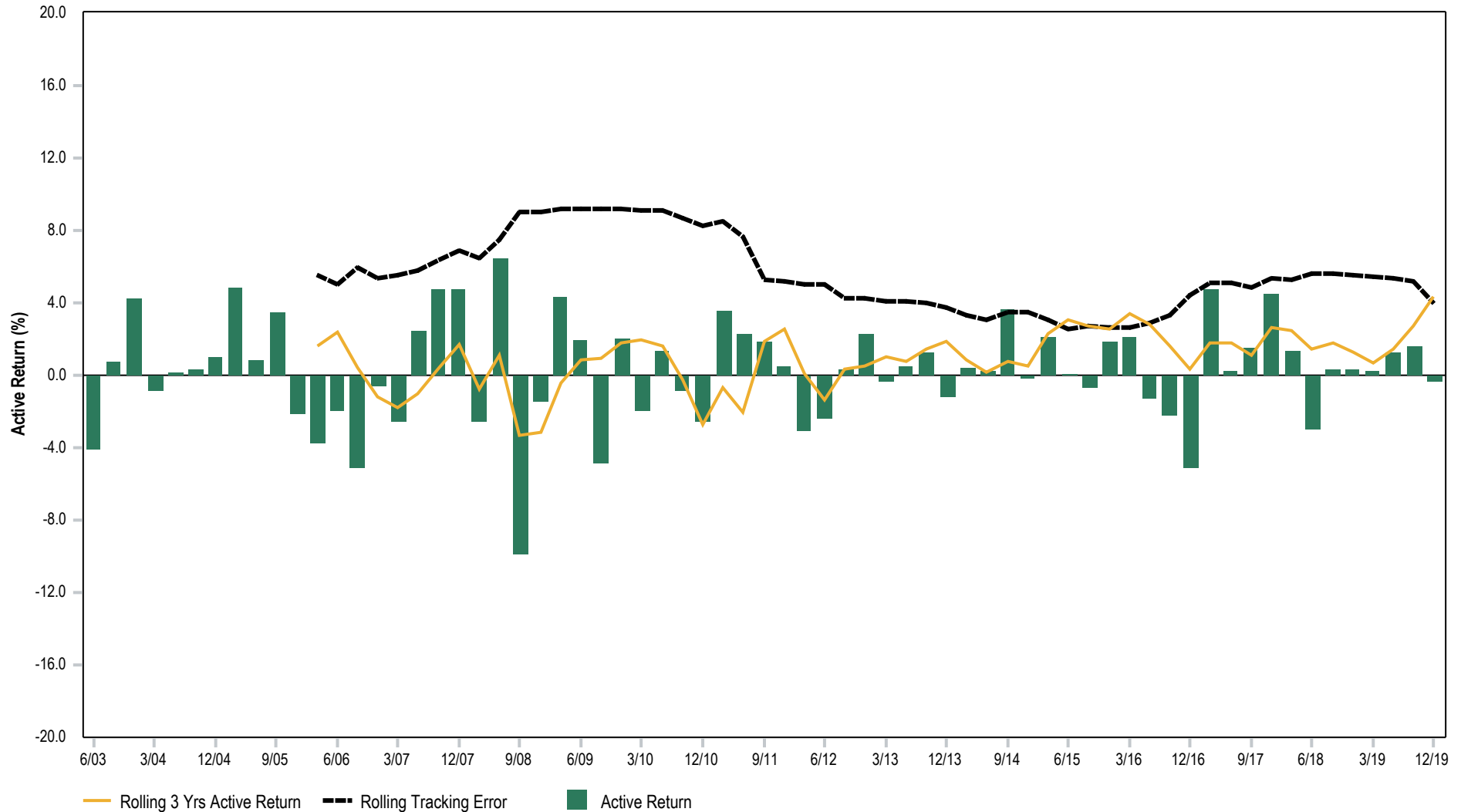
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Earnest Partners	8.13	25.79	25.79	9.35	9.21	12.50	12.49	-13.38	20.01	24.39	-4.51
Russell 2000 Value Index	8.49	22.39	22.39	4.77	6.99	10.13	10.56	-12.86	7.84	31.74	-7.47
Difference	-0.36	3.40	3.40	4.58	2.22	2.37	1.93	-0.52	12.17	-7.35	2.96



Buy-and-Hold Portfolio 8.01
 Portfolio Trading 0.12
 Actual Return 8.13
 Benchmark Return 8.49
 Actual Active Return -0.36

Stock Selection -1.77
 Sector Selection 1.97
 Interaction -0.62
 Total Selection -0.43

Portfolio Trading 0.12
 Benchmark Trading 0.06
 Active Trading Impact 0.06

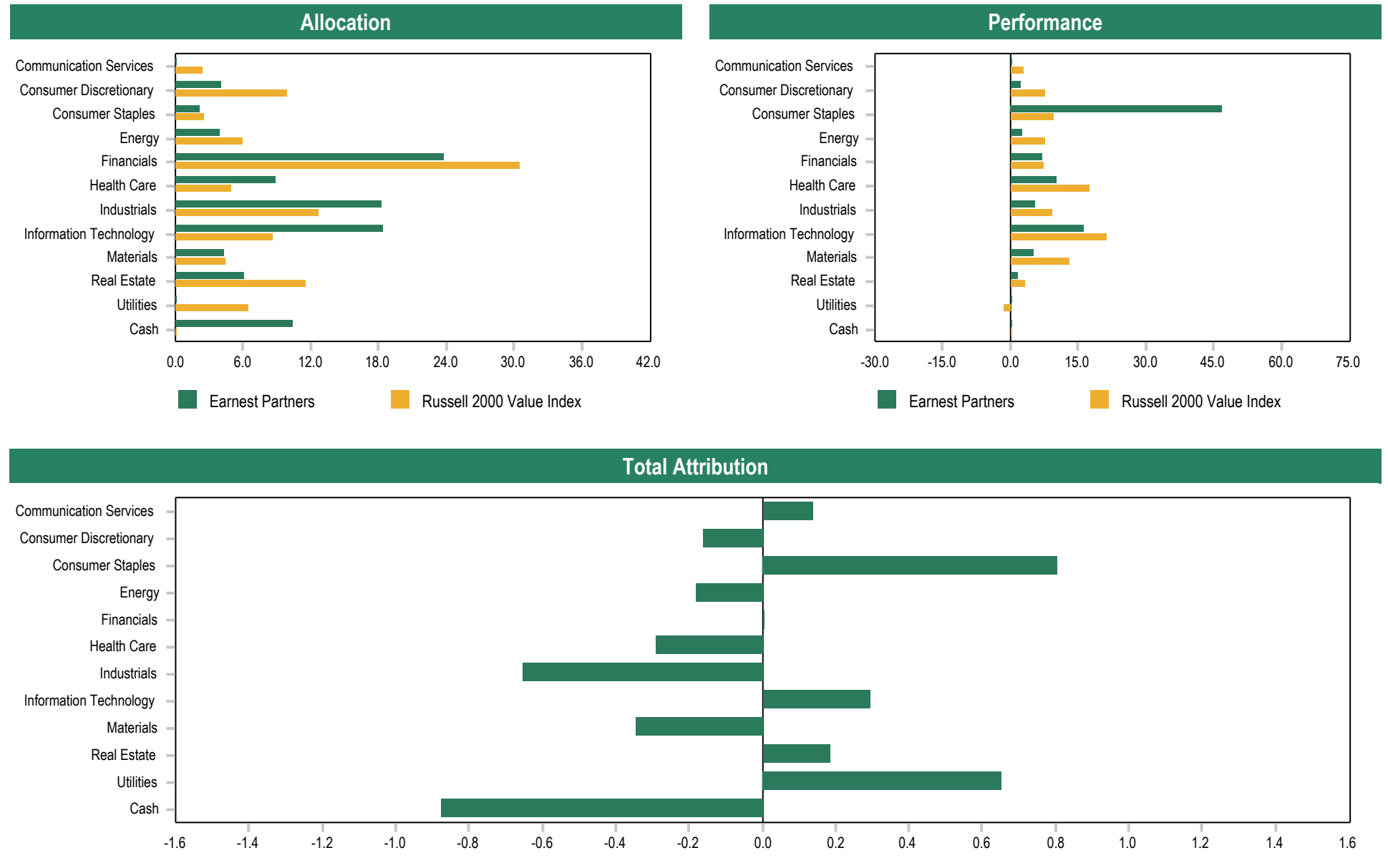
Buy & Hold Active Return -0.36

	Allocation — 10/01/2019		Performance — 1 Quarter Ending December 31, 2019		Attribution			Total
	Portfolio	Benchmark	Portfolio	Benchmark	Stock	Sector	Interaction	
Communication Services	0.00	2.43	0.00	2.80	0.00	0.14	0.00	0.14
Consumer Discretionary	4.02	9.90	2.36	7.61	-0.52	0.05	0.31	-0.16
Consumer Staples	2.17	2.57	46.79	9.44	0.96	0.00	-0.15	0.81
Energy	3.89	5.96	2.65	7.66	-0.30	0.02	0.10	-0.18
Financials	23.77	30.49	6.92	7.24	-0.10	0.08	0.02	0.00
Health Care	8.82	4.90	10.17	17.49	-0.36	0.36	-0.29	-0.29
Industrials	18.23	12.63	5.41	9.23	-0.48	0.04	-0.21	-0.65
Information Technology	18.29	8.63	16.07	21.20	-0.44	1.23	-0.50	0.30
Materials	4.36	4.48	5.21	13.00	-0.35	-0.01	0.01	-0.35
Real Estate	6.05	11.54	1.67	3.29	-0.19	0.28	0.09	0.18
Utilities	0.00	6.48	0.00	-1.65	0.00	0.65	0.00	0.65
Cash	10.39	0.00	0.00	0.00	0.00	-0.88	0.00	-0.88
Total	100.00	100.00	8.01	8.43	-1.77	1.97	-0.62	-0.43

Bristol County Retirement System

Buy and Hold Sector Attribution Graph

1 Quarter Ending December 31, 2019



Bristol County Retirement System

Buy and Hold Style Attribution

1 Quarter Ending December 31, 2019

Buy-and-Hold Portfolio 8.01
 Portfolio Trading 0.12
 Actual Return 8.13
 Benchmark Return 8.49
 Actual Active Return -0.36

Stock Selection 1.94
 Style Selection 1.26
 Interaction -3.63
 Total Selection -0.43

Portfolio Trading 0.12
 Benchmark Trading 0.06
 Active Trading Impact 0.06

Buy & Hold Active Return -0.36

	Allocation-10/01/2019		Performance-1 Quarter Ending December 31, 2019		Stock	Attribution		
	Portfolio	Benchmark	Portfolio	Benchmark		Style	Interaction	Total
Cash	10.39	0.00	0.00	0.00	0.00	-0.88	0.00	-0.88
Mid Growth	5.20	0.38	9.97	45.84	-0.13	1.80	-1.73	-0.06
Mid Neutral	15.98	3.16	6.13	7.70	-0.05	-0.09	-0.20	-0.34
Mid Value	10.64	11.12	4.12	4.48	-0.04	0.02	0.00	-0.02
Small Growth	5.96	0.68	-2.51	16.96	-0.13	0.45	-1.03	-0.71
Small Neutral	13.94	7.32	13.48	9.06	0.32	0.04	0.29	0.66
Small Value	37.89	74.29	11.46	8.80	1.97	-0.13	-0.97	0.87
Unclassified	0.00	3.06	0.00	6.69	0.00	0.05	0.00	0.05
Total	100.00	100.00	8.01	8.43	1.94	1.26	-3.63	-0.43

Bristol County Retirement System

Buy and Hold Style Attribution Graph

1 Quarter Ending December 31, 2019



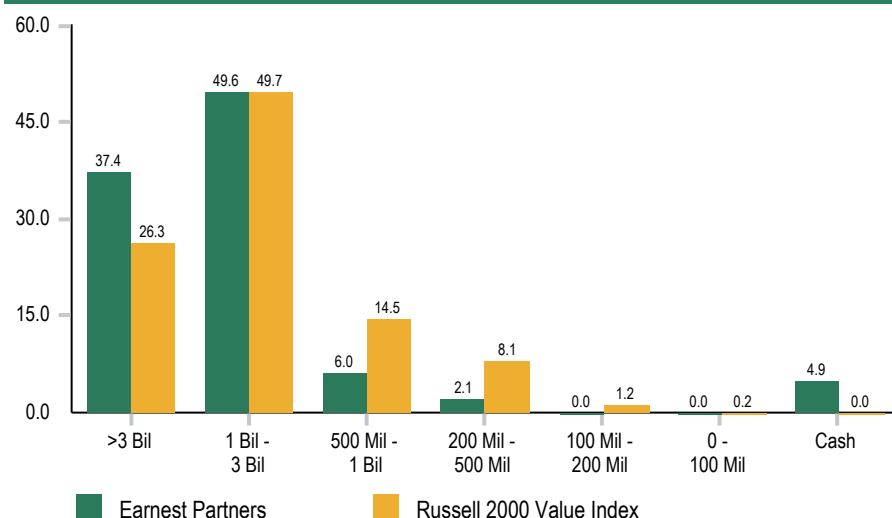
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Franklin Electric Co Inc	3.89	0.01	3.88	20.21
Casella Waste Systems Inc	3.49	0.00	3.49	7.20
Hexcel Corp	3.06	0.00	3.06	-10.54
Cabot Microelectronics Corp	2.93	0.00	2.93	2.83
Emergent BioSolutions Inc	2.80	0.00	2.80	3.19
Catalent Inc	2.78	0.00	2.78	18.13
Steelcase Inc.	2.64	0.13	2.51	11.98
Darling Ingredients Inc	2.60	0.45	2.15	46.79
Monolithic Power Systems Inc	2.55	0.00	2.55	14.64
Entegris Inc	2.53	0.00	2.53	6.61
% of Portfolio	29.27	0.59	28.68	

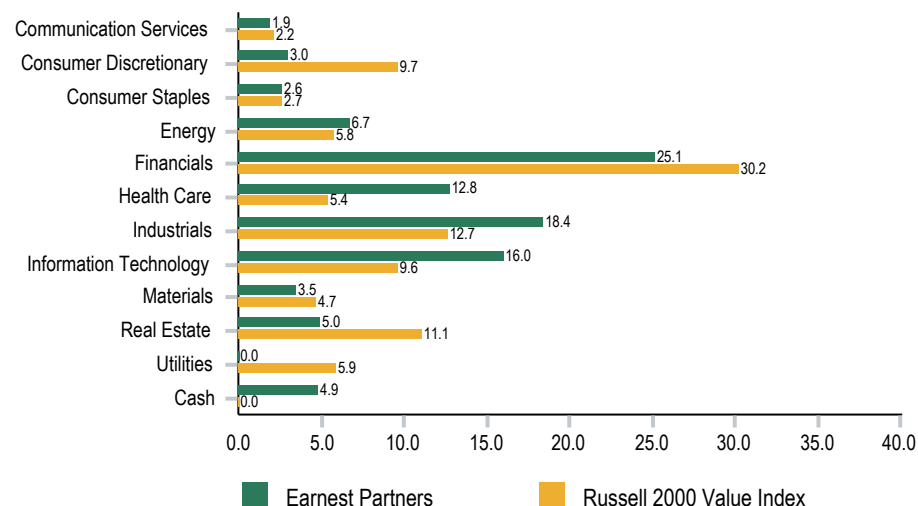
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	3,372,725,397	2,197,648,727
Median Mkt. Cap (\$)	2,526,741,160	718,408,503
Price/Earnings ratio	21.53	15.28
Price/Book ratio	2.32	1.65
5 Yr. EPS Growth Rate (%)	12.30	9.16
Current Yield (%)	1.43	2.11
Beta (5 Years, Monthly)	0.96	1.00
Number of Stocks	53	1,402

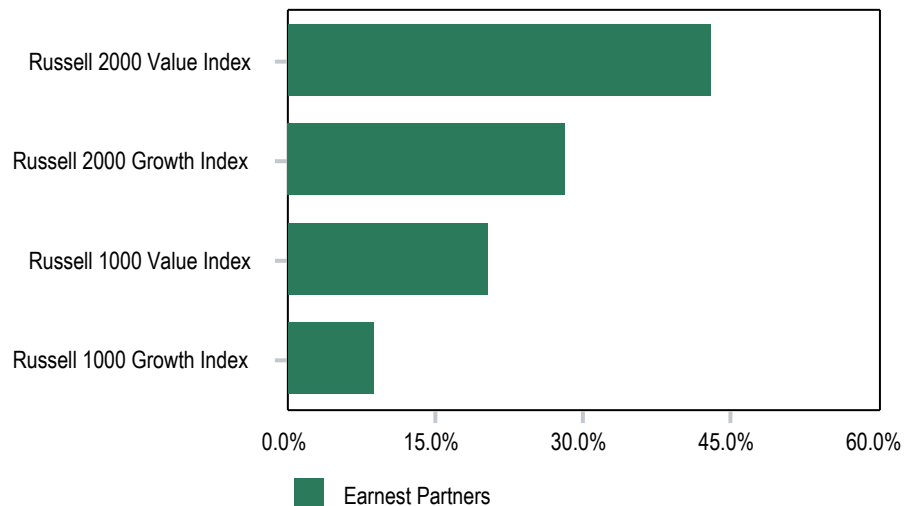
Distribution of Market Capitalization (%)



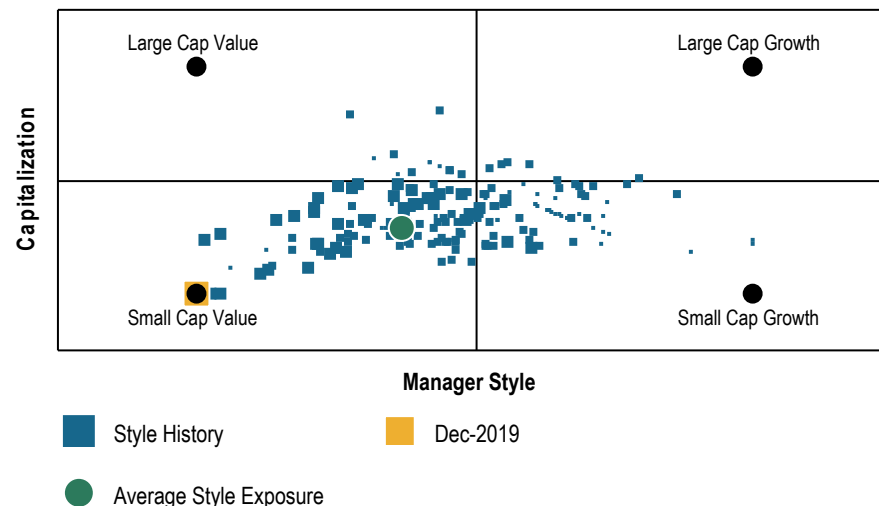
Sector Weights (%)



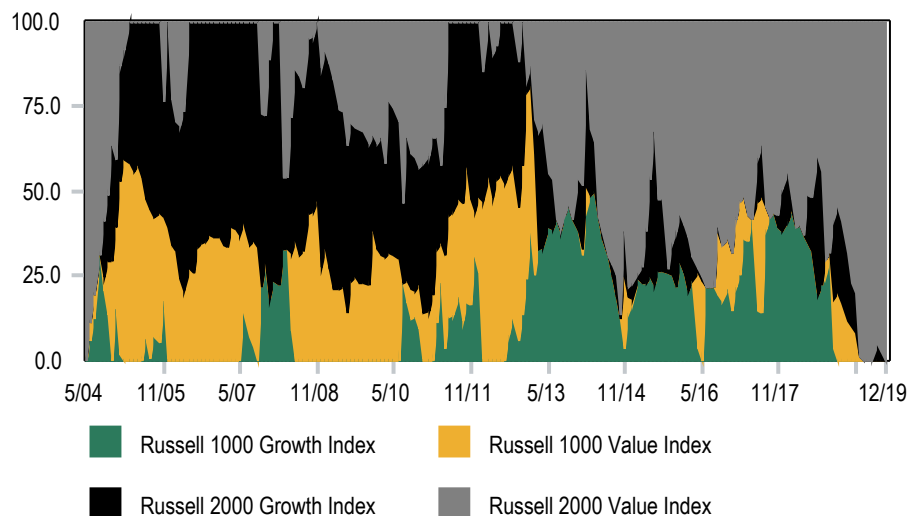
Investment Style Exposure



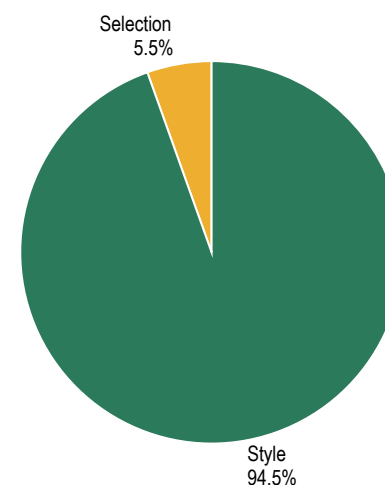
Style Map(ppp)



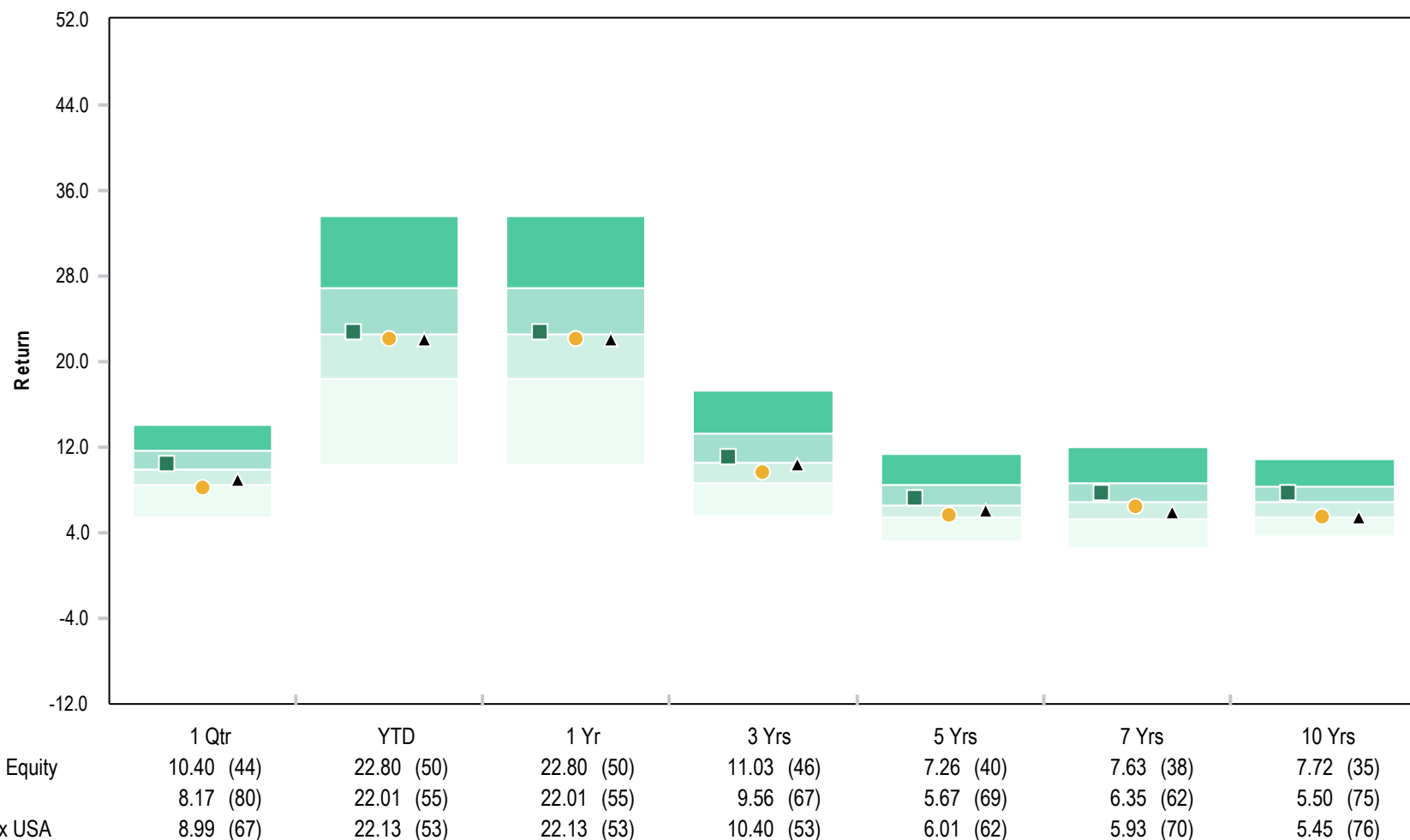
Style History(ppp)



Return Variance

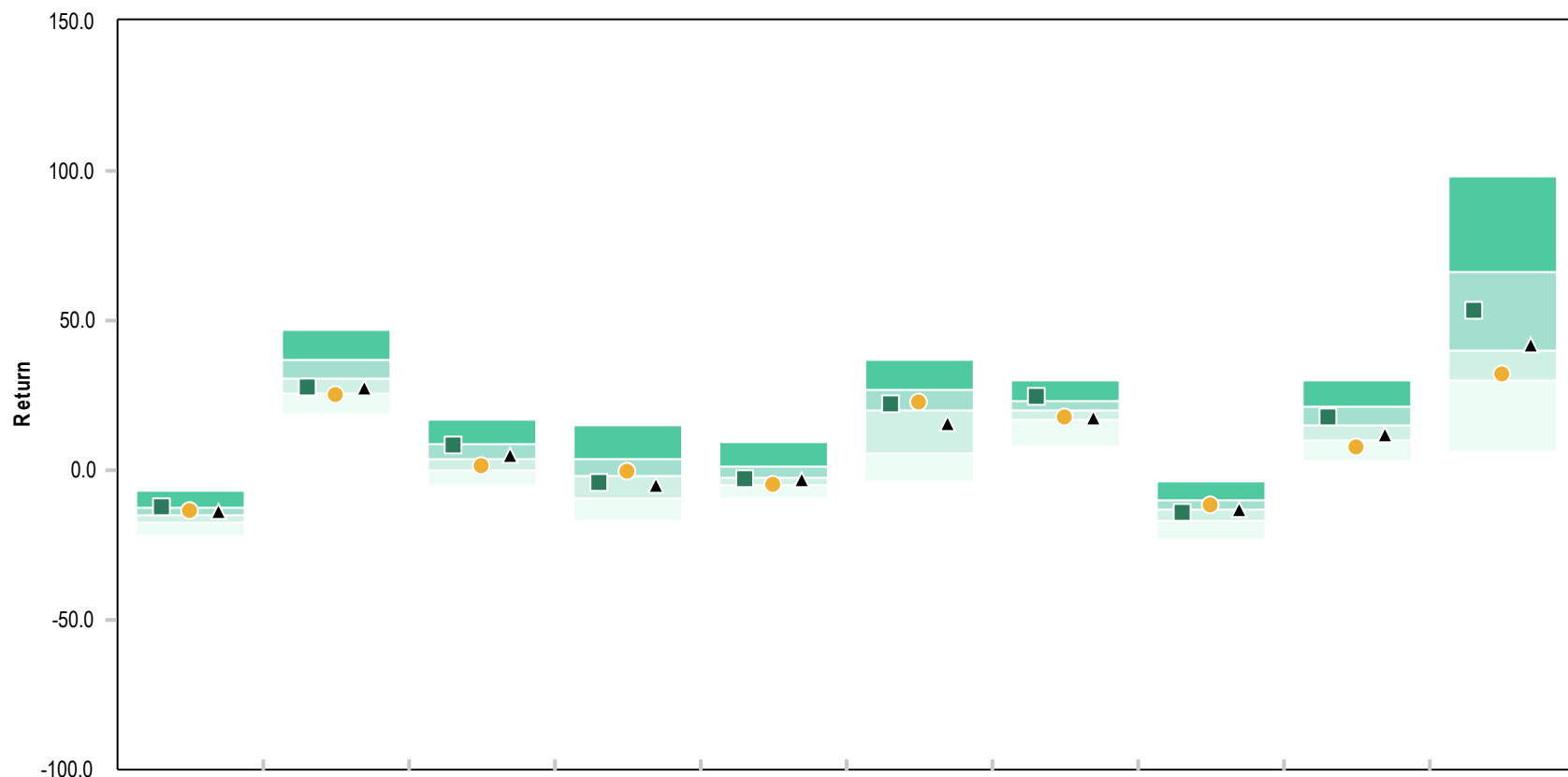


International Equity



5th Percentile	14.12	33.56	33.56	17.31	11.32	12.03	10.86
1st Quartile	11.74	26.94	26.94	13.24	8.45	8.64	8.28
Median	9.99	22.55	22.55	10.64	6.60	6.94	6.84
3rd Quartile	8.51	18.43	18.43	8.69	5.41	5.32	5.50
95th Percentile	5.46	10.48	10.48	5.61	3.27	2.53	3.71

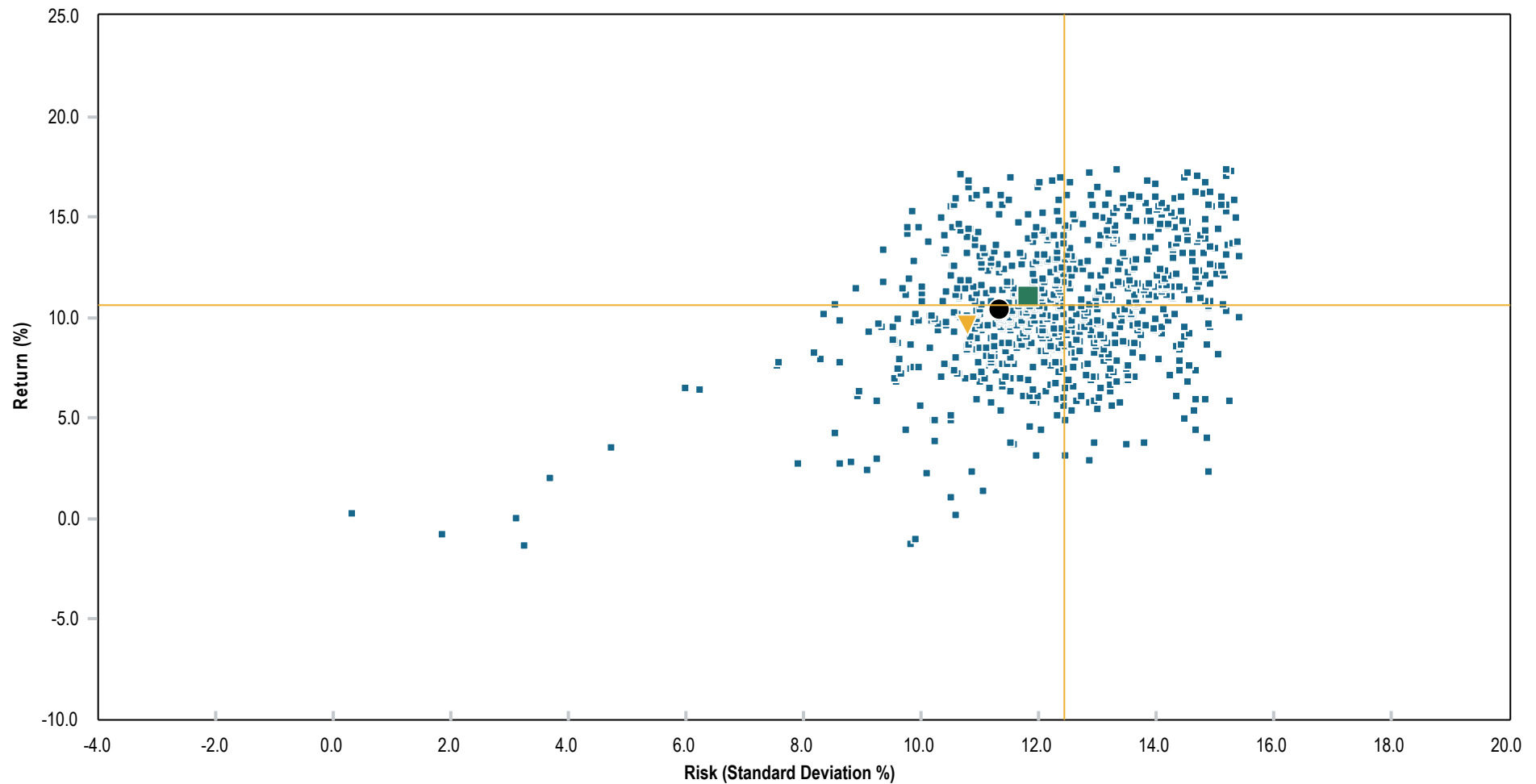
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Total International Equity	-12.74 (28)	27.74 (65)	8.40 (28)	-4.29 (62)	-3.24 (57)	21.81 (44)	24.35 (18)	-14.17 (59)	17.77 (39)	53.39 (32)
● MSCI EAFE (net)	-13.79 (38)	25.03 (80)	1.00 (70)	-0.81 (47)	-4.90 (74)	22.78 (41)	17.32 (70)	-12.14 (43)	7.75 (85)	31.78 (71)
▲ MSCI AC World ex USA	-13.78 (38)	27.77 (65)	5.01 (44)	-5.25 (65)	-3.44 (59)	15.78 (61)	17.39 (70)	-13.33 (52)	11.60 (67)	42.14 (46)

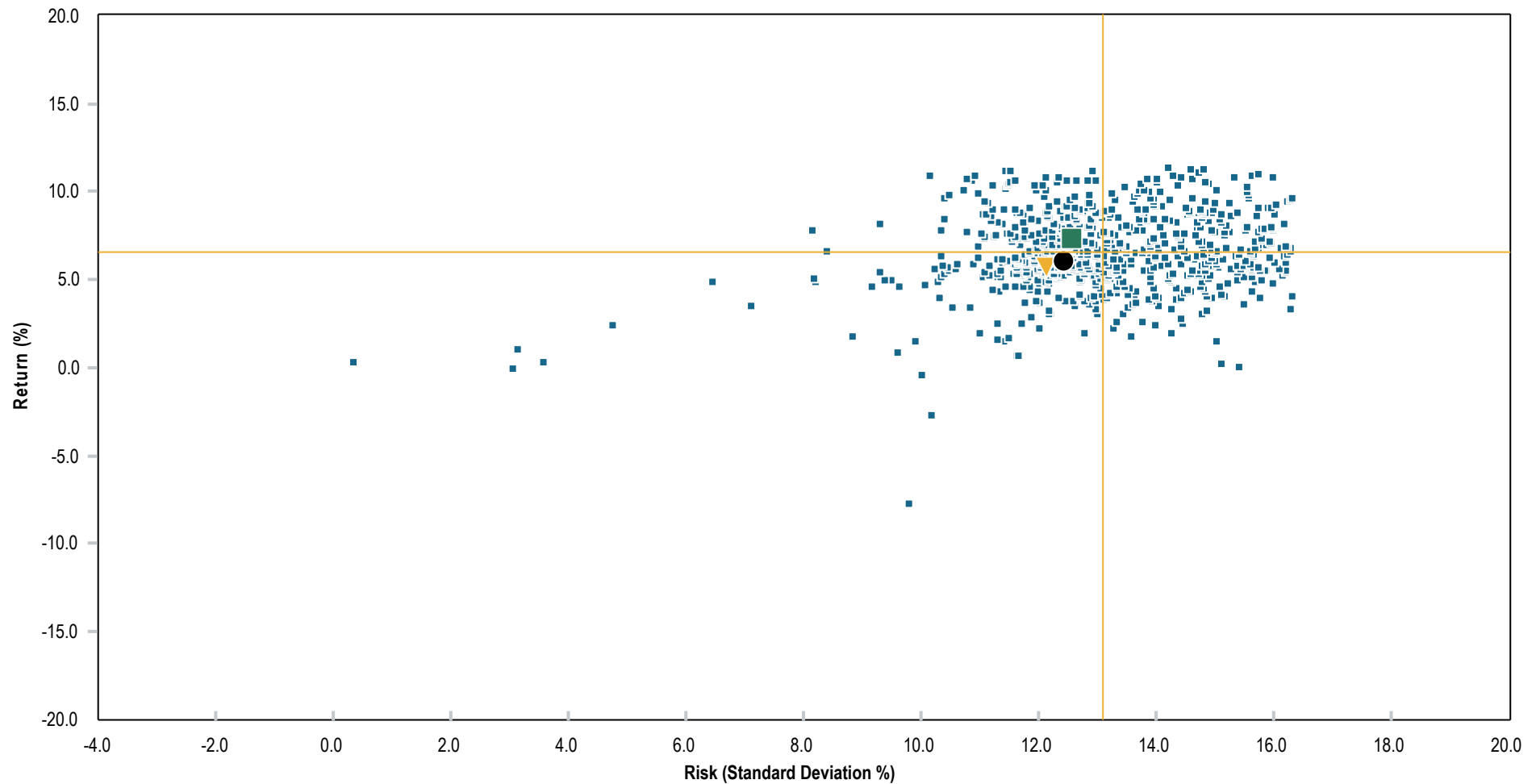
5th Percentile	-6.70	47.09	16.76	14.81	9.40	37.05	30.07	-3.54	29.74	98.34
1st Quartile	-12.39	36.95	8.97	3.52	0.99	26.59	22.99	-10.07	21.29	66.17
Median	-14.81	30.57	3.99	-1.72	-2.52	19.85	19.82	-13.12	15.19	39.86
3rd Quartile	-17.44	25.65	0.23	-9.28	-5.02	5.33	16.75	-16.83	9.80	30.02
95th Percentile	-21.86	18.71	-5.20	-16.92	-9.39	-3.99	8.23	-23.12	2.90	6.42

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total International Equity	11.03	11.83
▼ MSCI EAFE (net)	9.56	10.81
● MSCI AC World ex USA	10.40	11.33
— Median	10.64	12.45

Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total International Equity	7.26	12.59
▼ MSCI EAFE (net)	5.67	12.13
● MSCI AC World ex USA	6.01	12.43
— Median	6.60	13.09

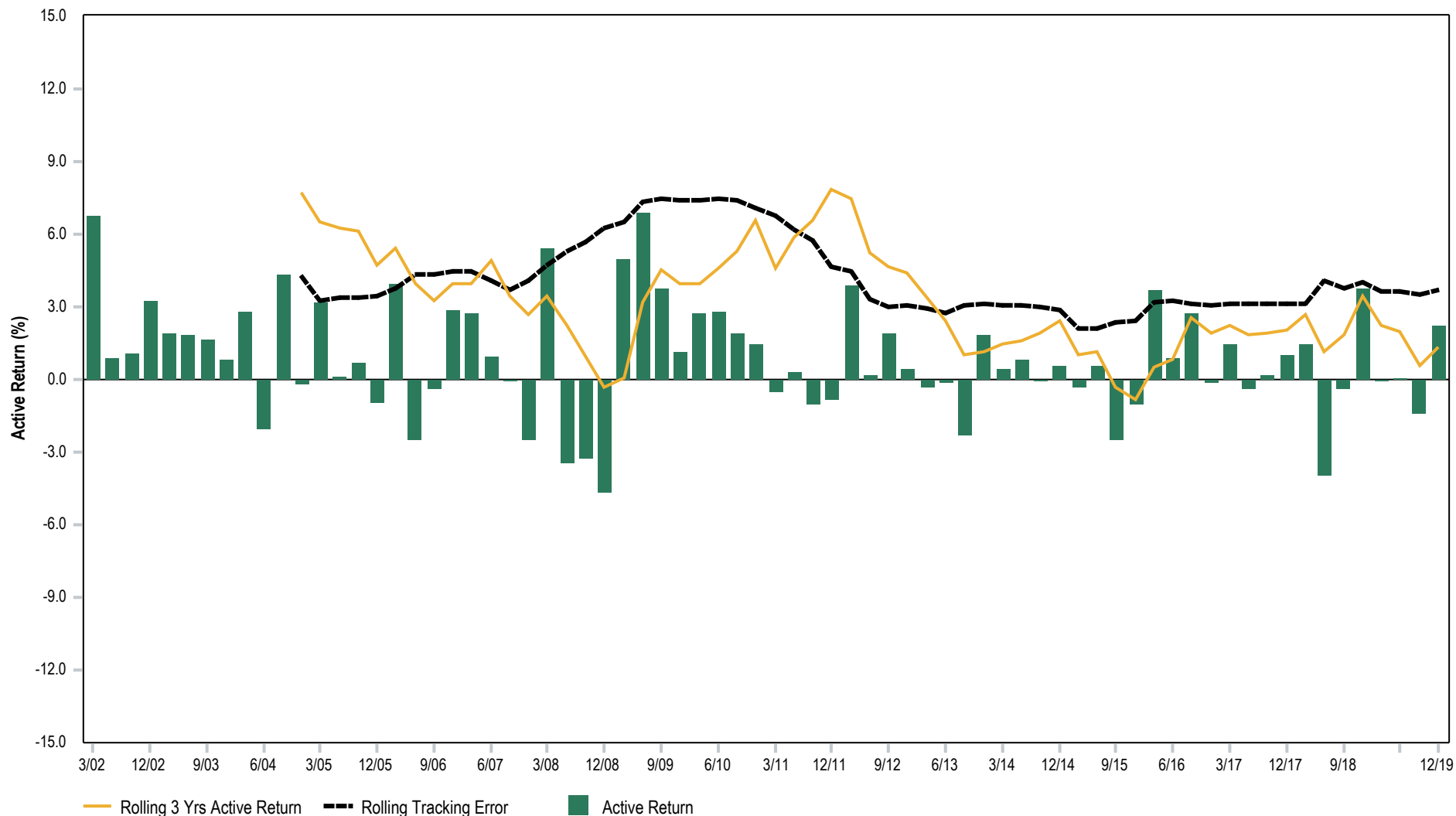
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Total International Equity	10.40	22.80	22.80	11.03	7.26	7.63	7.72	-12.74	27.74	8.40	-4.29
MSCI EAFE (net)	8.17	22.01	22.01	9.56	5.67	6.35	5.50	-13.79	25.03	1.00	-0.81
Difference	2.23	0.79	0.79	1.47	1.59	1.28	2.22	1.05	2.71	7.40	-3.48



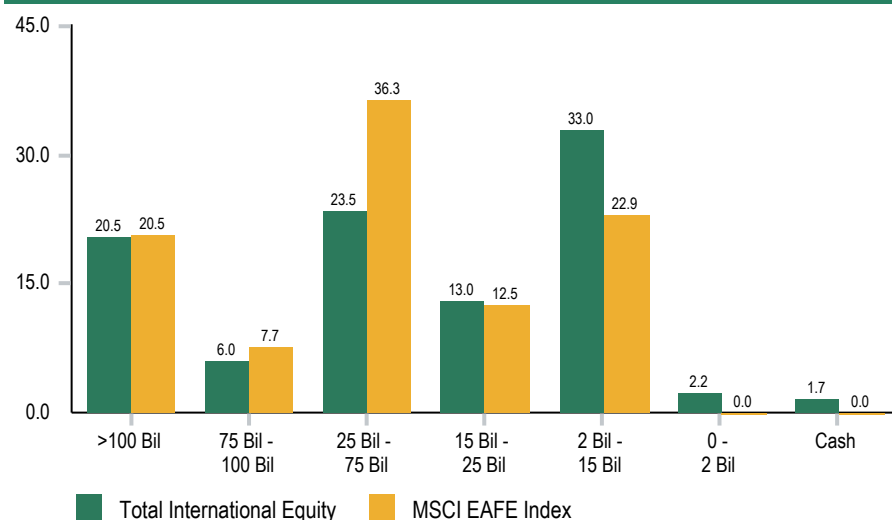
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Taiwan Semiconductor Manuf	2.03	0.00	2.03	27.33
Samsung Electronics Co Ltd	1.97	0.00	1.97	18.85
Keyence Corp	1.42	0.43	0.99	14.44
Samsung Electronics Co Ltd	1.38	0.00	1.38	20.26
Tencent Holdings LTD	1.31	0.00	1.31	14.50
Roche Holding AG	1.30	1.53	-0.23	11.37
China Construction Bank Corp	1.19	0.00	1.19	13.29
Nestle SA, Cham Und Vevey	1.19	2.17	-0.98	-0.31
SK Hynix Inc	1.12	0.00	1.12	20.71
Sberbank of Russia OJSC	1.00	0.00	1.00	16.94
% of Portfolio	13.91	4.13	9.78	

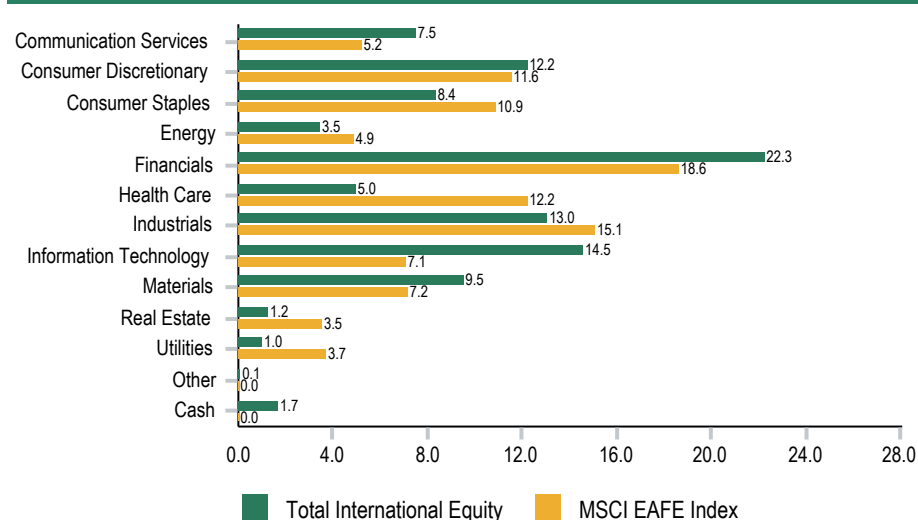
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	61,704,569,412	66,589,840,527
Median Mkt. Cap (\$)	6,856,805,436	11,161,860,457
Price/Earnings ratio	14.99	17.24
Price/Book ratio	2.49	2.34
5 Yr. EPS Growth Rate (%)	8.43	6.00
Current Yield (%)	3.10	3.38
Beta (5 Years, Monthly)	0.99	1.00
Number of Stocks	893	918

Distribution of Market Capitalization (%)



Sector Weights (%)



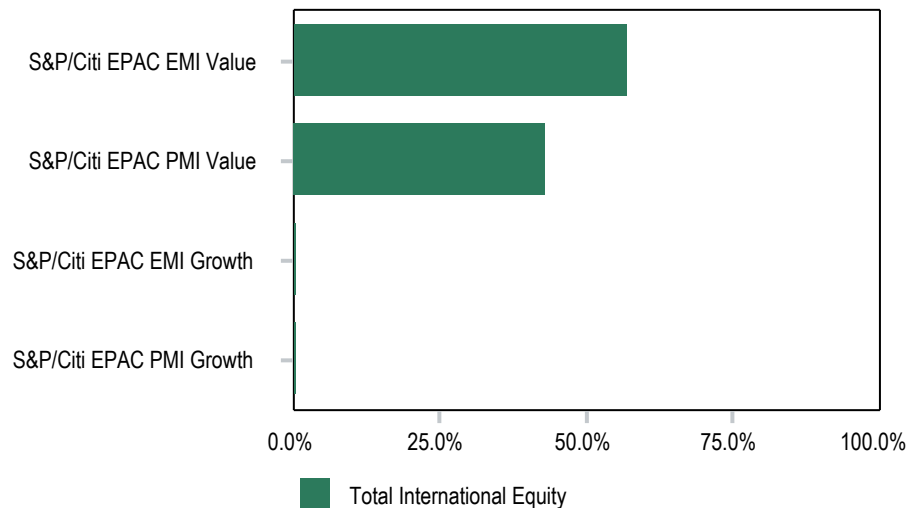
Ten Best Performers

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Sibanye-Stillwater Limited	0.01	0.00	0.01	83.89
AAC Technologies Holdings Inc	0.28	0.00	0.28	64.94
Lasertec Corp	0.03	0.00	0.03	64.05
Northam Platinum (PTY) Ltd	0.02	0.00	0.02	61.12
Cnhc Jinan Truck Appliance Co Ltd	0.01	0.00	0.01	57.66
Sanken Electric Co Ltd	0.01	0.00	0.01	56.73
Evolution Gaming Group AB	0.01	0.00	0.01	53.21
Dunelm Group PLC	0.01	0.00	0.01	52.39
Even Construtora E Incorporadora	0.01	0.00	0.01	51.21
Surgutneftegas PJSC	0.02	0.00	0.02	50.33
% of Portfolio	0.41	0.00	0.41	

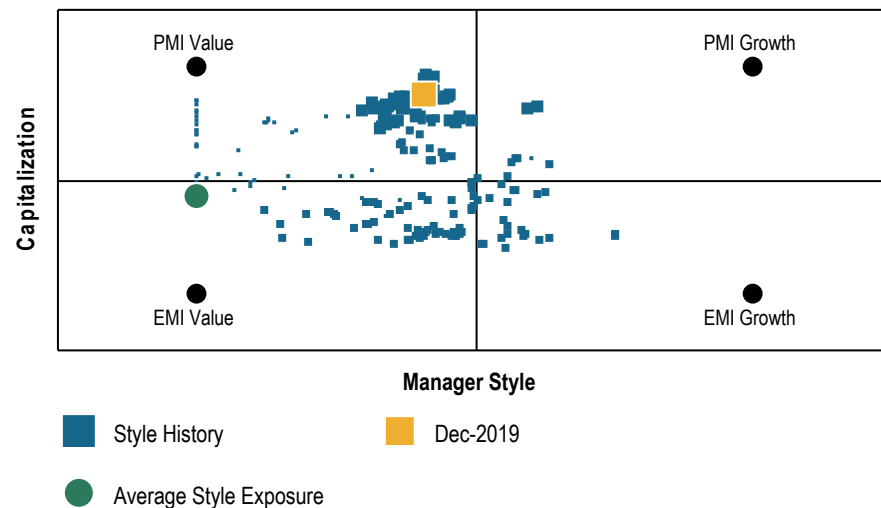
Ten Worst Performers

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Trevi-Finanziaria Industriale SPA, Cesena (FO)	0.01	0.00	0.01	-39.76
Jumbo Interactive Ltd	0.00	0.00	0.00	-35.80
Round One Corp	0.01	0.00	0.01	-34.84
PPC Ltd	0.01	0.00	0.01	-32.46
Qudian Inc	0.00	0.00	0.00	-31.64
PagSeguro Digital Ltd	0.01	0.00	0.01	-26.24
Wirecard AG	0.01	0.10	-0.09	-24.61
Suzuken Co Ltd	0.00	0.02	-0.02	-23.44
Aoyama Trading Co Ltd	0.01	0.00	0.01	-18.77
Meritz Securities Co Ltd	0.00	0.00	0.00	-18.07
% of Portfolio	0.06	0.12	-0.06	

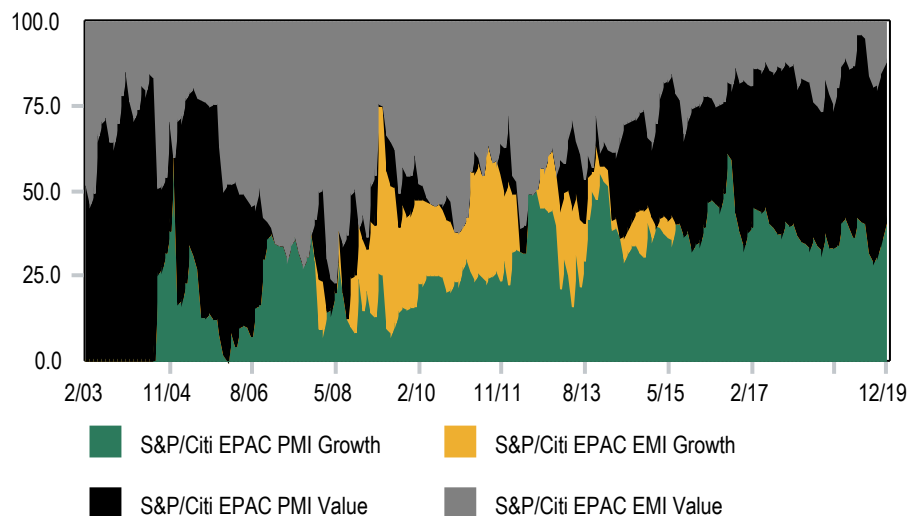
Investment Style Exposure



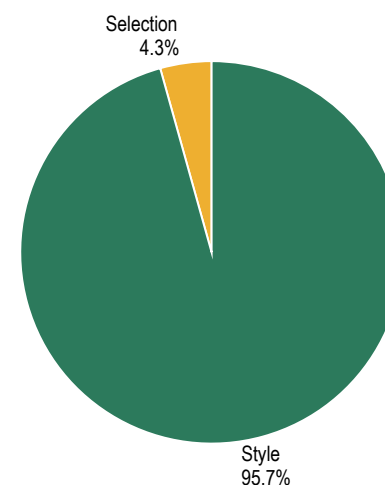
Style Map(ppp)

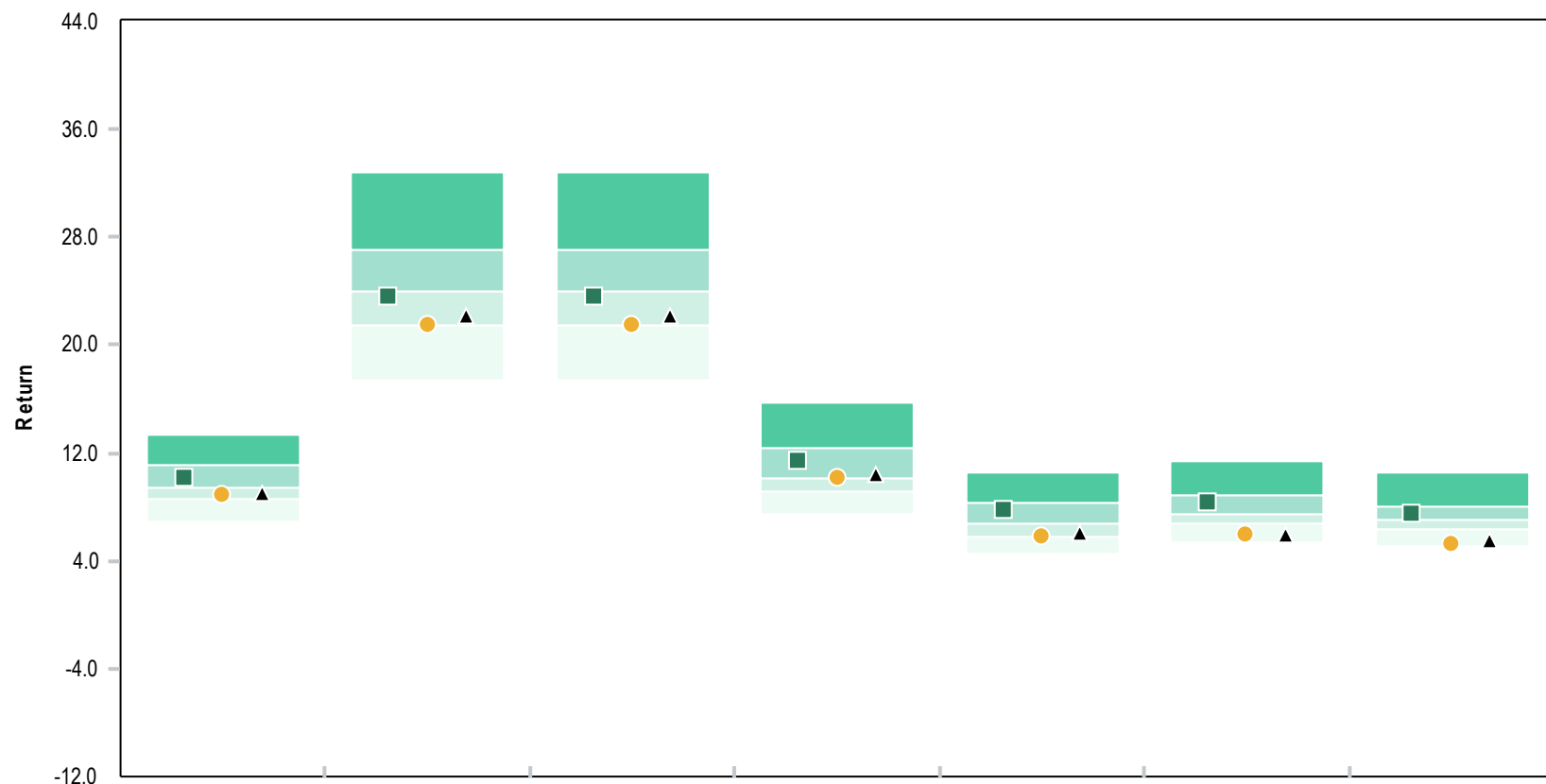


Style History(ppp)



Return Variance



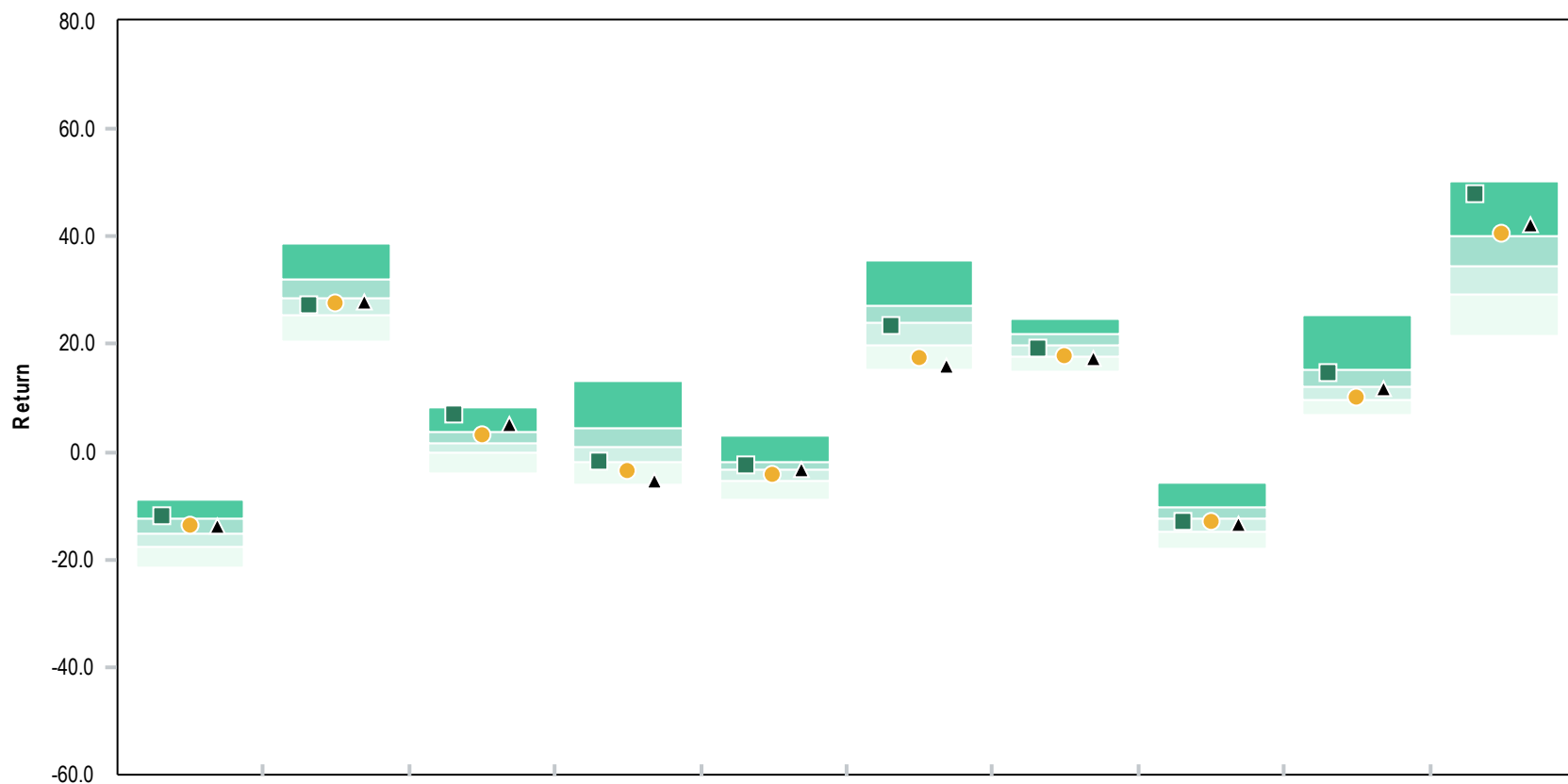


■ Arrowstreet Capital
● Arrowstreet Capital Index*
▲ MSCI AC World ex USA

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Arrowstreet Capital	10.15 (38)	23.56 (54)	23.56 (54)	11.44 (33)	7.73 (32)	8.25 (35)	7.53 (33)
Arrowstreet Capital Index*	8.92 (65)	21.42 (76)	21.42 (76)	10.08 (52)	5.81 (72)	5.87 (93)	5.28 (93)
MSCI AC World ex USA	8.99 (64)	22.13 (67)	22.13 (67)	10.40 (46)	6.01 (64)	5.93 (92)	5.45 (92)

5th Percentile	13.40	32.82	32.82	15.76	10.50	11.37	10.56
1st Quartile	11.09	27.09	27.09	12.34	8.34	8.89	8.03
Median	9.37	23.97	23.97	10.16	6.75	7.50	7.06
3rd Quartile	8.55	21.46	21.46	9.12	5.75	6.74	6.32
95th Percentile	6.96	17.42	17.42	7.41	4.59	5.31	5.05

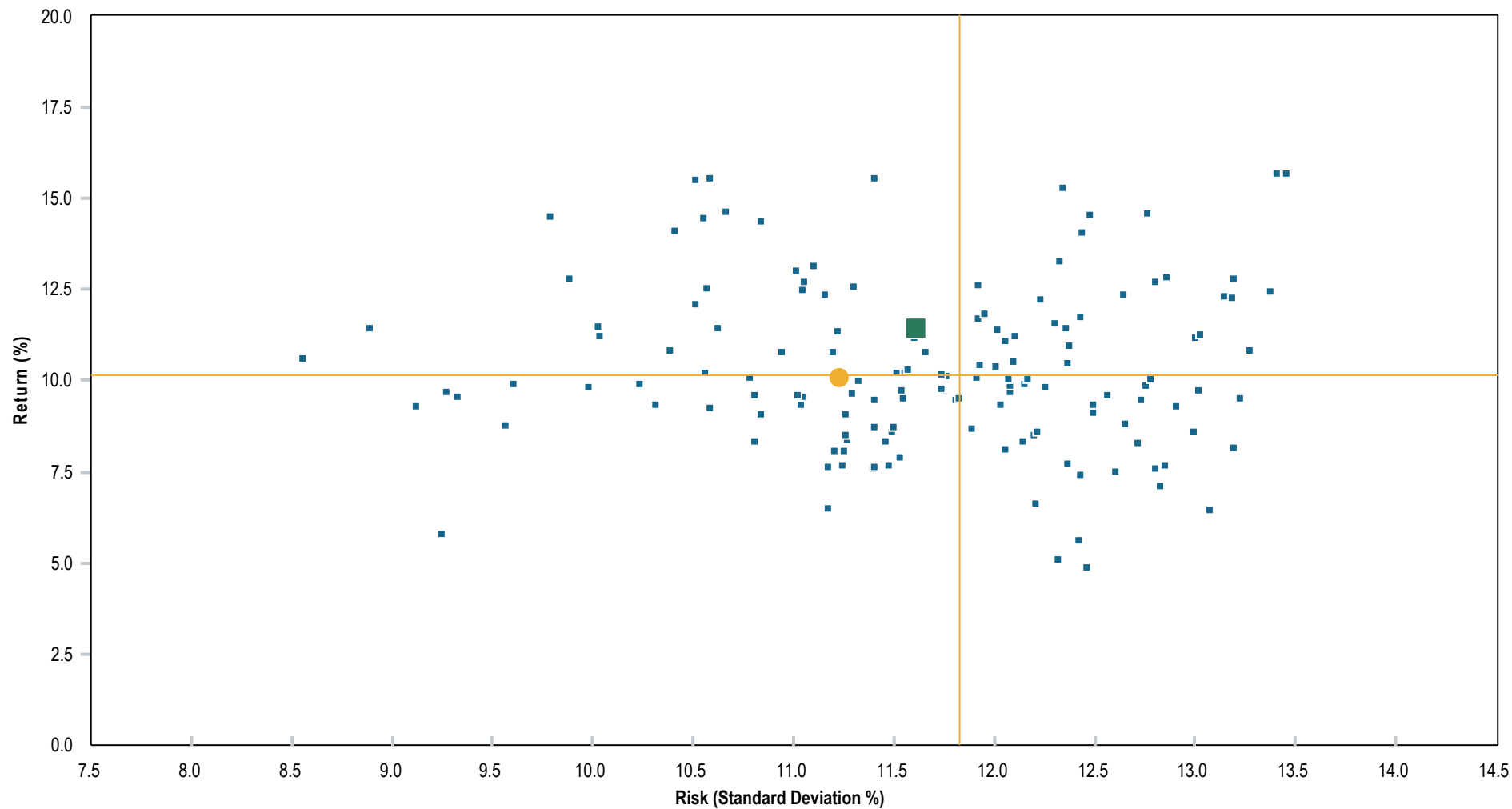
*80% MSCI EAFE/20% MSCI EME



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Arrowstreet Capital	-11.98 (20)	27.26 (57)	6.87 (10)	-1.88 (76)	-2.74 (38)	23.44 (56)	19.10 (62)	-12.96 (57)	14.39 (31)	47.80 (9)
● Arrowstreet Capital Index*	-13.84 (35)	27.52 (56)	3.15 (33)	-3.64 (88)	-4.23 (59)	17.38 (85)	17.65 (76)	-13.27 (60)	9.98 (70)	40.33 (25)
▲ MSCI AC World ex USA	-13.78 (35)	27.77 (55)	5.01 (19)	-5.25 (93)	-3.44 (51)	15.78 (94)	17.39 (78)	-13.33 (61)	11.60 (55)	42.14 (19)

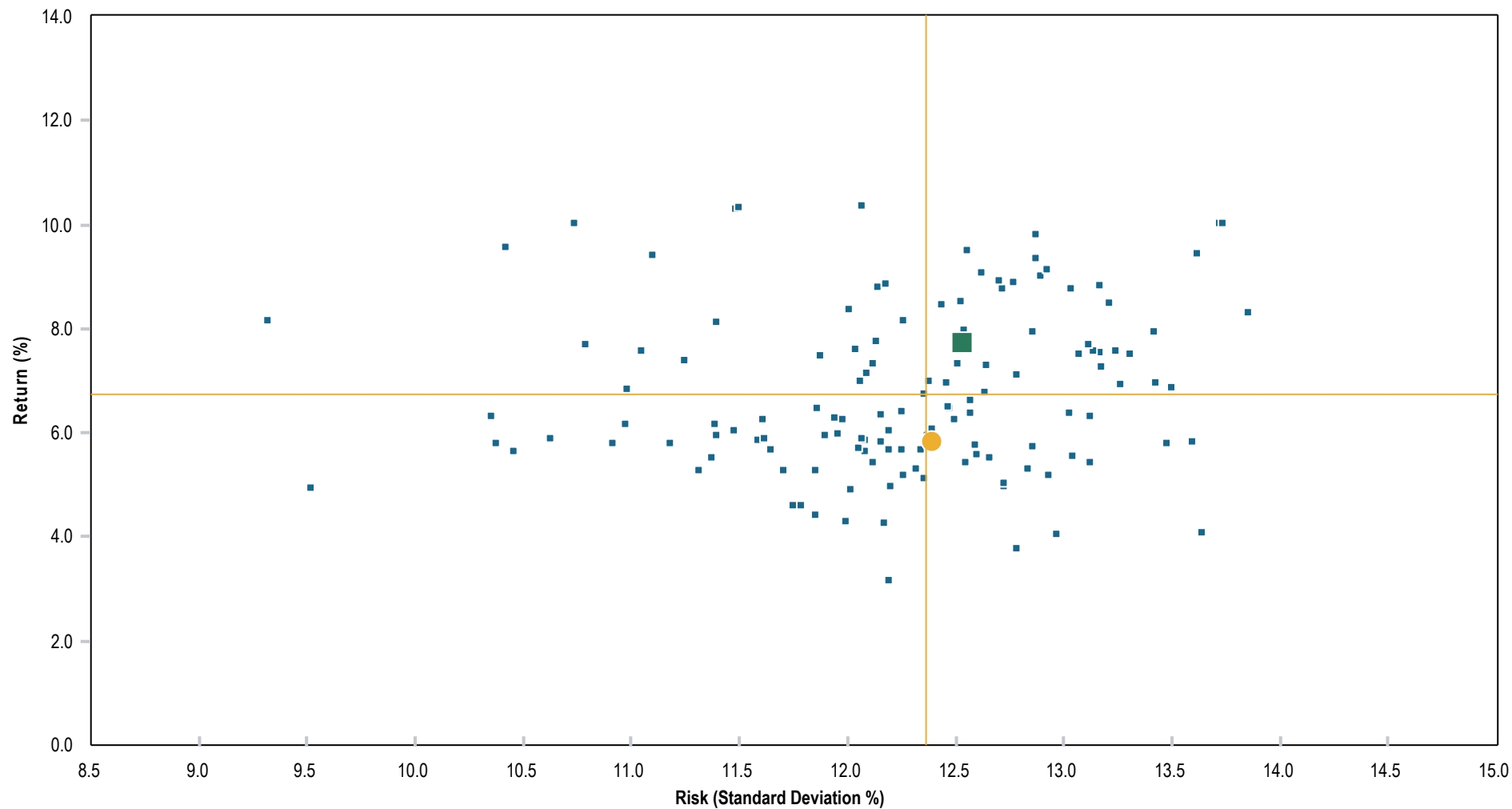
5th Percentile	-8.85	38.74	8.26	13.29	2.92	35.67	24.58	-5.62	25.49	50.08
1st Quartile	-12.42	32.17	3.79	4.56	-1.93	27.21	22.01	-10.40	15.30	40.08
Median	-15.12	28.54	1.68	1.07	-3.43	23.99	19.76	-12.41	12.06	34.43
3rd Quartile	-17.62	25.34	-0.28	-1.88	-5.25	19.78	17.67	-14.82	9.71	29.23
95th Percentile	-21.58	20.67	-3.91	-6.12	-8.98	15.24	14.94	-17.91	6.70	21.59

*80% MSCI EAFE/20% MSCI EME



	Return	Standard Deviation
■ Arrowstreet Capital	11.44	11.61
● Arrowstreet Capital Index*	10.08	11.23
— Median	10.16	11.83

*80% MSCI EAFE/20% MSCI EME.



	Return	Standard Deviation
■ Arrowstreet Capital	7.73	12.53
● Arrowstreet Capital Index*	5.81	12.39
— Median	6.75	12.36

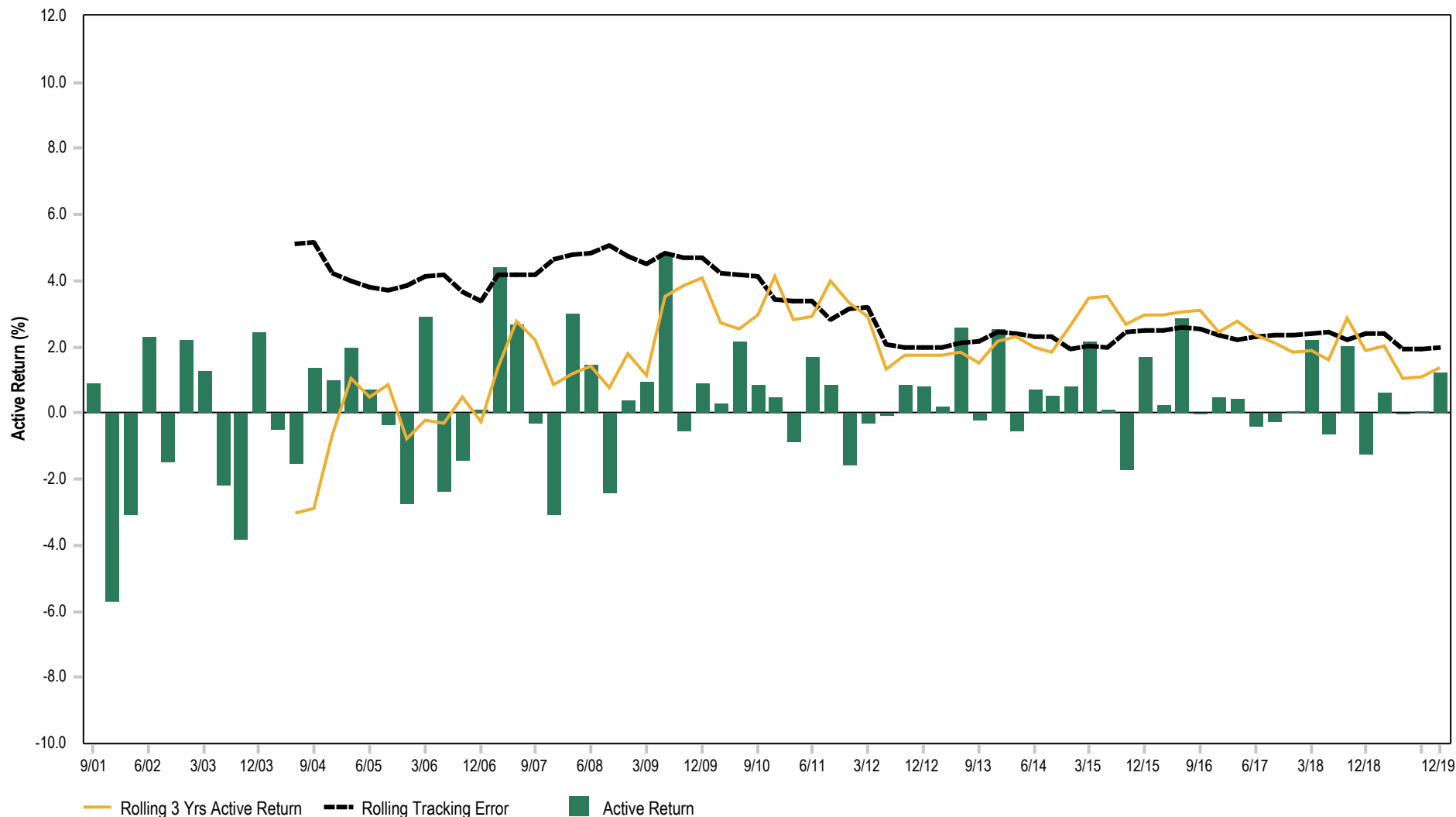
*80% MSCI EAFE/20% MSCI EME.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Arrowstreet Capital	10.15	23.56	23.56	11.44	7.73	8.25	7.53	-11.98	27.26	6.87	-1.88
Arrowstreet Capital Index*	8.92	21.42	21.42	10.08	5.81	5.87	5.28	-13.84	27.52	3.15	-3.64
Difference	1.23	2.14	2.14	1.36	1.92	2.38	2.25	1.86	-0.26	3.72	1.76



*80% MSCI EAFE (Net)/20% MSCI EMF.
Gross of Fees

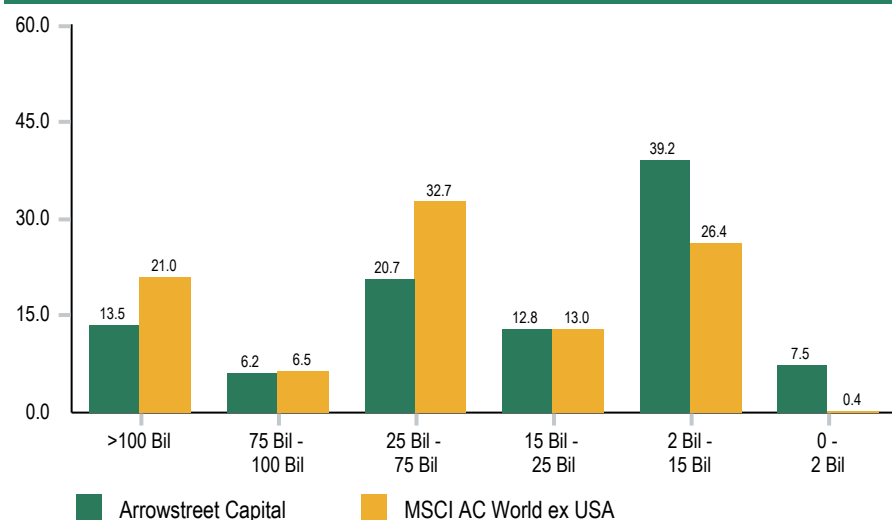
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Samsung Electronics Co Ltd	2.36	1.02	1.34	18.85
Roche Holding AG	2.17	1.01	1.16	11.37
Novartis AG	1.54	0.90	0.64	9.40
Bayer AG	1.43	0.34	1.09	15.83
BHP Group Ltd	0.94	0.36	0.58	10.40
Rio Tinto Group	0.92	0.30	0.62	13.96
Taiwan Semiconductor	0.92	1.21	-0.29	25.88
Koninklijke Philips NV	0.88	0.20	0.68	5.38
Allianz SE	0.88	0.46	0.42	5.10
Bank of China Ltd	0.87	0.15	0.72	8.83
% of Portfolio	12.91	5.95	6.96	

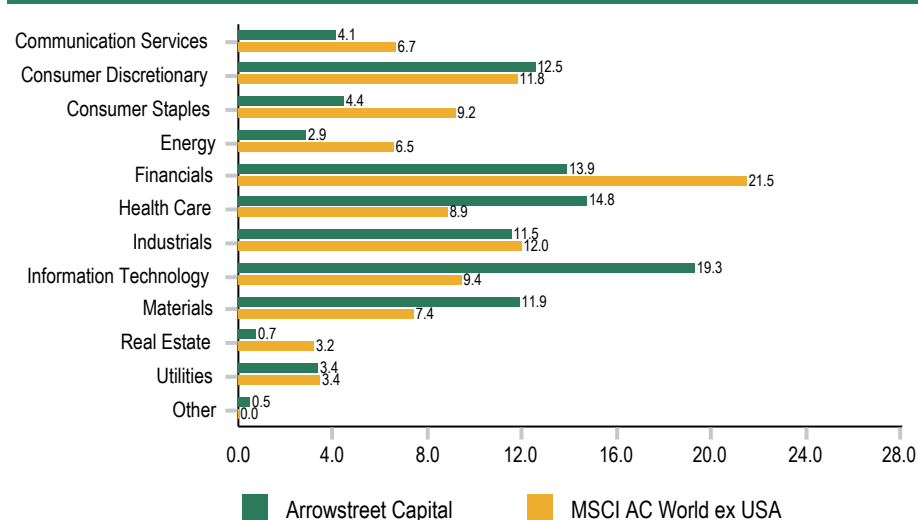
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	45,950,443,496	75,601,211,877
Median Mkt. Cap (\$)	5,557,968,640	8,444,352,025
Price/Earnings ratio	14.12	16.14
Price/Book ratio	2.33	2.34
5 Yr. EPS Growth Rate (%)	10.74	8.14
Current Yield (%)	3.32	3.19
Beta (5 Years, Monthly)	0.98	1.00
Number of Stocks	721	2,412

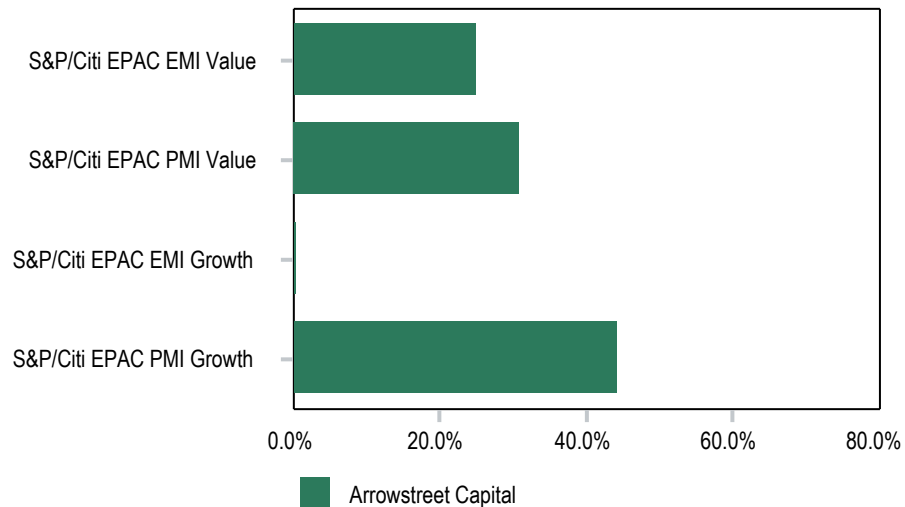
Distribution of Market Capitalization (%)



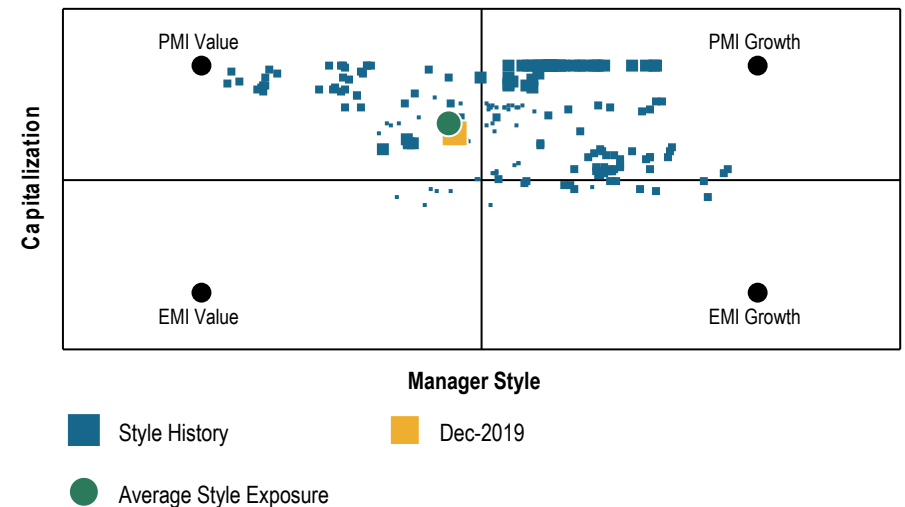
Sector Weights (%)



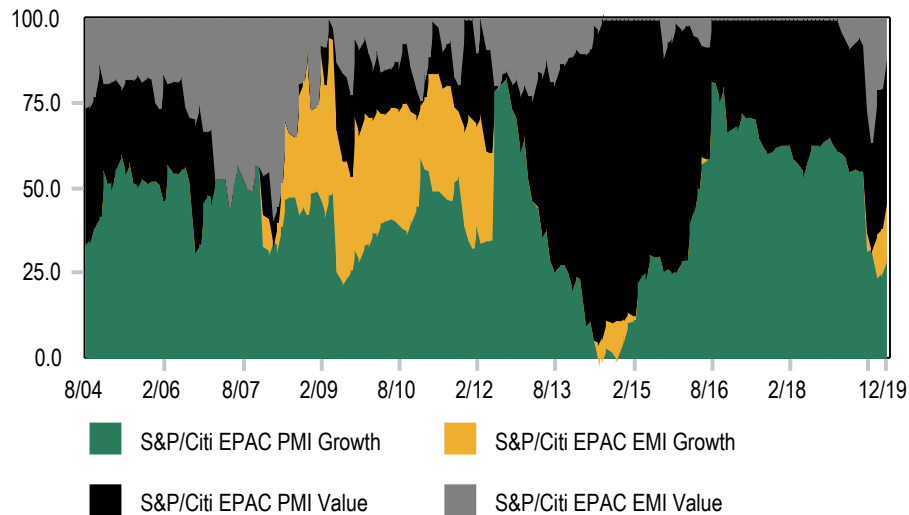
Investment Style Exposure



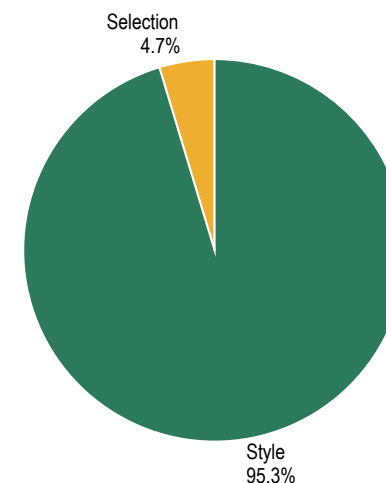
Style Map(ppp)

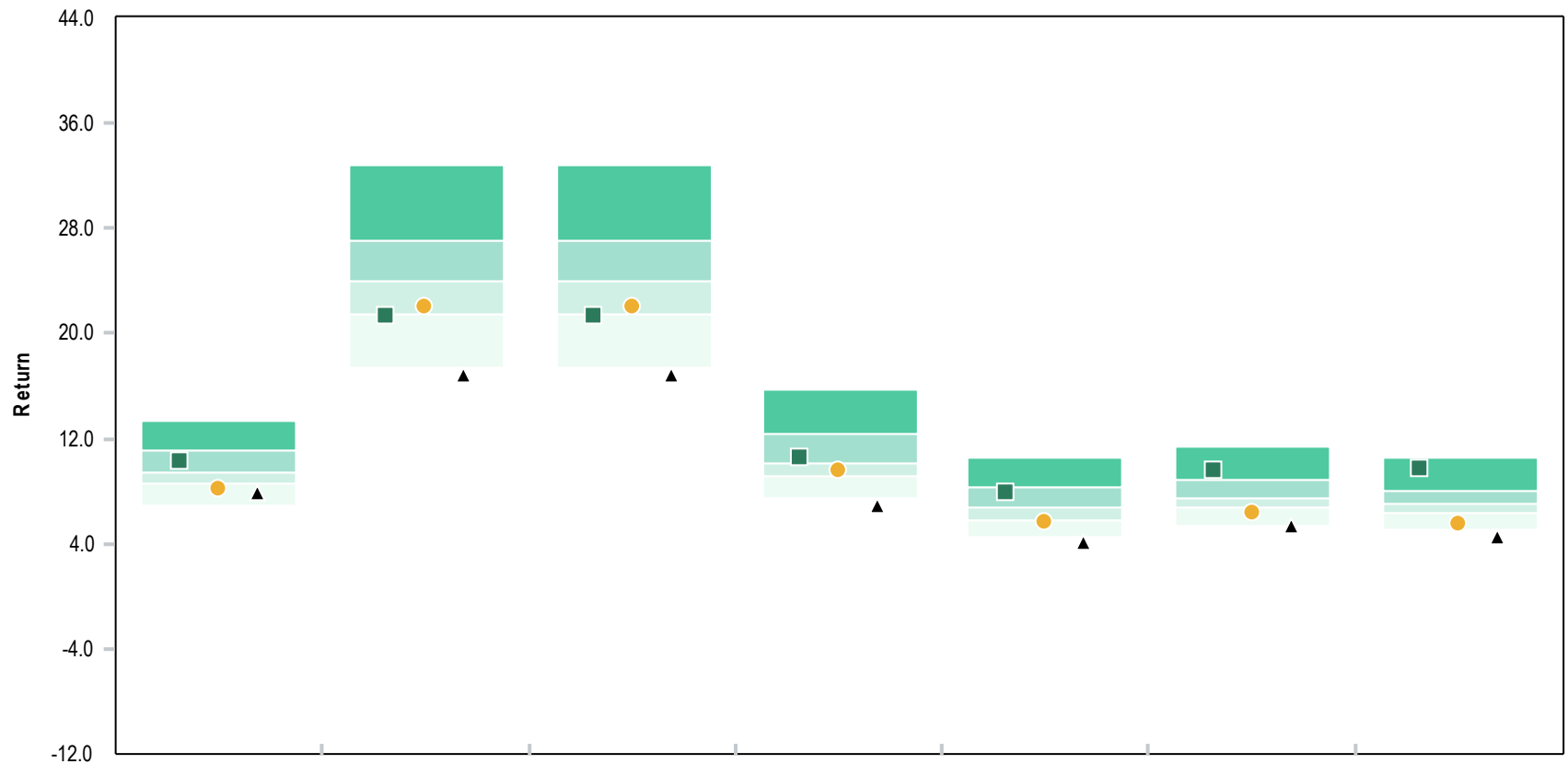


Style History(ppp)



Return Variance





	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Freedom Capital Intl	10.26 (36)	21.39 (76)	21.39 (76)	10.60 (44)	7.92 (31)	9.56 (17)	9.73 (14)
● MSCI EAFE (net)	8.17 (81)	22.01 (69)	22.01 (69)	9.56 (65)	5.67 (78)	6.35 (84)	5.50 (92)
▲ MSCI EAFE Value	7.87 (86)	16.83 (97)	16.83 (97)	6.95 (96)	4.15 (98)	5.35 (95)	4.57 (99)

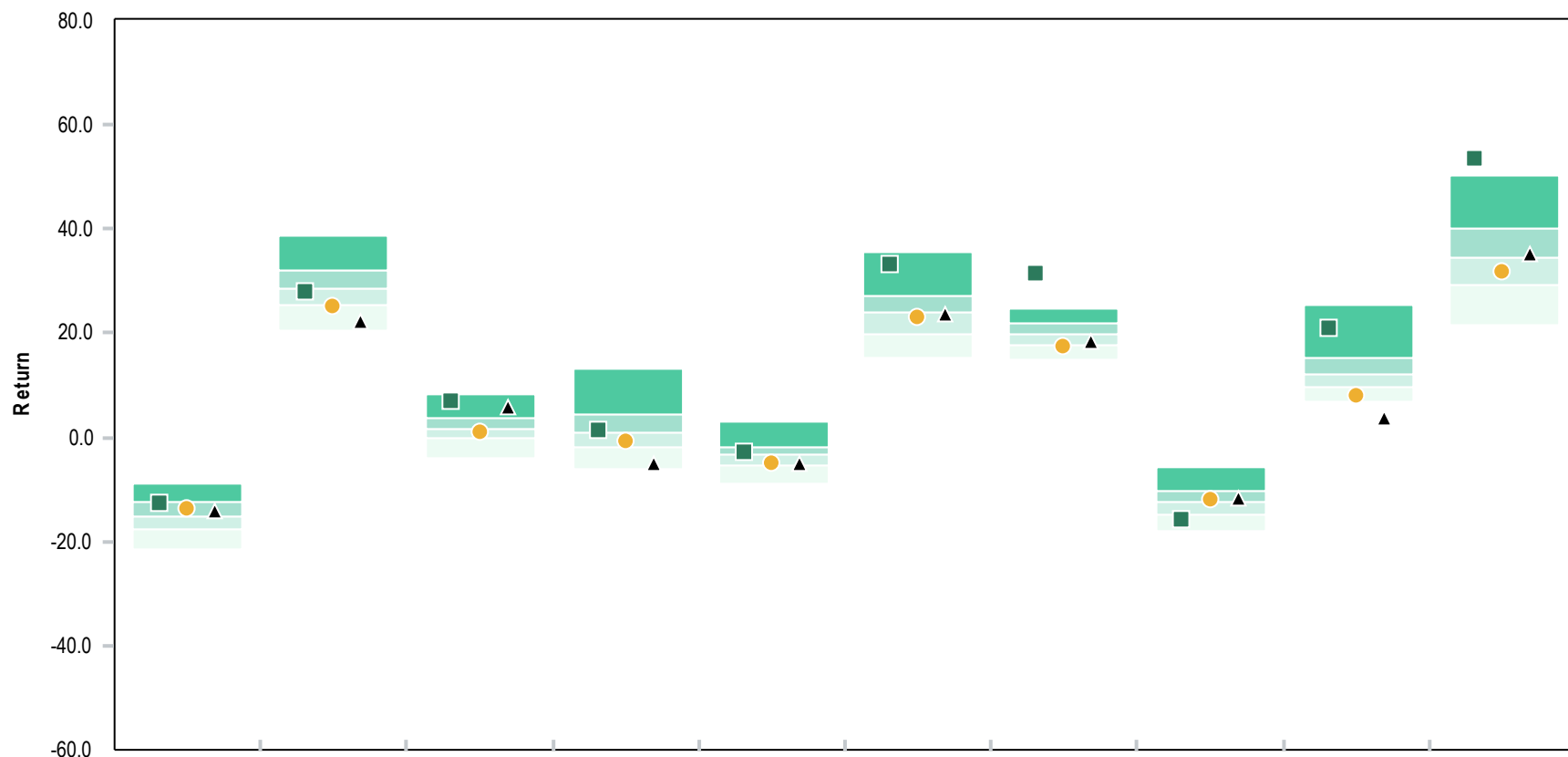
5th Percentile	13.40	32.82	32.82	15.76	10.50	11.37	10.56
1st Quartile	11.09	27.09	27.09	12.34	8.34	8.89	8.03
Median	9.37	23.97	23.97	10.16	6.75	7.50	7.06
3rd Quartile	8.55	21.46	21.46	9.12	5.75	6.74	6.32
95th Percentile	6.96	17.42	17.42	7.41	4.59	5.31	5.05

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM International Core Equity (SA+CF)

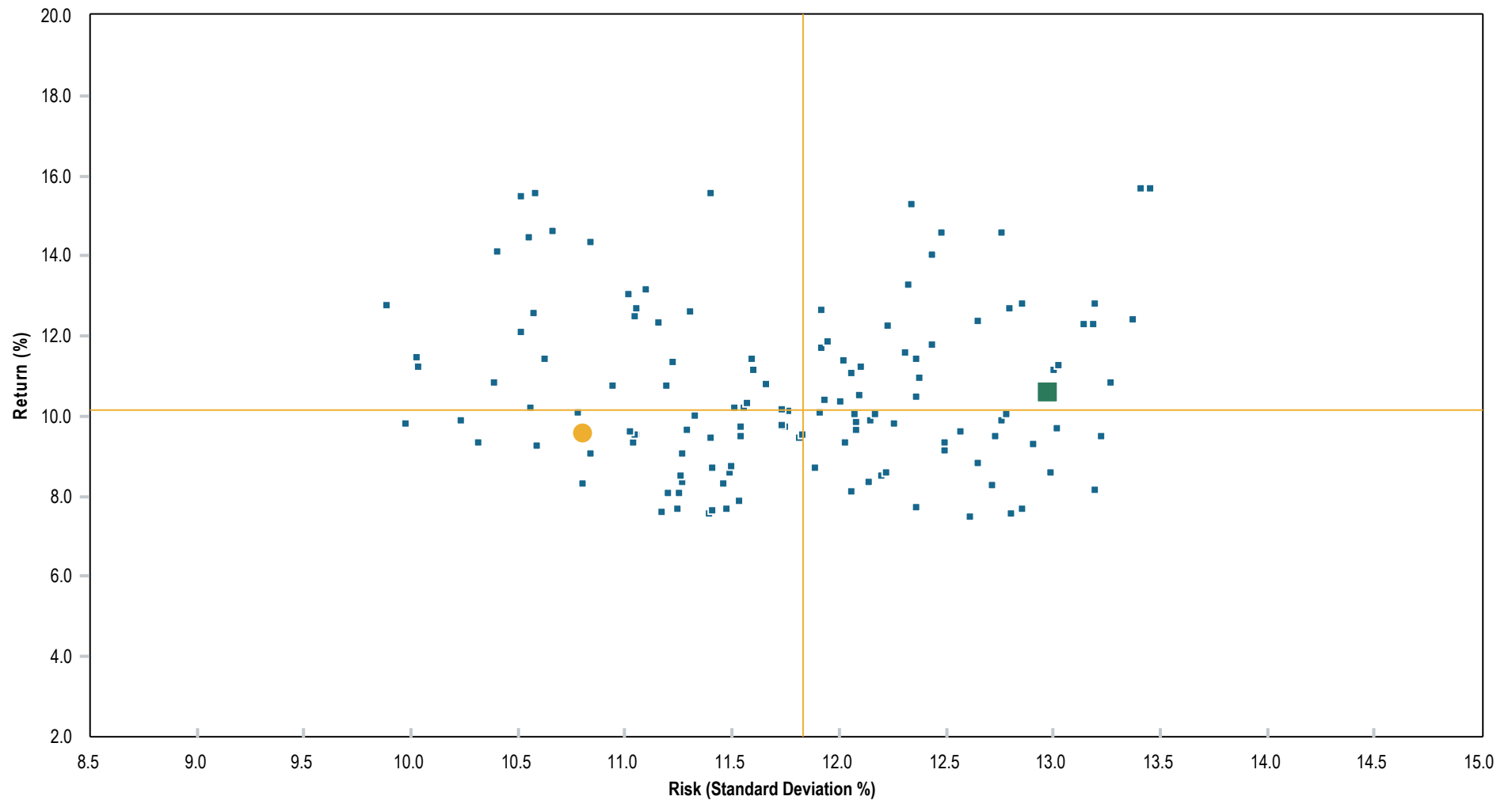
As of December 31, 2019



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Freedom Capital Intl	-12.90 (28)	27.96 (54)	6.75 (10)	1.37 (47)	-2.88 (40)	33.24 (8)	31.46 (1)	-15.84 (87)	20.72 (13)	53.54 (3)
● MSCI EAFE (net)	-13.79 (35)	25.03 (78)	1.00 (59)	-0.81 (67)	-4.90 (69)	22.78 (59)	17.32 (78)	-12.14 (46)	7.75 (92)	31.78 (61)
▲ MSCI EAFE Value	-14.26 (42)	22.12 (94)	5.68 (15)	-5.22 (93)	-4.92 (69)	23.59 (54)	18.43 (70)	-11.65 (41)	3.81 (98)	35.06 (48)

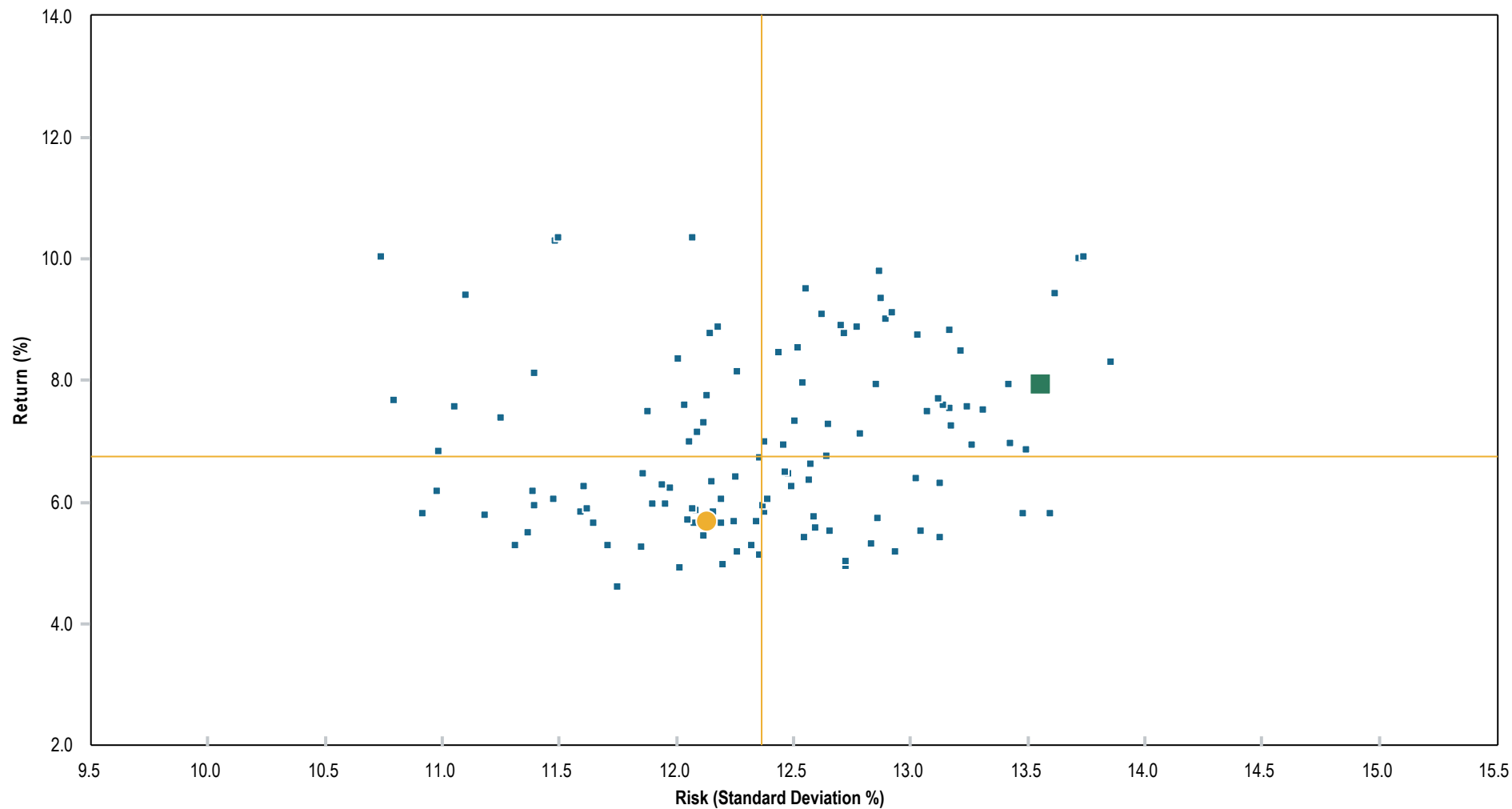
5th Percentile	-8.85	38.74	8.26	13.29	2.92	35.67	24.58	-5.62	25.49	50.08
1st Quartile	-12.42	32.17	3.79	4.56	-1.93	27.21	22.01	-10.40	15.30	40.08
Median	-15.12	28.54	1.68	1.07	-3.43	23.99	19.76	-12.41	12.06	34.43
3rd Quartile	-17.62	25.34	-0.28	-1.88	-5.25	19.78	17.67	-14.82	9.71	29.23
95th Percentile	-21.58	20.67	-3.91	-6.12	-8.98	15.24	14.94	-17.91	6.70	21.59

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Freedom Capital Intl	10.60	12.98
● MSCI EAFE (net)	9.56	10.81
— Median	10.16	11.83

Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Freedom Capital Intl	7.92	13.56
● MSCI EAFE (net)	5.67	12.13
— Median	6.75	12.36

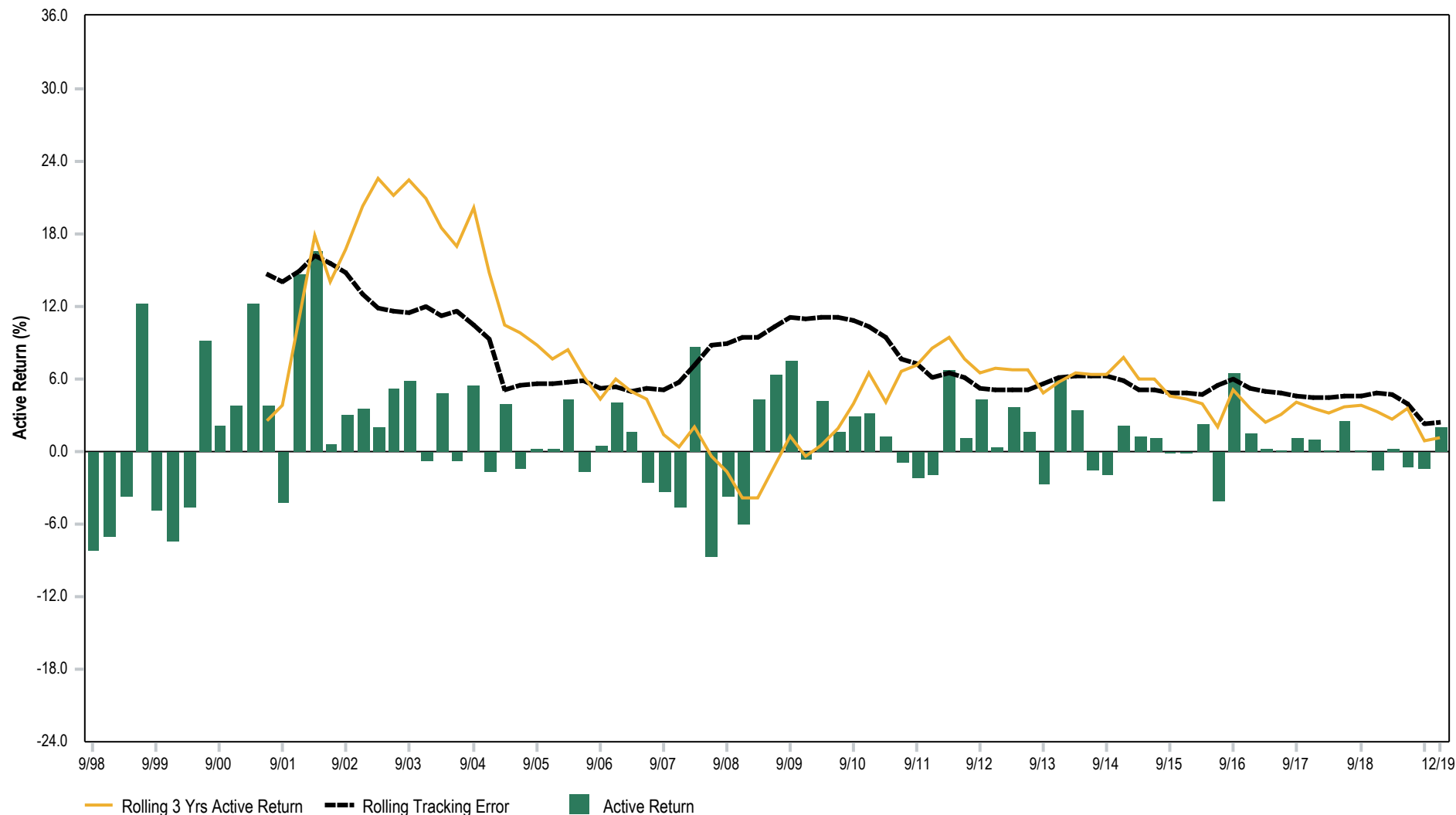
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Freedom Capital Intl	10.26	21.39	21.39	10.60	7.92	9.56	9.73	-12.90	27.96	6.75	1.37
MSCI EAFE (net)	8.17	22.01	22.01	9.56	5.67	6.35	5.50	-13.79	25.03	1.00	-0.81
Difference	2.09	-0.62	-0.62	1.04	2.25	3.21	4.23	0.89	2.93	5.75	2.18



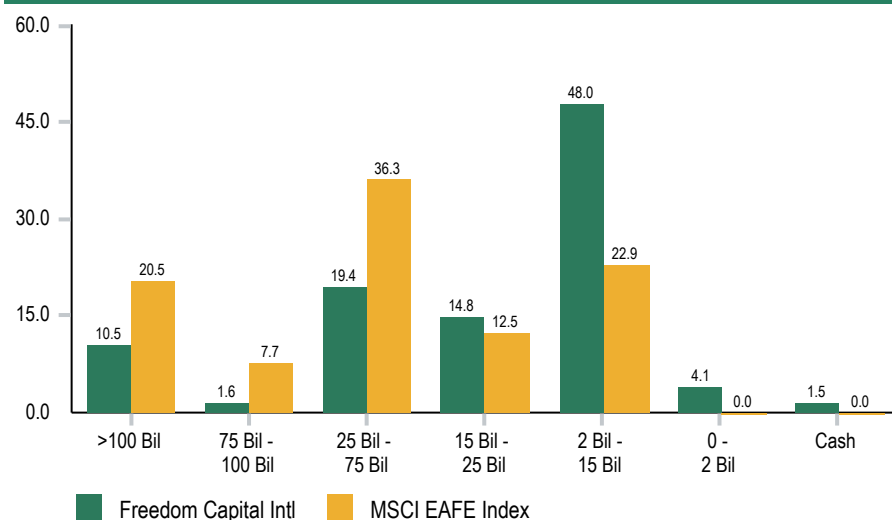
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Bellway PLC	3.15	0.00	3.15	26.09
Next PLC	3.08	0.08	3.00	23.20
Hannover Rueck SE	2.94	0.08	2.86	14.32
Babcock International Group PLC	2.92	0.00	2.92	22.96
Taylor Wimpey PLC	2.78	0.06	2.72	32.23
Popular Inc	2.45	0.00	2.45	9.23
BHP Group Ltd	2.41	0.54	1.87	9.73
DnB ASA	2.33	0.12	2.21	5.74
Svenska Kullagerfabriken Skf AB	2.32	0.05	2.27	22.44
Magna International Inc.	2.30	0.00	2.30	3.60
% of Portfolio	26.68	0.93	25.75	

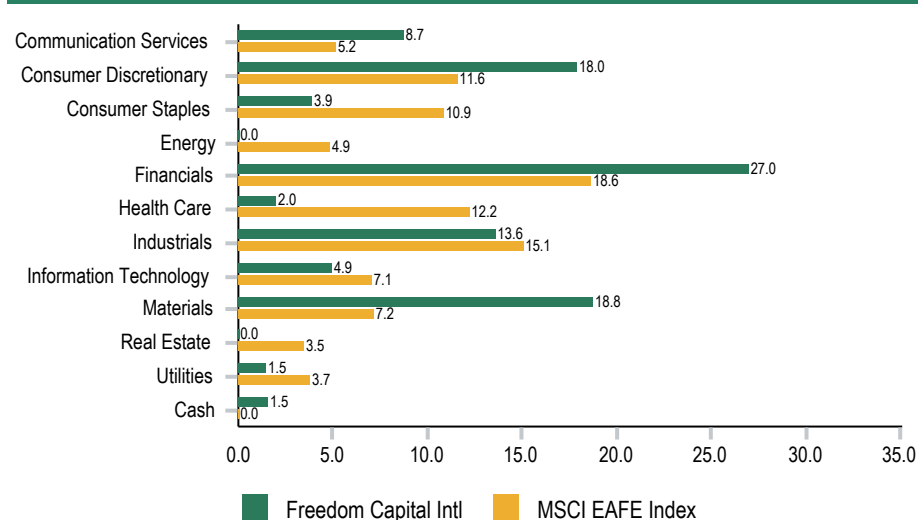
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	37,252,741,080	66,589,840,527
Median Mkt. Cap (\$)	12,383,145,230	11,161,860,457
Price/Earnings ratio	13.39	17.24
Price/Book ratio	1.85	2.34
5 Yr. EPS Growth Rate (%)	2.77	6.00
Current Yield (%)	4.16	3.38
Beta (5 Years, Monthly)	1.05	1.00
Number of Stocks	56	918

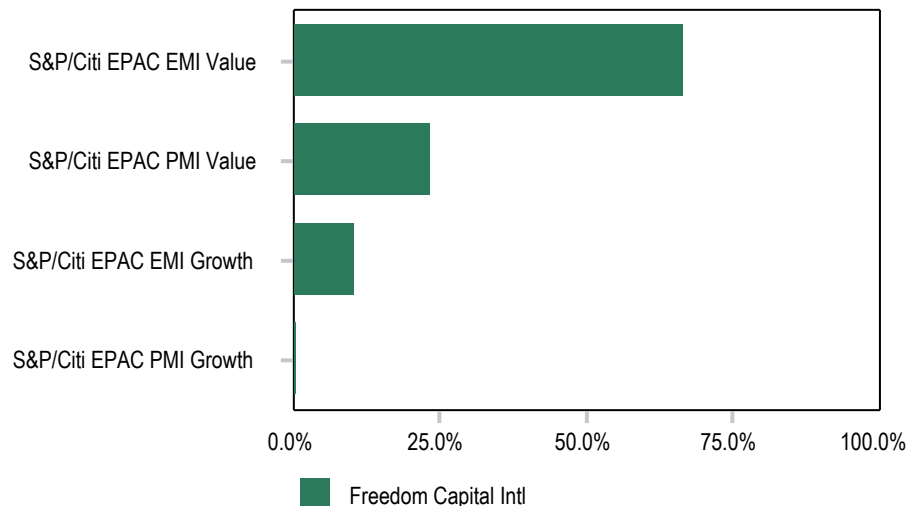
Distribution of Market Capitalization (%)



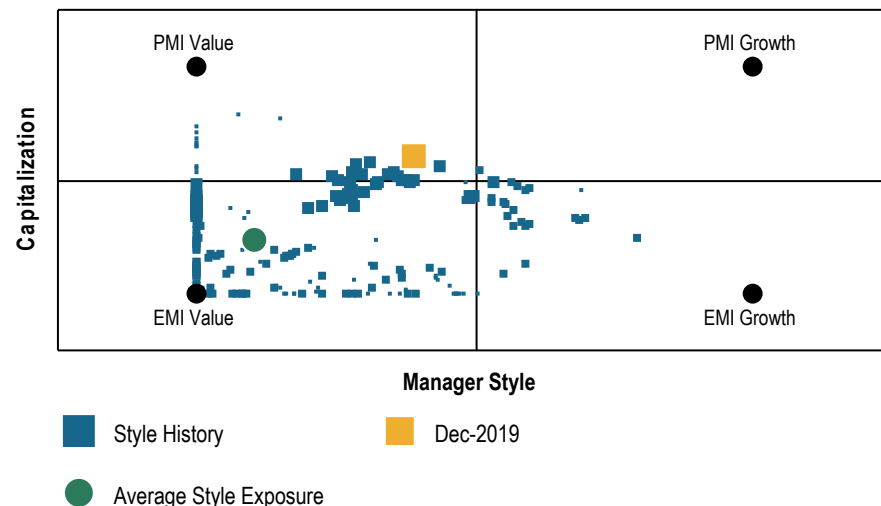
Sector Weights (%)



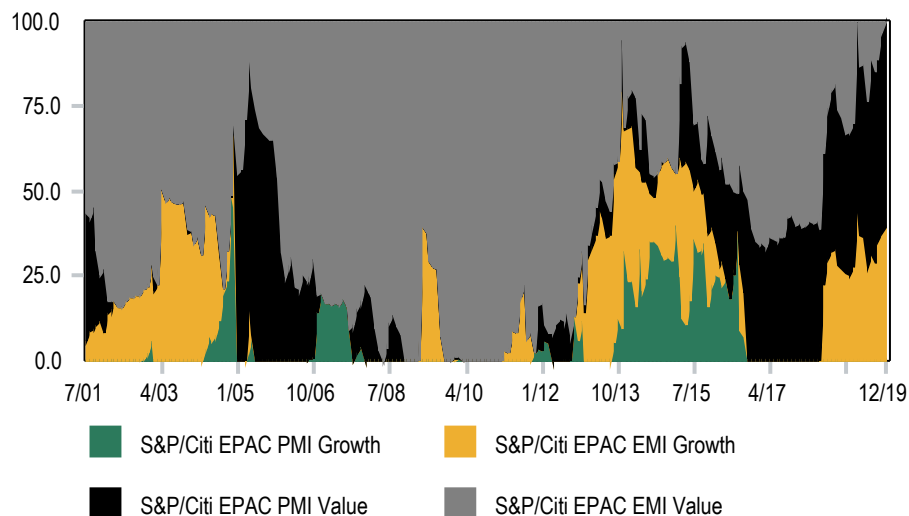
Investment Style Exposure



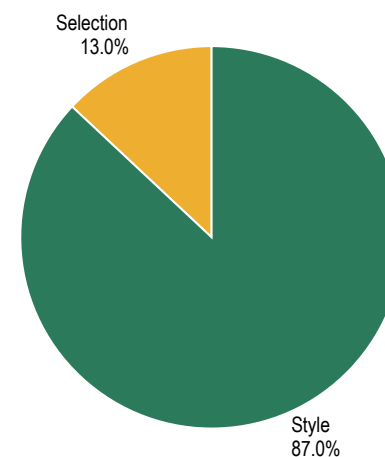
Style Map(ppp)

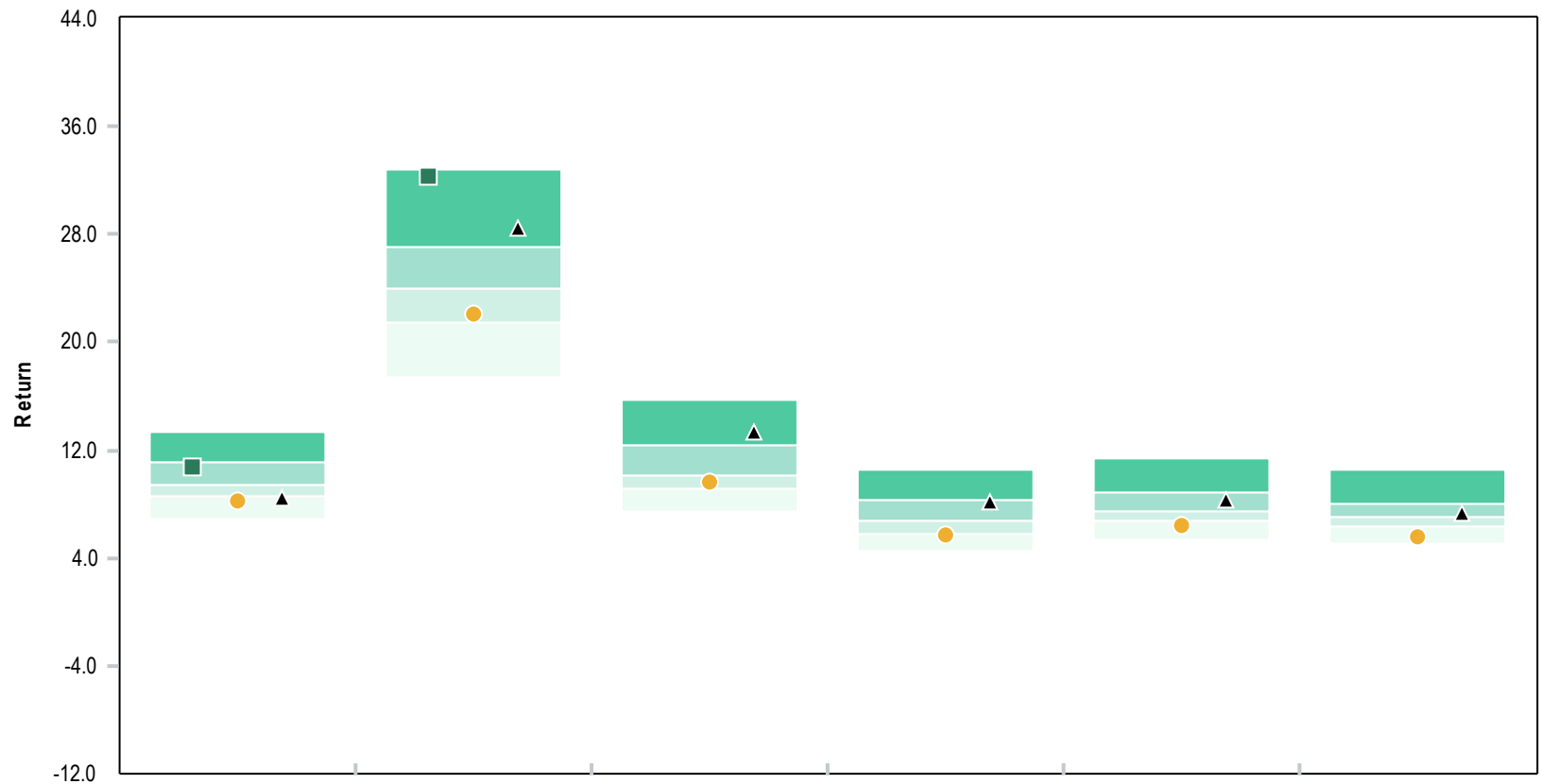


Style History(ppp)



Return Variance





■ Fiera International Equity
 ● MSCI EAFE (Net)
 ▲ MSCI EAFE Growth Index

	1 Qtr	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Fiera International Equity	10.63 (31)	32.28 (7)	N/A	N/A	N/A	N/A
MSCI EAFE (Net)	8.17 (81)	22.01 (69)	9.56 (65)	5.67 (78)	6.35 (84)	5.50 (92)
MSCI EAFE Growth Index	8.48 (77)	28.43 (16)	13.28 (16)	8.13 (28)	8.27 (35)	7.34 (39)

5th Percentile	13.40	32.82	15.76	10.50	11.37	10.56
1st Quartile	11.09	27.09	12.34	8.34	8.89	8.03
Median	9.37	23.97	10.16	6.75	7.50	7.06
3rd Quartile	8.55	21.46	9.12	5.75	6.74	6.32
95th Percentile	6.96	17.42	7.41	4.59	5.31	5.05

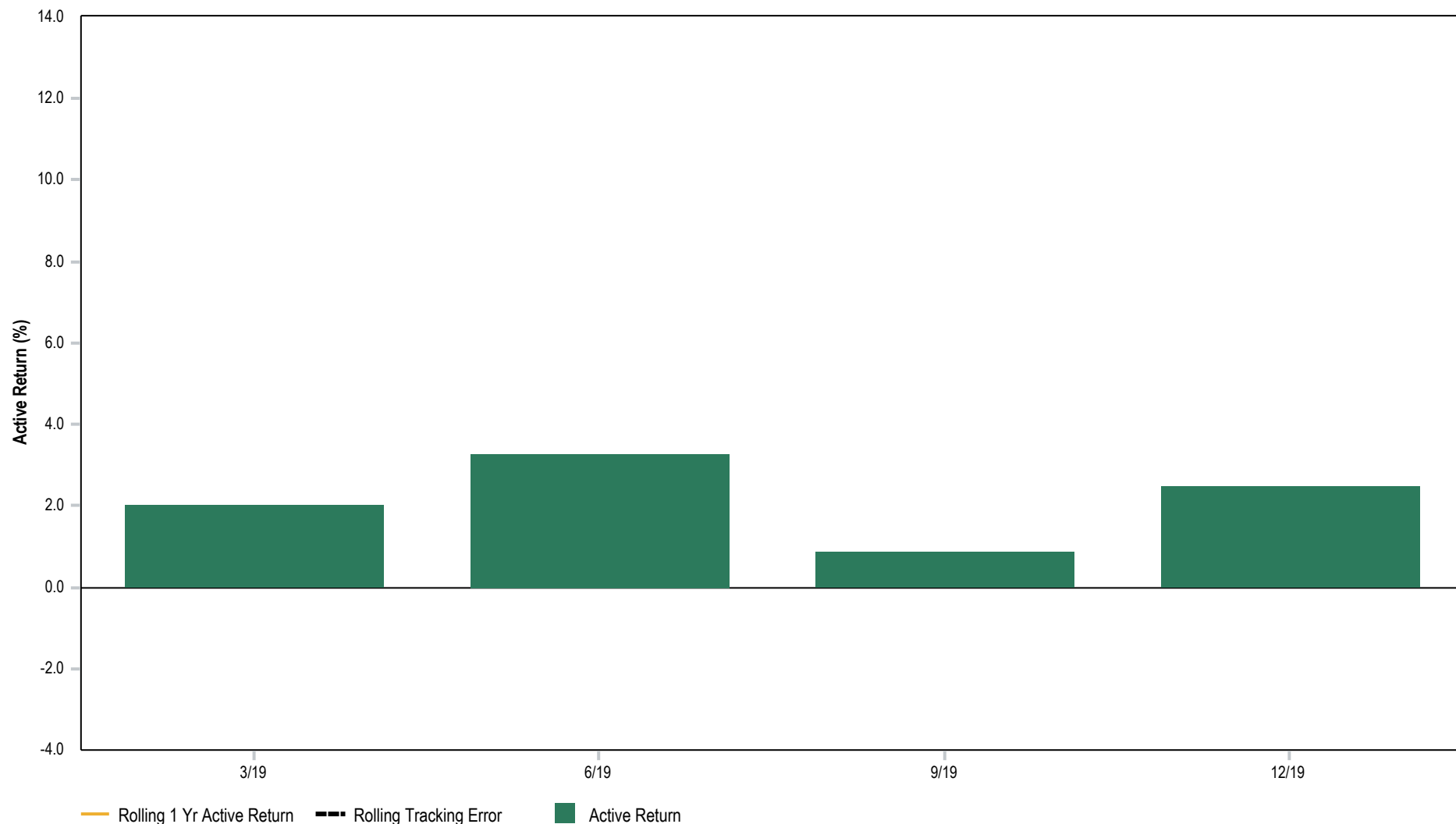
Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Fiera International Equity	10.63	32.28	32.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MSCI EAFE (Net)	8.17	22.01	22.01	9.56	5.67	6.35	5.50	-13.79	25.03	1.00	-0.81
Difference	2.46	10.27	10.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



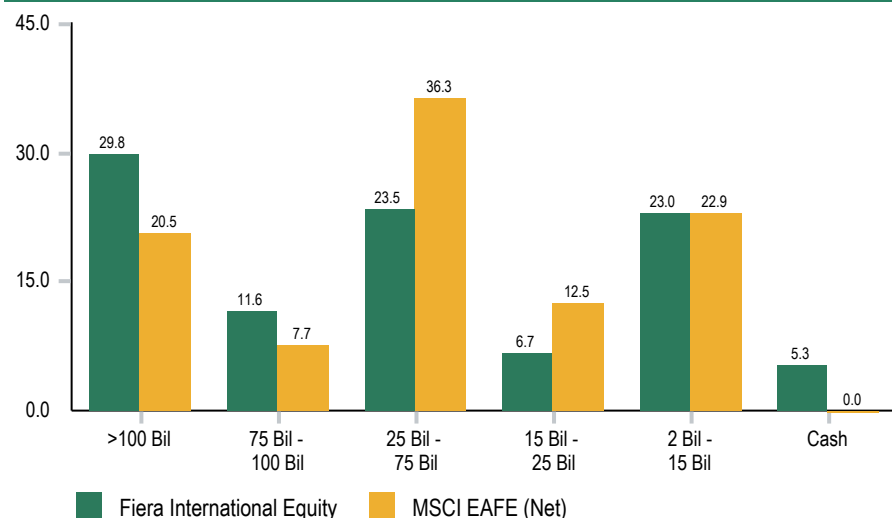
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Keyence Corp	7.12	0.43	6.69	14.44
Nestle SA, Cham Und Vevey	5.84	2.17	3.67	-0.31
L'Oreal S.A., Paris	4.75	0.50	4.25	5.76
Roche Holding AG	4.73	1.53	3.20	11.37
Diageo PLC	4.52	0.67	3.85	3.39
Intercontinental Hotels Group PLC	4.39	0.08	4.31	10.50
IHS Markit Ltd	4.31	0.00	4.31	12.66
Schindler Holding AG, Hergiswil	4.26	0.07	4.19	13.63
Intertek Group PLC, London	3.99	0.08	3.91	15.03
LVMH Moet Hennessy Louis Vuitton SE	3.97	0.87	3.10	17.58
% of Portfolio	47.88	6.40	41.48	

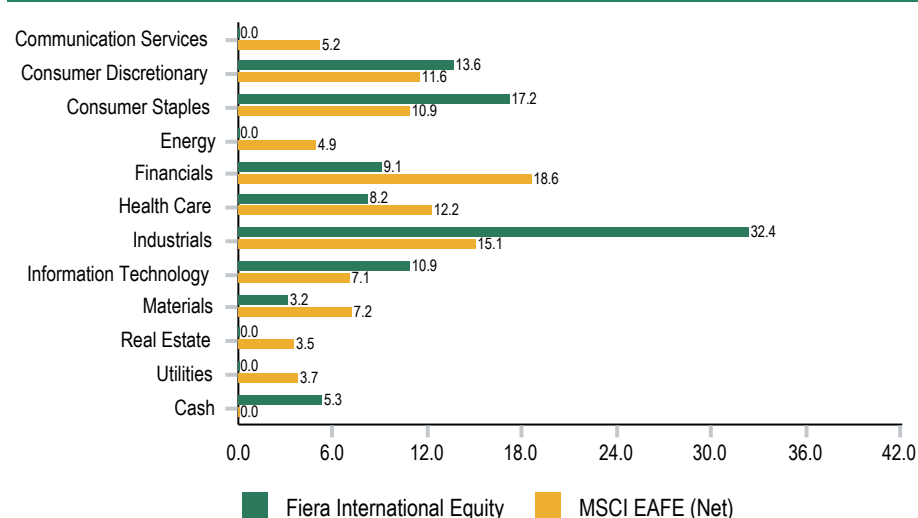
Portfolio Characteristics

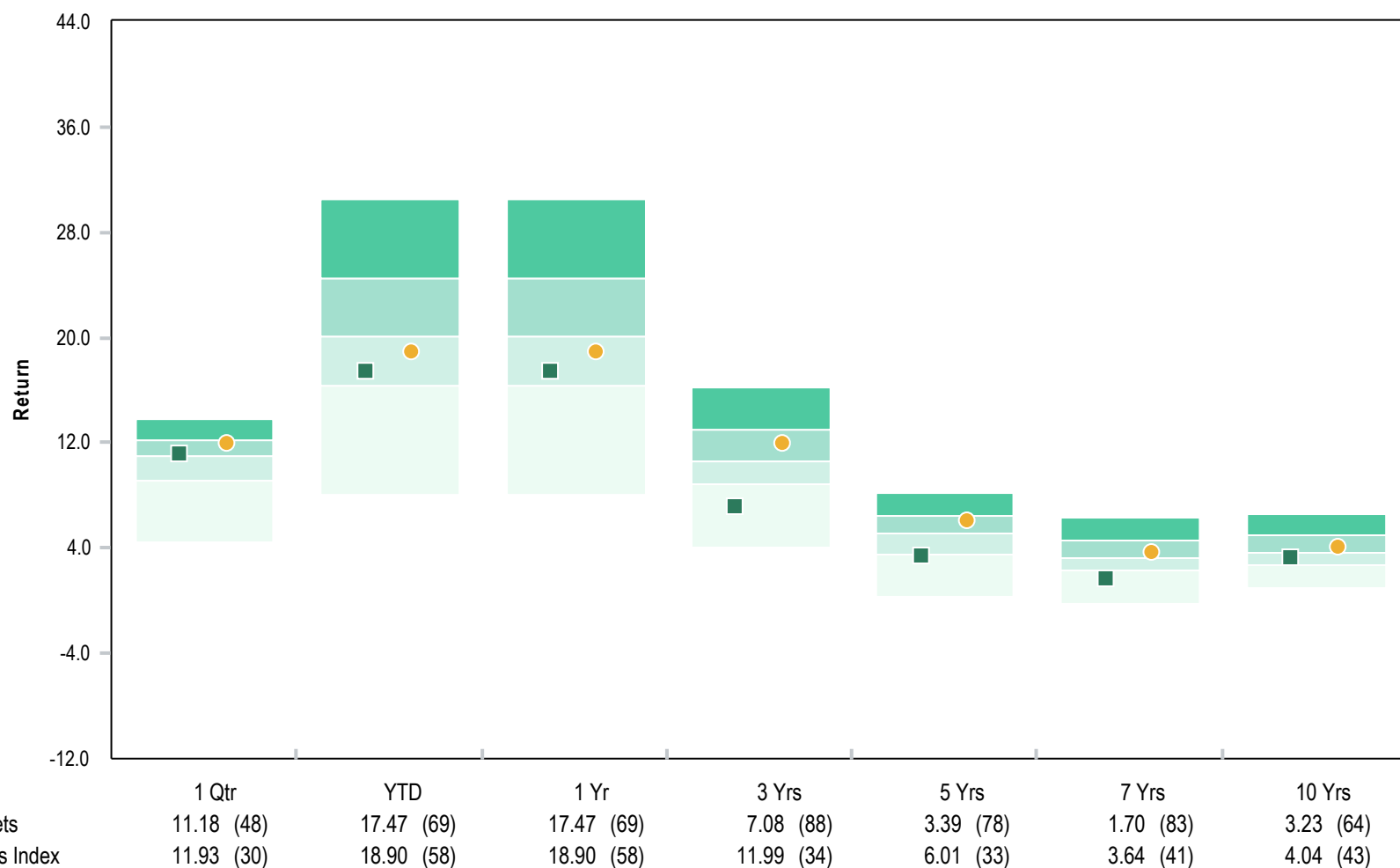
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	77,223,551,296	66,589,840,527
Median Mkt. Cap (\$)	30,214,445,800	11,161,860,457
Price/Earnings ratio	29.94	17.24
Price/Book ratio	4.80	2.34
5 Yr. EPS Growth Rate (%)	6.81	6.00
Current Yield (%)	1.81	3.38
Beta	N/A	1.00
Number of Stocks	30	918

Distribution of Market Capitalization (%)



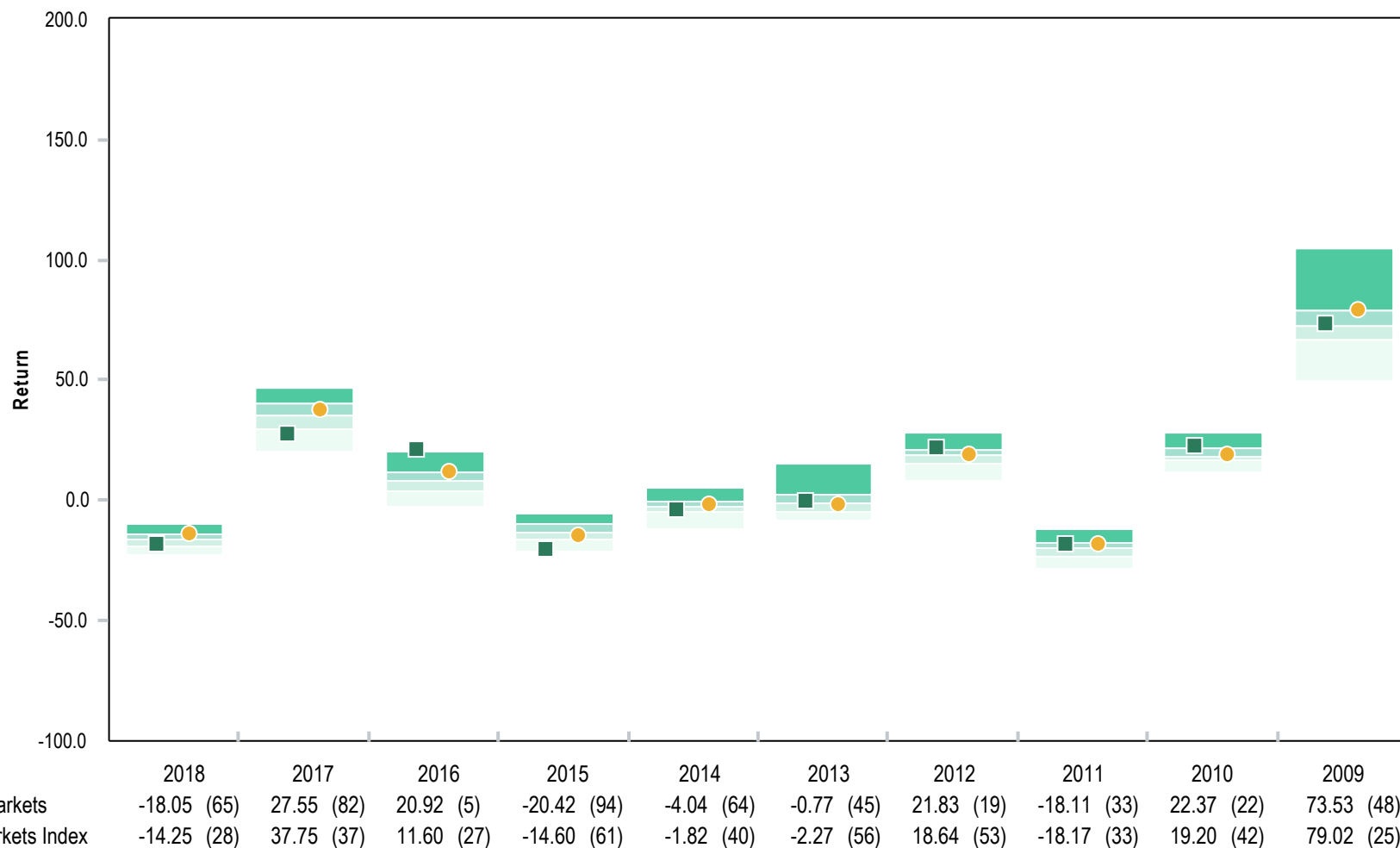
Sector Weights (%)





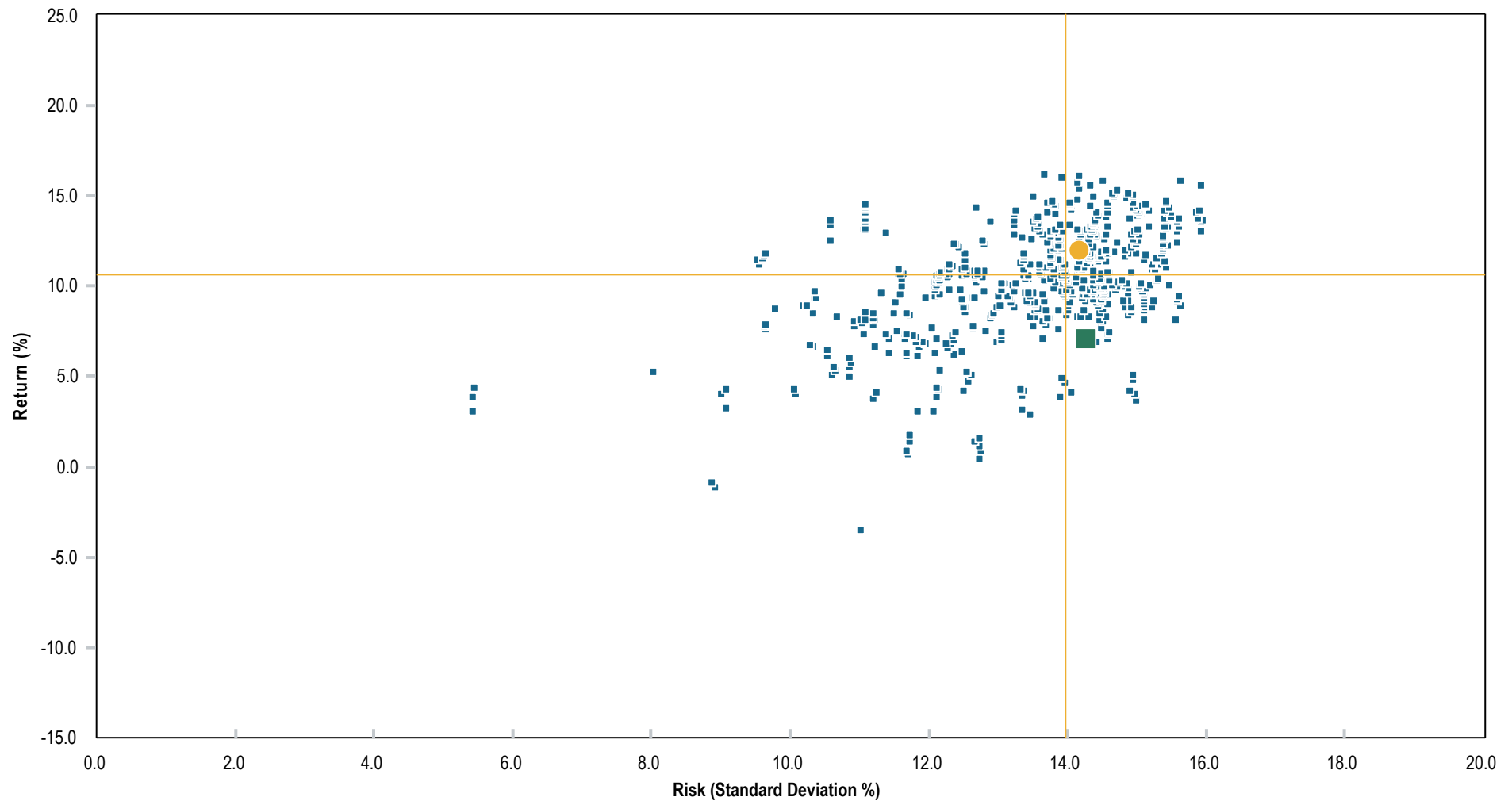
5th Percentile	13.82	30.56	30.56	16.17	8.24	6.33	6.58
1st Quartile	12.13	24.49	24.49	13.00	6.48	4.54	5.03
Median	11.03	20.06	20.06	10.63	5.13	3.18	3.67
3rd Quartile	9.16	16.33	16.33	8.91	3.56	2.24	2.71
95th Percentile	4.44	8.05	8.05	4.08	0.28	-0.25	0.93

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



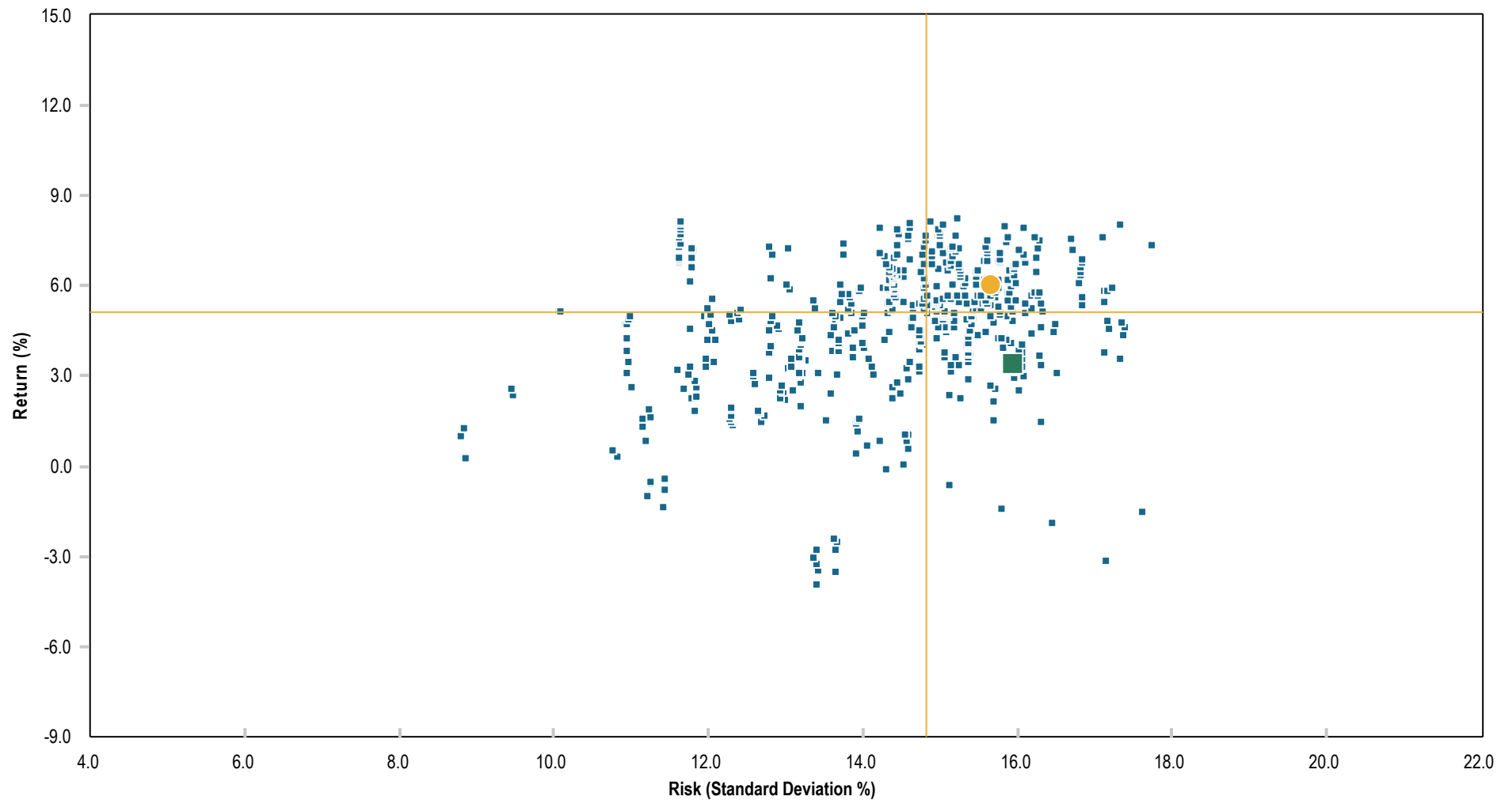
5th Percentile	-9.65	46.64	20.18	-5.77	5.49	15.49	28.18	-11.88	28.16	104.42
1st Quartile	-14.01	40.40	11.80	-9.95	-0.22	2.73	20.70	-17.42	21.85	78.94
Median	-16.40	35.37	8.35	-13.66	-2.92	-1.42	18.78	-19.51	18.32	72.67
3rd Quartile	-19.02	29.42	4.00	-16.19	-5.04	-4.73	15.35	-23.06	16.42	66.89
95th Percentile	-22.61	20.38	-2.69	-20.93	-11.68	-8.28	8.26	-28.12	11.42	49.83

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Lazard Emerging Markets	7.08	14.26
● MSCI Emerging Markets Index	11.99	14.18
— Median	10.63	13.97

Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Lazard Emerging Markets	3.39	15.94
● MSCI Emerging Markets Index	6.01	15.66
— Median	5.13	14.81

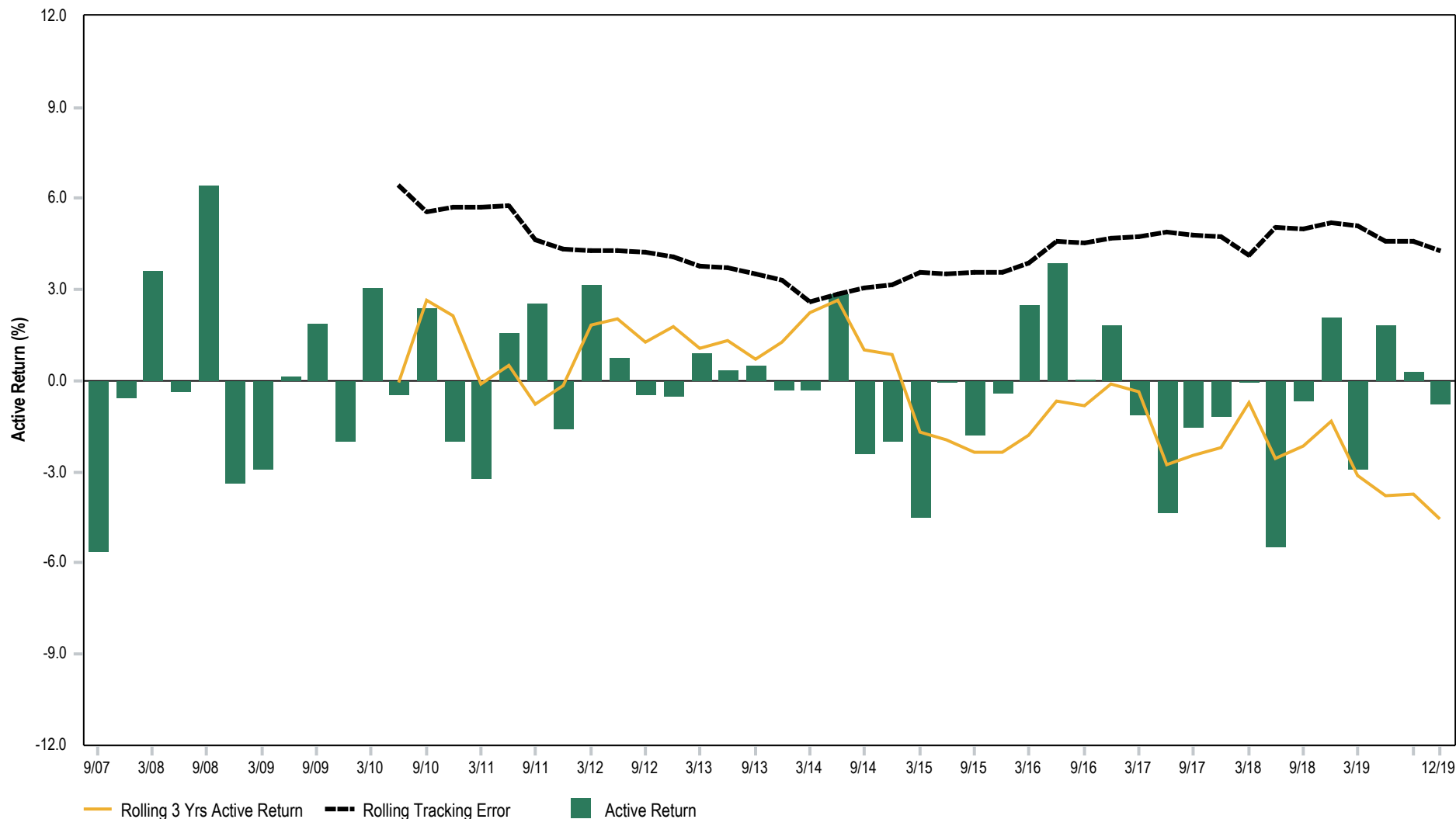
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Lazard Emerging Markets	11.18	17.47	17.47	7.08	3.39	1.70	3.23	-18.05	27.55	20.92	-20.42
MSCI Emerging Markets Index	11.93	18.90	18.90	11.99	6.01	3.64	4.04	-14.25	37.75	11.60	-14.60
Difference	-0.75	-1.43	-1.43	-4.91	-2.62	-1.94	-0.81	-3.80	-10.20	9.32	-5.82



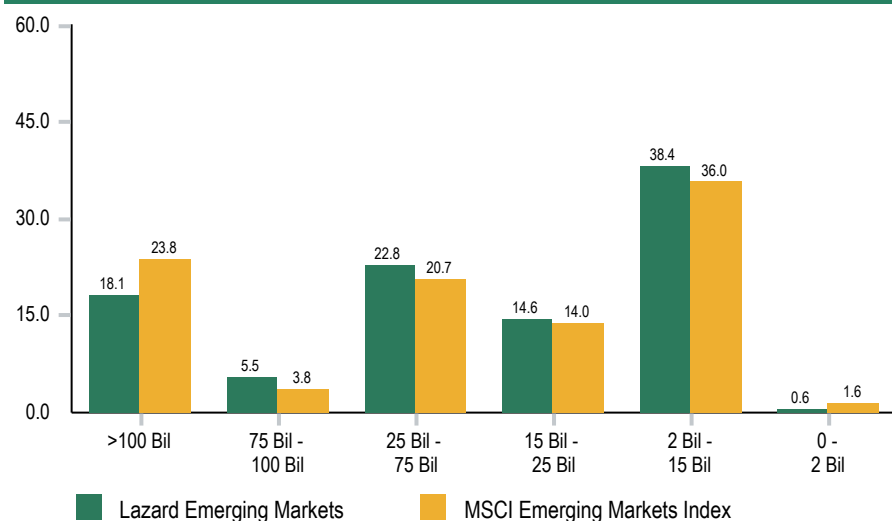
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
China Construction Bank Corp	5.41	1.33	4.08	13.29
Samsung Electronics Co Ltd	5.13	3.71	1.42	18.85
SK Hynix Inc	3.54	0.71	2.83	20.71
Banco Do Brasil SA Bb Brasil	3.38	0.18	3.20	24.95
Sberbank of Russia OJSC	3.23	0.71	2.52	16.94
China Mobile Ltd	3.02	0.83	2.19	2.10
Taiwan Semiconductor Manuf	2.78	4.38	-1.60	27.33
OTP Bank PLC	2.33	0.19	2.14	25.55
Weichai Power Co Ltd	2.31	0.07	2.24	46.45
America Movil SA De CV, Mexico	2.28	0.43	1.85	8.87
% of Portfolio	33.41	12.54	20.87	

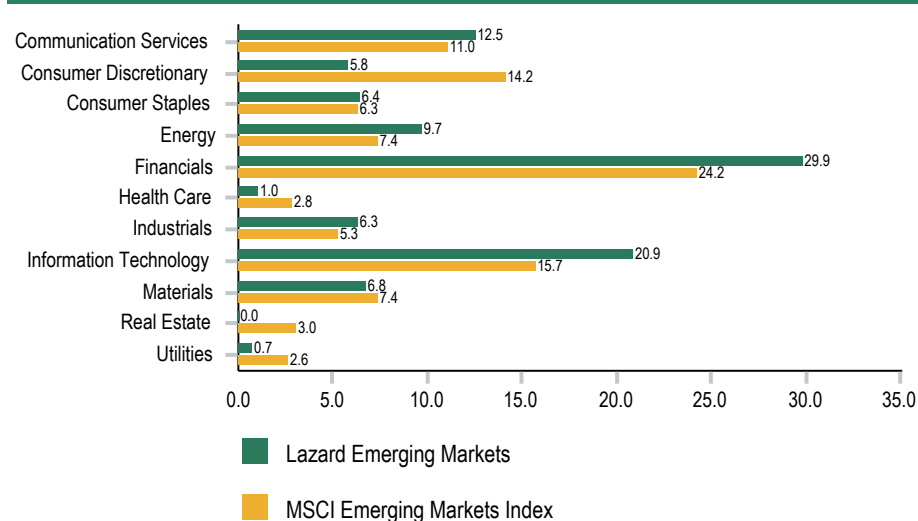
Portfolio Characteristics

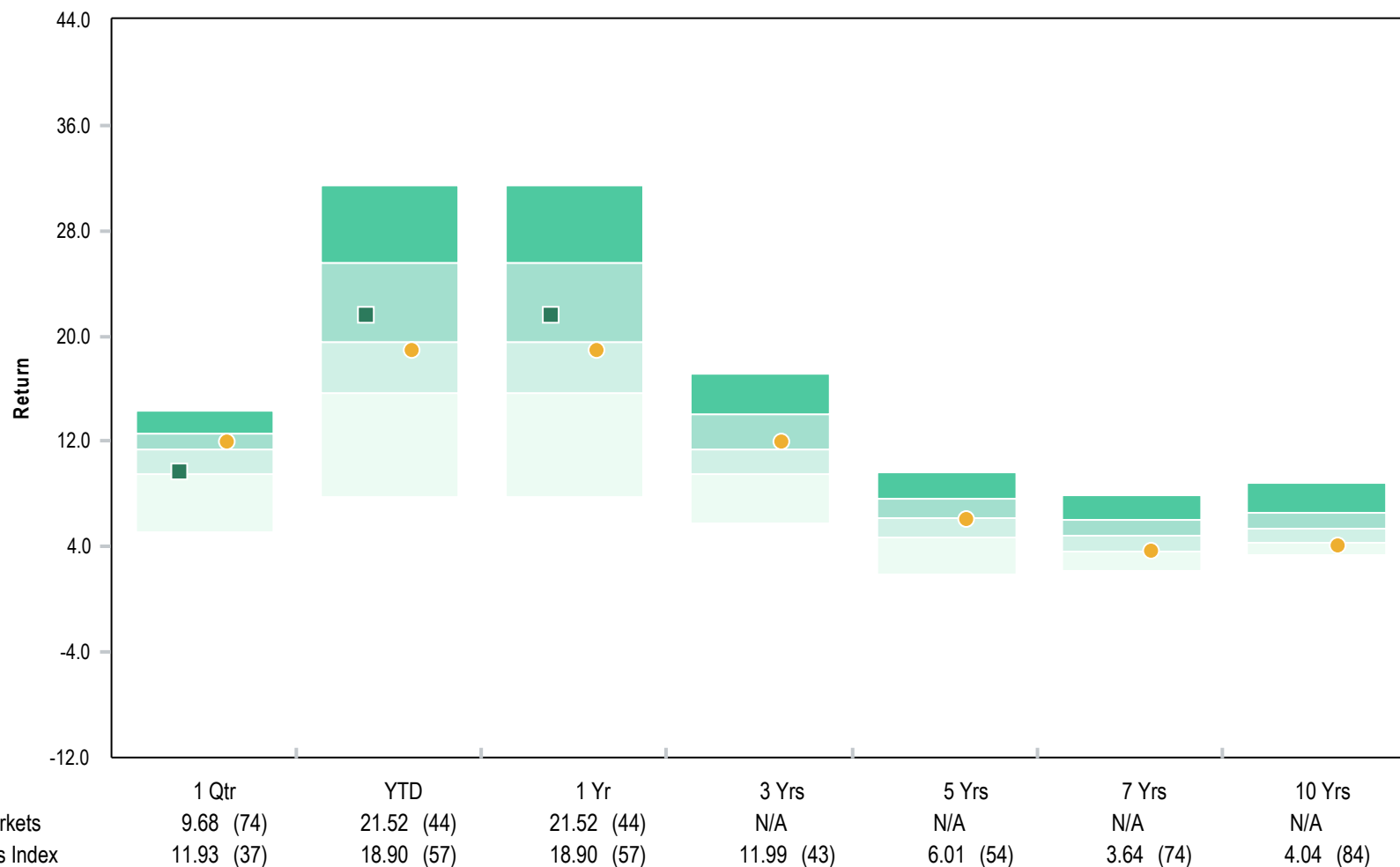
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	62,432,084,065	104,152,443,693
Median Mkt. Cap (\$)	13,441,082,137	5,792,440,025
Price/Earnings ratio	10.96	14.34
Price/Book ratio	2.09	2.47
5 Yr. EPS Growth Rate (%)	6.48	13.04
Current Yield (%)	3.86	2.76
Beta (5 Years, Monthly)	0.97	1.00
Number of Stocks	75	1,404

Distribution of Market Capitalization (%)



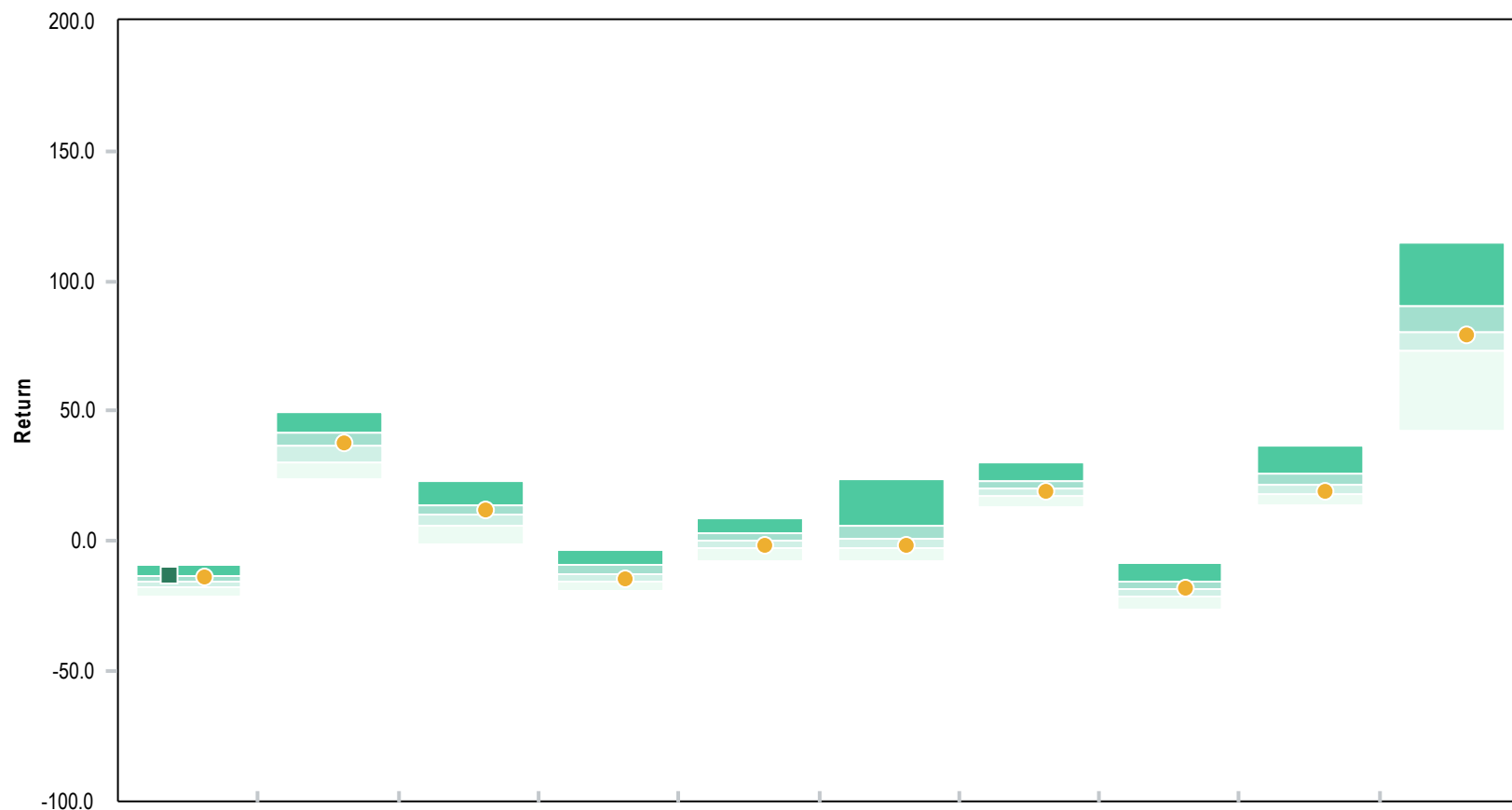
Sector Weights (%)





5th Percentile	14.35	31.42	31.42	17.16	9.62	7.95	8.85
1st Quartile	12.57	25.51	25.51	14.09	7.59	6.00	6.58
Median	11.36	19.49	19.49	11.39	6.22	4.82	5.32
3rd Quartile	9.56	15.72	15.72	9.47	4.65	3.60	4.36
95th Percentile	5.13	7.84	7.84	5.80	1.94	2.13	3.39

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Aberdeen Emerging Markets	-13.65 (31)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
● MSCI Emerging Markets Index	-14.25 (37)	37.75 (42)	11.60 (40)	-14.60 (66)	-1.82 (70)	-2.27 (73)	18.64 (68)	-18.17 (51)	19.20 (69)	79.02 (56)

5th Percentile	-8.97	49.44	23.04	-3.16	9.13	23.59	30.66	-8.19	36.50	114.64
1st Quartile	-13.37	41.77	13.61	-9.29	3.12	5.74	23.15	-15.65	25.81	90.10
Median	-15.23	36.81	10.36	-12.66	-0.09	0.97	20.50	-18.09	21.86	80.12
3rd Quartile	-17.45	30.29	6.32	-15.32	-2.44	-2.65	17.29	-21.44	18.33	73.17
95th Percentile	-21.51	24.04	-0.93	-19.08	-7.38	-7.32	12.83	-25.99	13.74	42.24

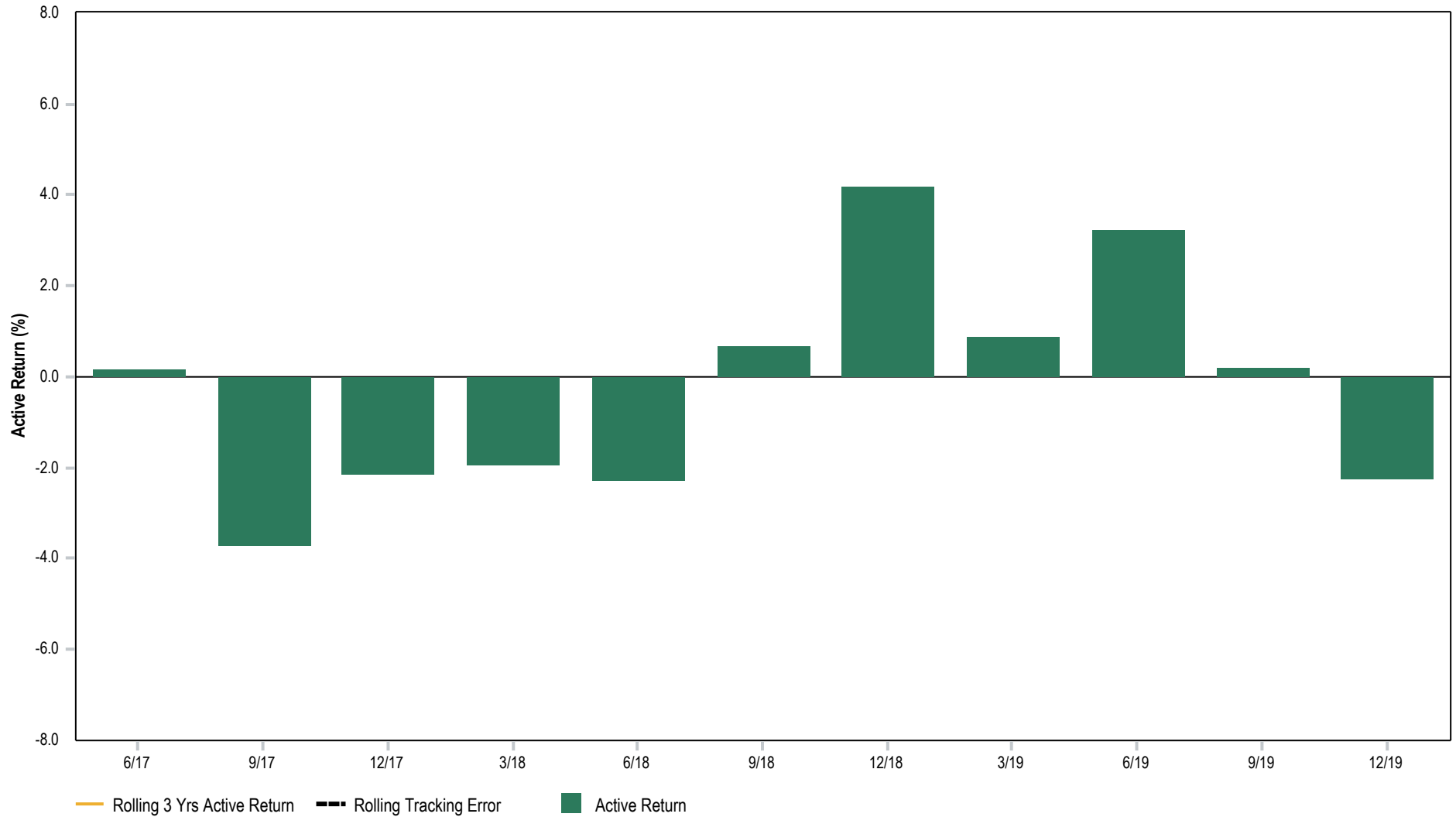
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Aberdeen Emerging Markets	9.68	21.52	21.52	N/A	N/A	N/A	N/A	-13.65	N/A	N/A	N/A
MSCI Emerging Markets Index	11.93	18.90	18.90	11.99	6.01	3.64	4.04	-14.25	37.75	11.60	-14.60
Difference	-2.25	2.62	2.62	N/A	N/A	N/A	N/A	0.60	N/A	N/A	N/A



Bristol County Retirement System

Aberdeen Emerging Markets

As of December 31, 2019

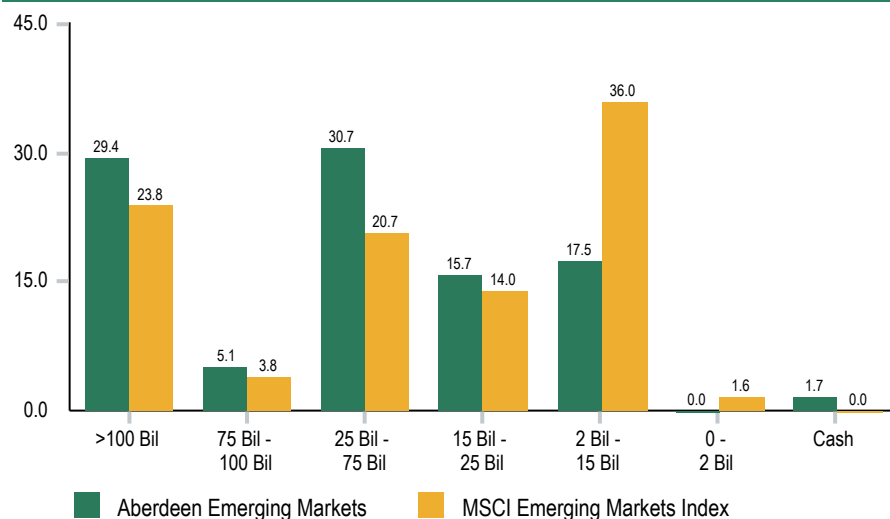
Top Ten Equity Holdings

	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Taiwan Semiconductor Manuf	6.77	4.38	2.39	27.33
Samsung Electronics Co Ltd	6.40	0.52	5.88	20.26
Tencent Holdings LTD	6.25	4.44	1.81	14.50
Housing Development Finance Corp Ltd	4.29	0.89	3.40	21.13
Ping An Insurance Group	3.70	1.06	2.64	2.95
Banco Bradesco Sa Brad	3.63	0.16	3.47	15.39
AIA Group Ltd	2.78	0.00	2.78	11.20
China Resources Land Ltd	2.45	0.22	2.23	18.89
Vale SA	2.38	0.68	1.70	17.80
Fomento Economico Mexican SAB	2.04	0.30	1.74	4.07
% of Portfolio	40.69	12.65	28.04	

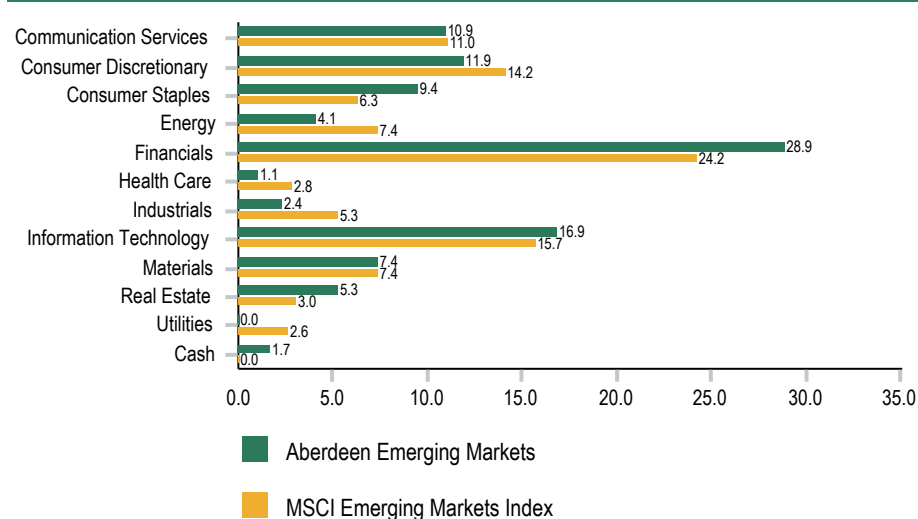
Portfolio Characteristics

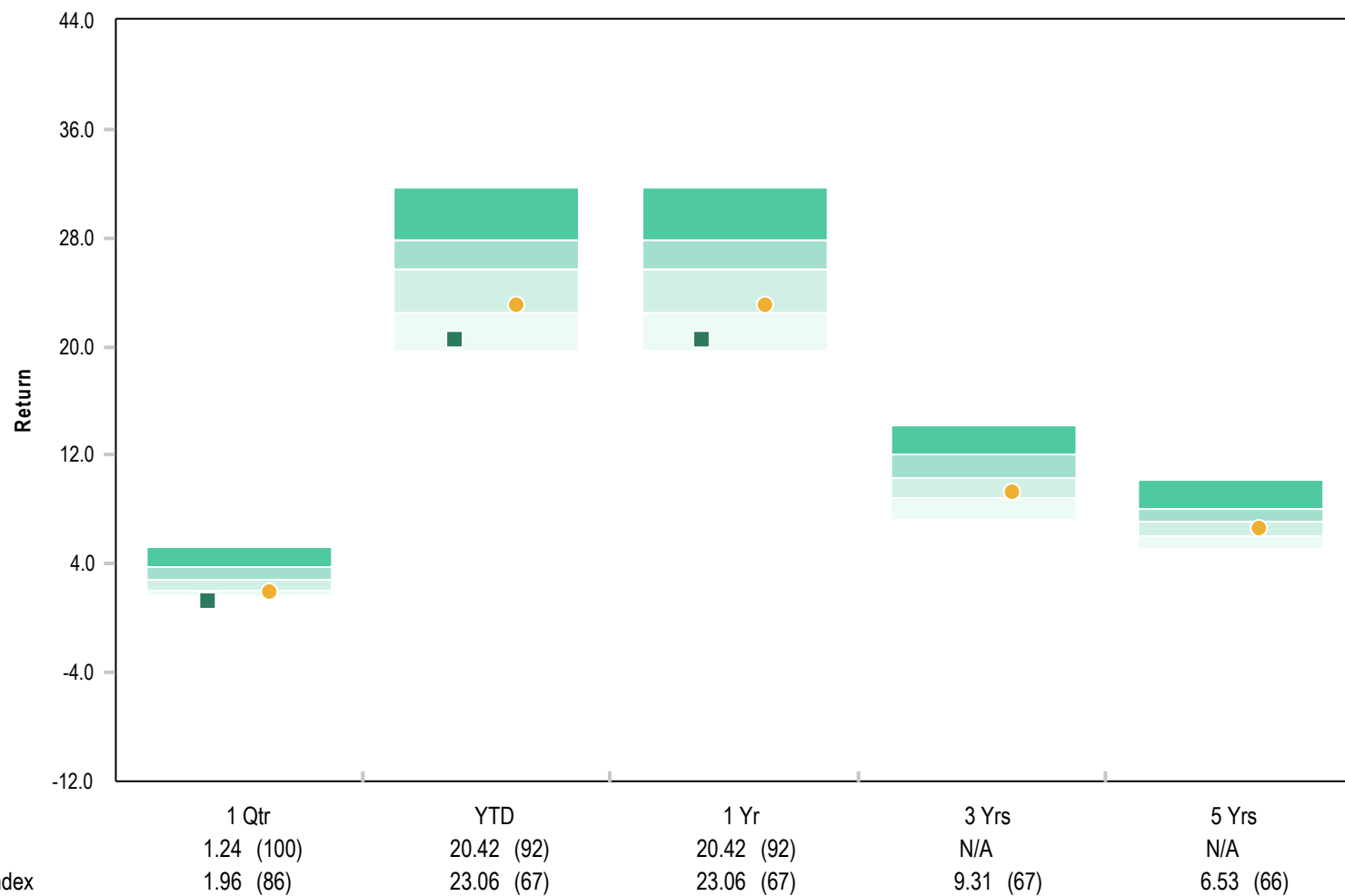
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	82,616,020,514	104,152,443,693
Median Mkt. Cap (\$)	29,563,161,629	5,792,440,025
Price/Earnings ratio	17.75	14.34
Price/Book ratio	2.83	2.47
5 Yr. EPS Growth Rate (%)	17.18	13.04
Current Yield (%)	2.27	2.76
Beta	N/A	1.00
Number of Stocks	61	1,404

Distribution of Market Capitalization (%)



Sector Weights (%)





5th Percentile	5.18	31.65	31.65	14.17	10.25
1st Quartile	3.72	27.84	27.84	12.09	8.01
Median	2.87	25.72	25.72	10.27	7.13
3rd Quartile	2.03	22.49	22.49	8.83	6.08
95th Percentile	1.61	19.66	19.66	7.29	5.16

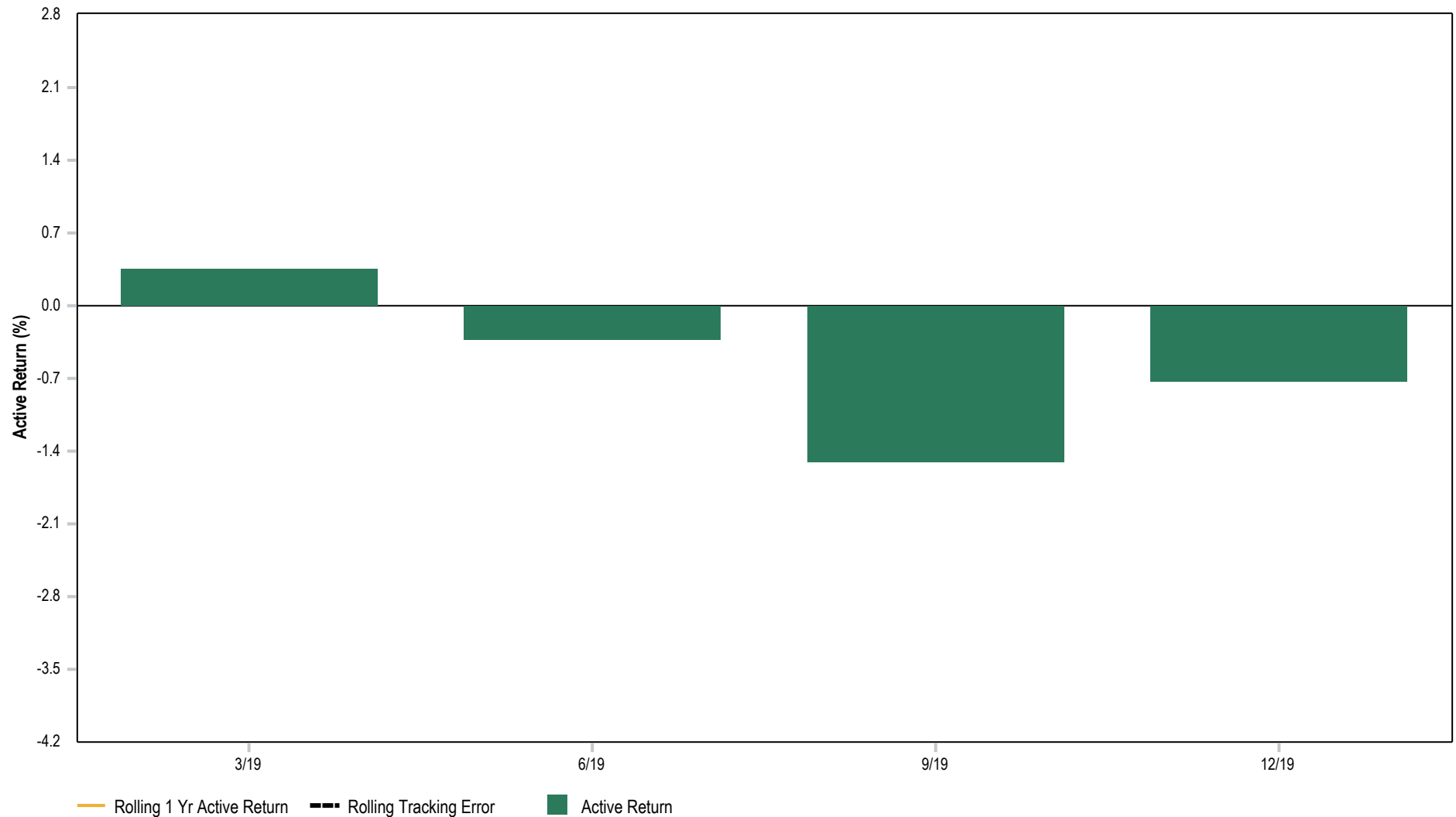
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

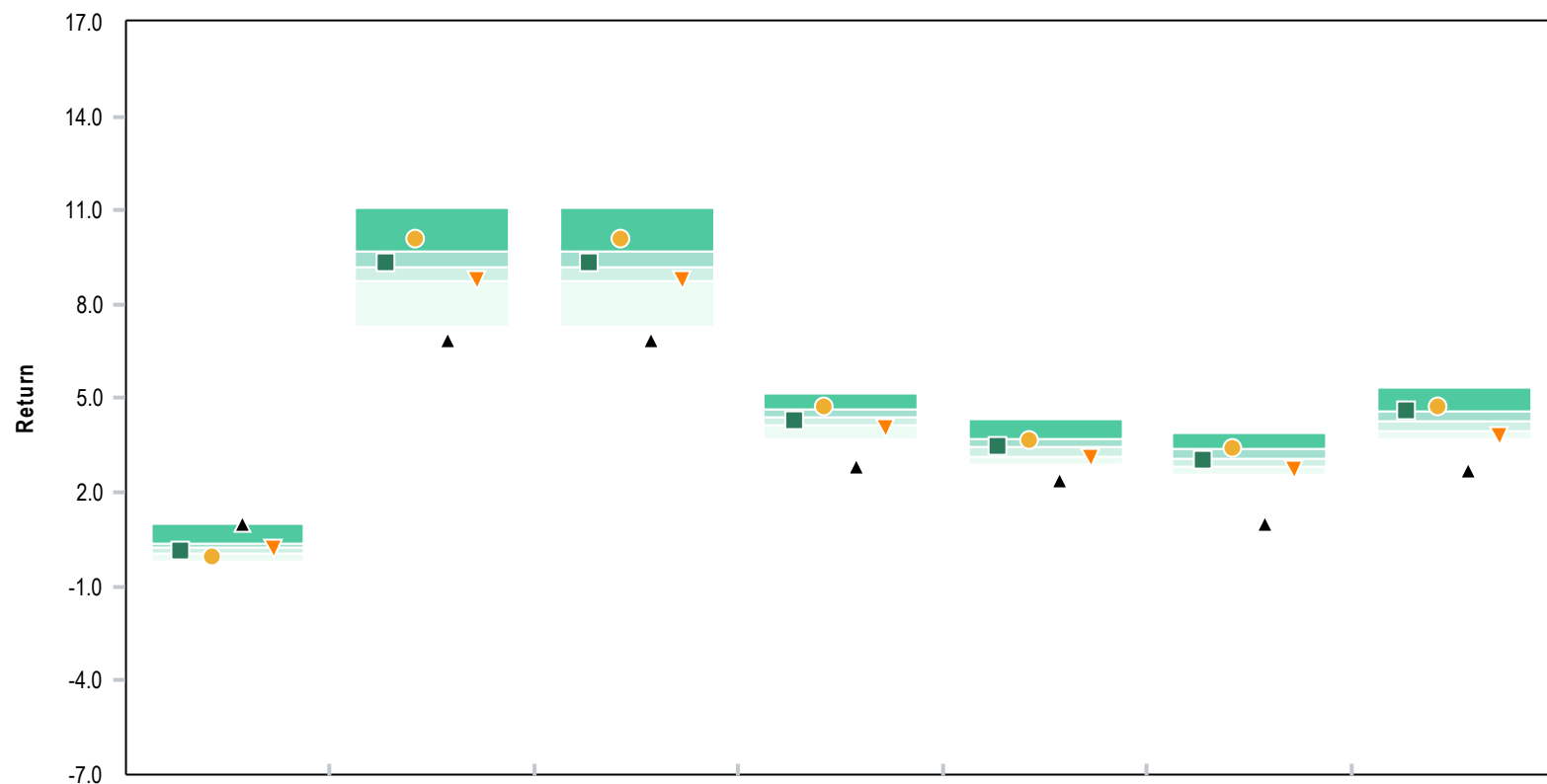
Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Brookfield Global Real Estate	1.24	20.42	20.42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE EPRA/NAREIT Developed Index	1.96	23.06	23.06	9.31	6.53	7.51	9.25	-4.74	11.42	4.99	0.05
Difference	-0.72	-2.64	-2.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Domestic Fixed Income



	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total Domestic Fixed	0.14 (66)	9.29 (46)	9.29 (46)	4.27 (59)	3.46 (51)	3.02 (59)	4.60 (24)
● Income Research & Management	-0.10 (90)	10.05 (10)	10.05 (10)	4.70 (24)	3.64 (33)	3.41 (22)	4.74 (18)
▲ IRM-TIPS	0.99 (6)	6.88 (97)	6.88 (97)	2.82 (100)	2.40 (100)	1.01 (100)	2.71 (100)
▼ Barclays Aggregate	0.18 (57)	8.72 (77)	8.72 (77)	4.03 (85)	3.05 (89)	2.72 (88)	3.75 (91)

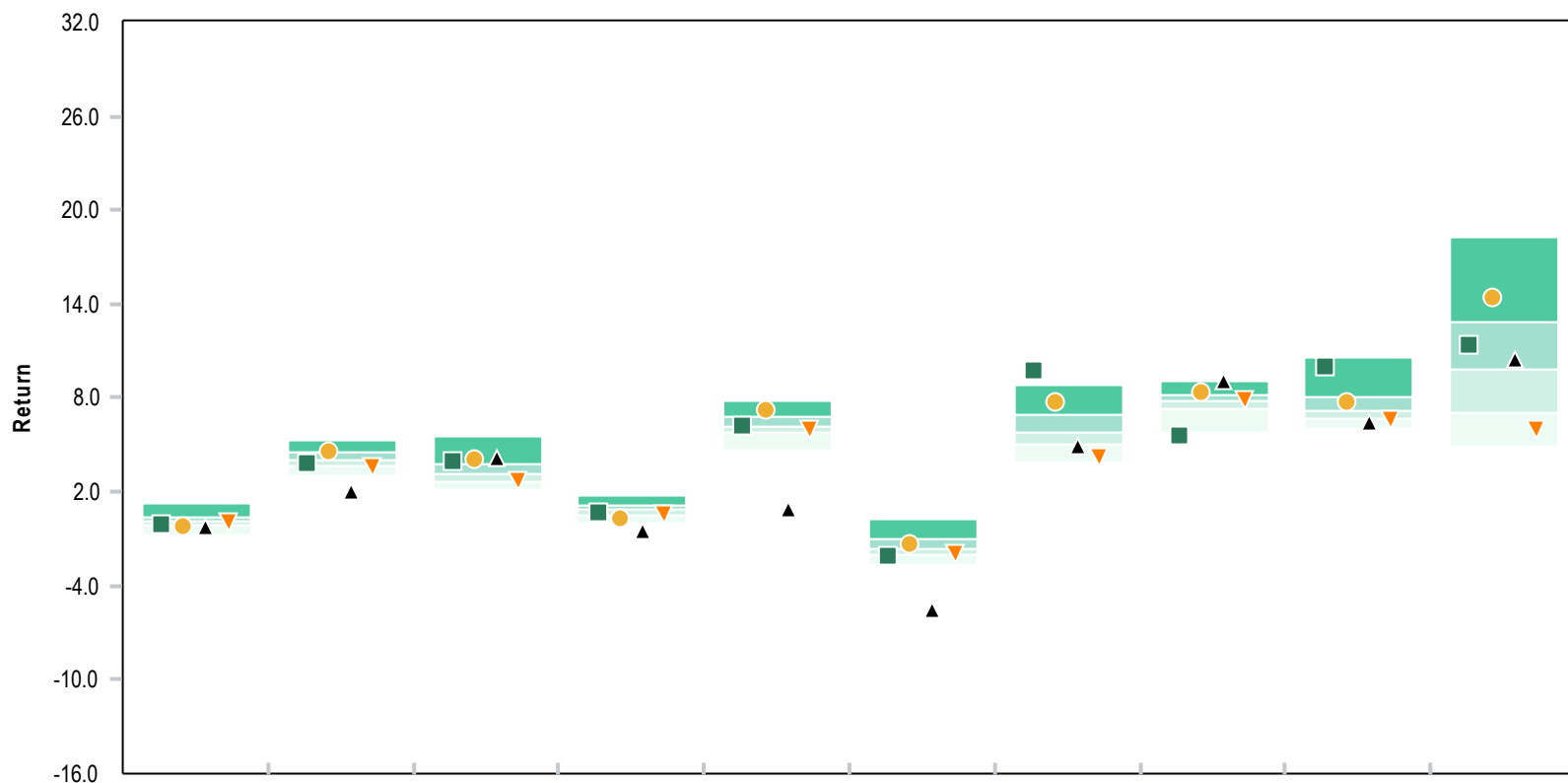
5th Percentile	1.00	11.08	11.08	5.17	4.37	3.89	5.35
1st Quartile	0.34	9.68	9.68	4.66	3.71	3.37	4.57
Median	0.22	9.20	9.20	4.40	3.46	3.07	4.27
3rd Quartile	0.05	8.75	8.75	4.12	3.17	2.81	3.96
95th Percentile	-0.18	7.33	7.33	3.71	2.89	2.60	3.68

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Broad Market Core Fixed Income (SA+CF)

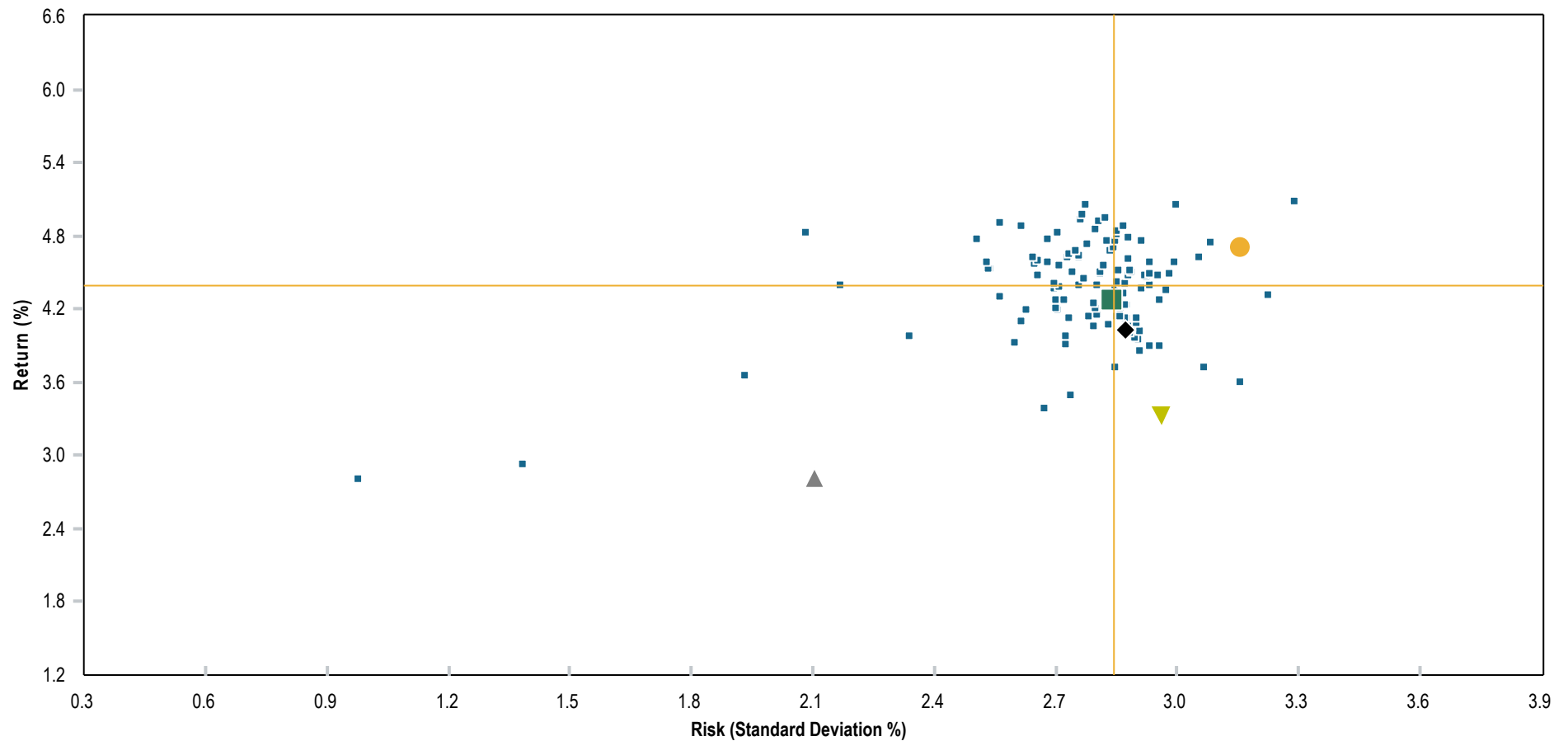
As of December 31, 2019



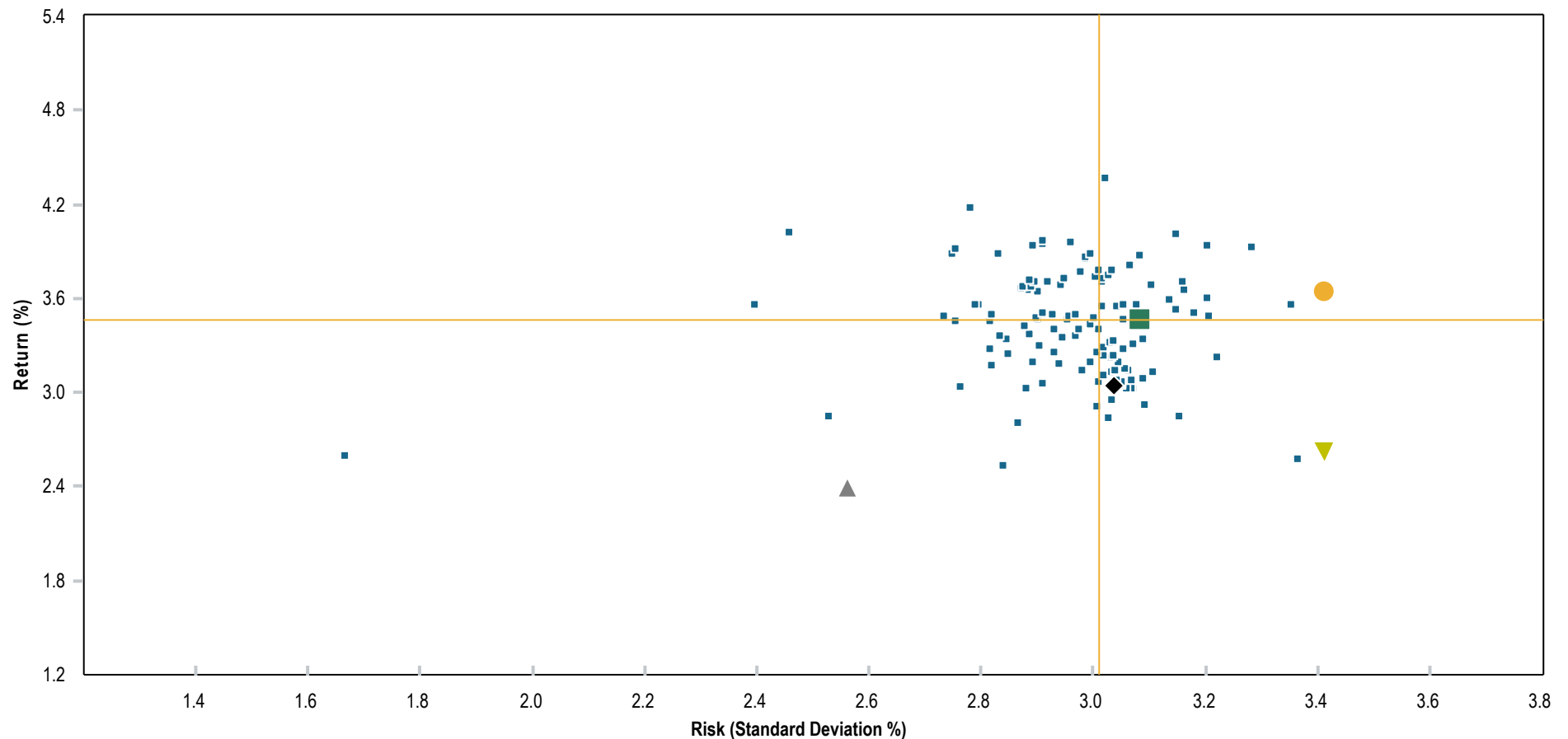
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Total Domestic Fixed	-0.08 (70)	3.82 (62)	3.86 (24)	0.66 (64)	6.15 (51)	-2.14 (82)	9.73 (5)	5.49 (98)	9.95 (8)	11.40 (36)
● Income Research & Management	-0.19 (79)	4.49 (27)	4.00 (21)	0.20 (87)	7.23 (10)	-1.39 (40)	7.70 (12)	8.31 (24)	7.71 (39)	14.40 (17)
▲ IRM-TIPS	-0.26 (83)	1.97 (100)	4.11 (16)	-0.53 (98)	0.88 (100)	-5.54 (100)	4.96 (76)	9.08 (6)	6.41 (85)	10.49 (42)
▼ Barclays Aggregate	0.01 (61)	3.54 (83)	2.65 (75)	0.55 (76)	5.97 (67)	-2.02 (72)	4.21 (90)	7.84 (51)	6.54 (83)	5.93 (89)

5th Percentile	1.32	5.27	5.54	1.72	7.86	0.19	8.80	9.10	10.58	18.21
1st Quartile	0.39	4.51	3.82	1.11	6.78	-1.03	6.87	8.24	8.10	12.79
Median	0.07	4.04	3.10	0.82	6.16	-1.58	5.84	7.84	7.23	9.84
3rd Quartile	-0.15	3.63	2.64	0.55	5.82	-2.05	5.00	7.25	6.72	7.11
95th Percentile	-0.72	3.08	2.15	-0.06	4.66	-2.64	3.86	5.79	6.04	4.86

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total Domestic Fixed	3.46	3.08
● Income Research & Management	3.64	3.41
◆ Barclays Aggregate	3.05	3.04
▲ IRM-TIPS	2.40	2.56
▼ Blmbg. Barc. U.S. TIPS	2.62	3.41
— Median	3.46	3.01

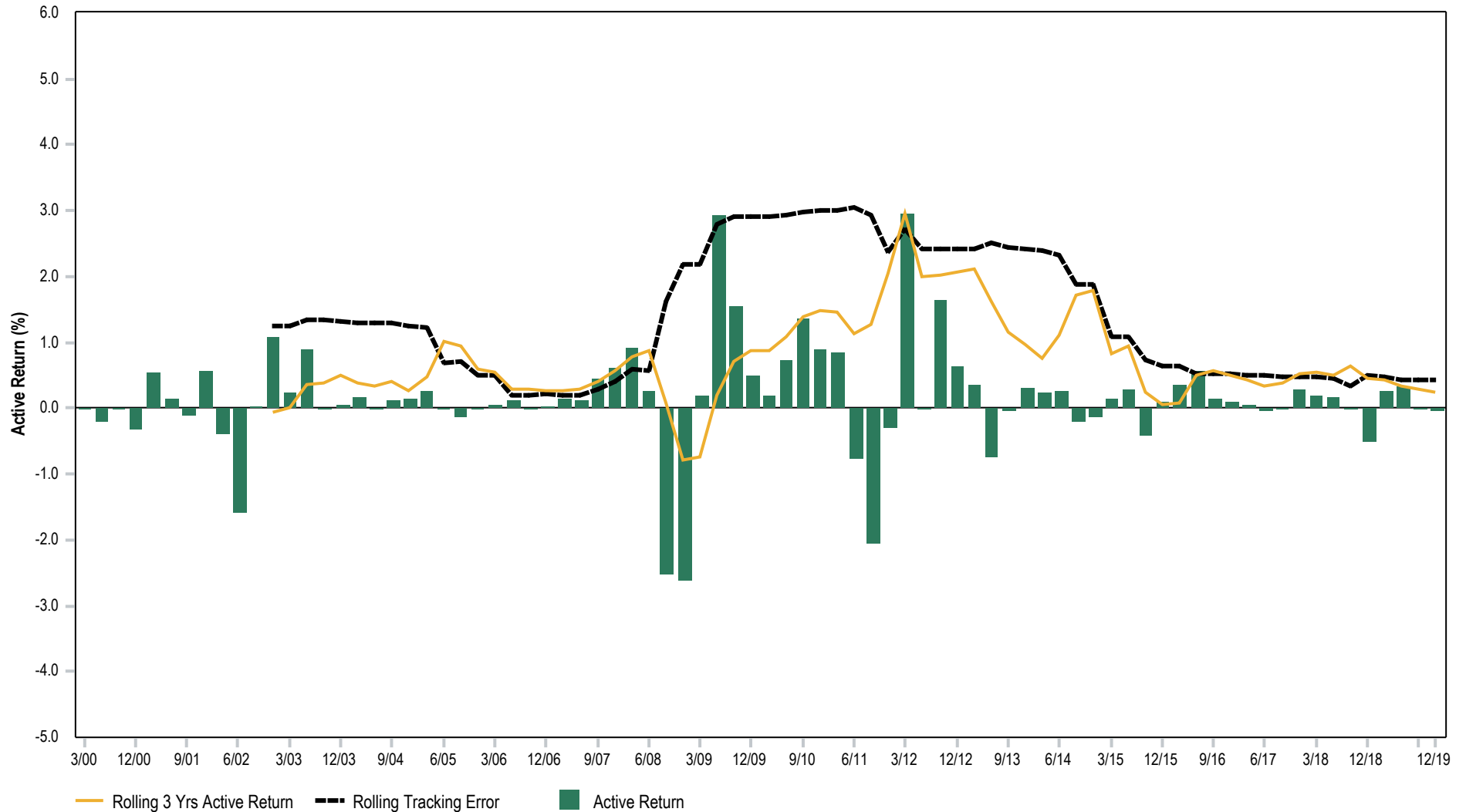
Calculation based on monthly periodicity.

Bristol County Retirement System

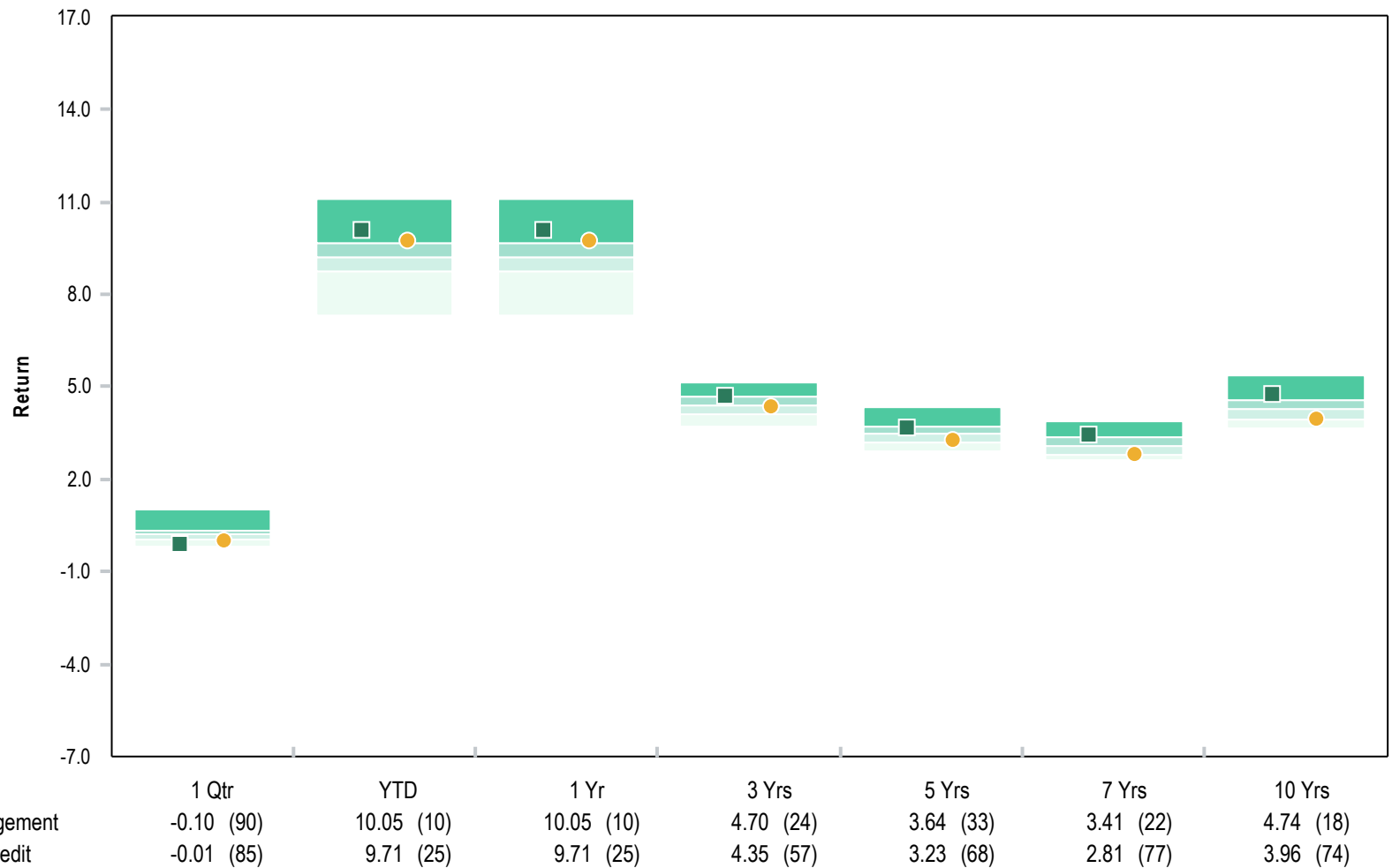
Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Total Domestic Fixed	0.14	9.29	9.29	4.27	3.46	3.02	4.60	-0.08	3.82	3.86	0.66
Barclays Aggregate	0.18	8.72	8.72	4.03	3.05	2.72	3.75	0.01	3.54	2.65	0.55
Difference	-0.04	0.57	0.57	0.24	0.41	0.30	0.85	-0.09	0.28	1.21	0.11

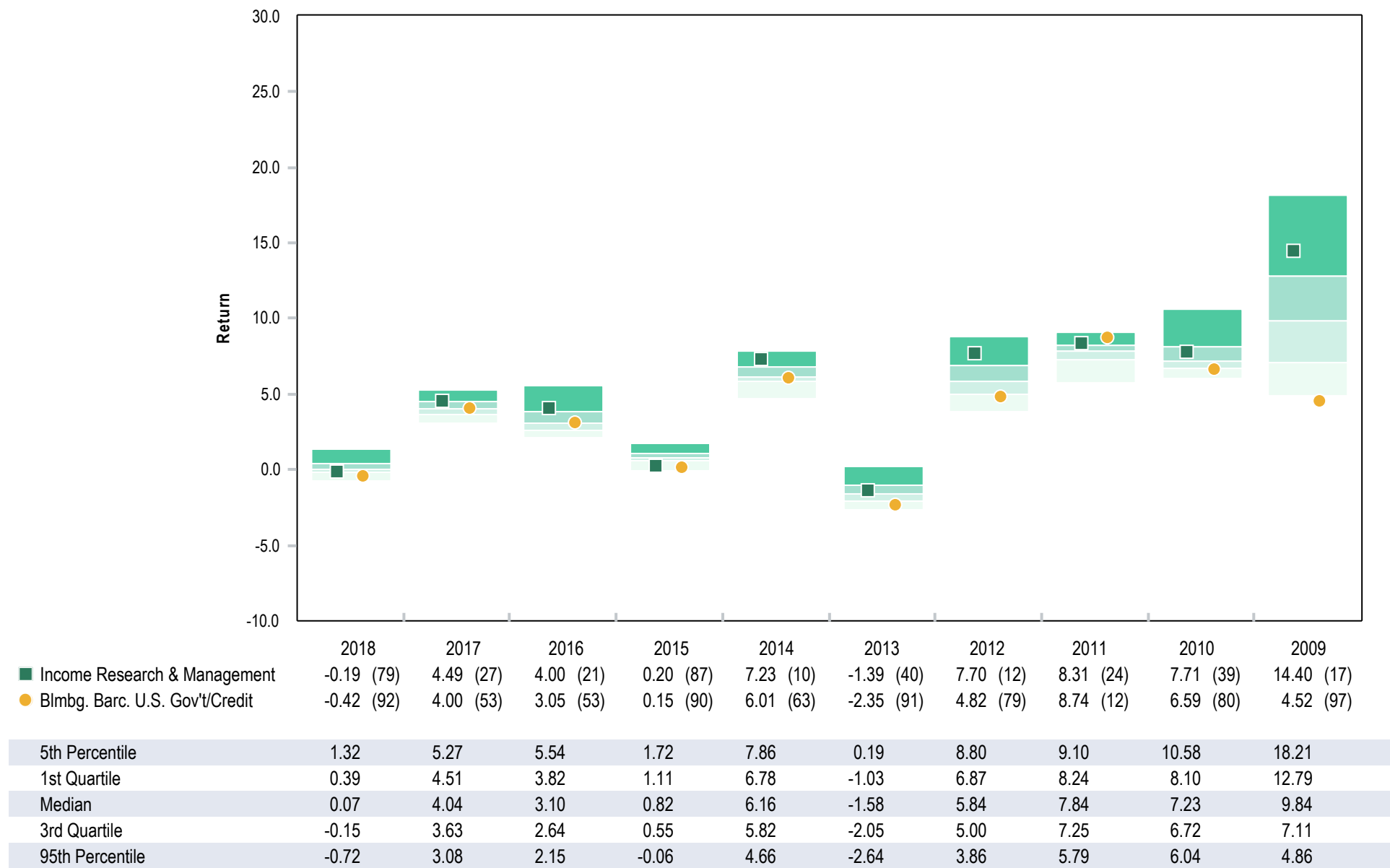


Gross of Fees



5th Percentile	1.00	11.08	11.08	5.17	4.37	3.89	5.35
1st Quartile	0.34	9.68	9.68	4.66	3.71	3.37	4.57
Median	0.22	9.20	9.20	4.40	3.46	3.07	4.27
3rd Quartile	0.05	8.75	8.75	4.12	3.17	2.81	3.96
95th Percentile	-0.18	7.33	7.33	3.71	2.89	2.60	3.68

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



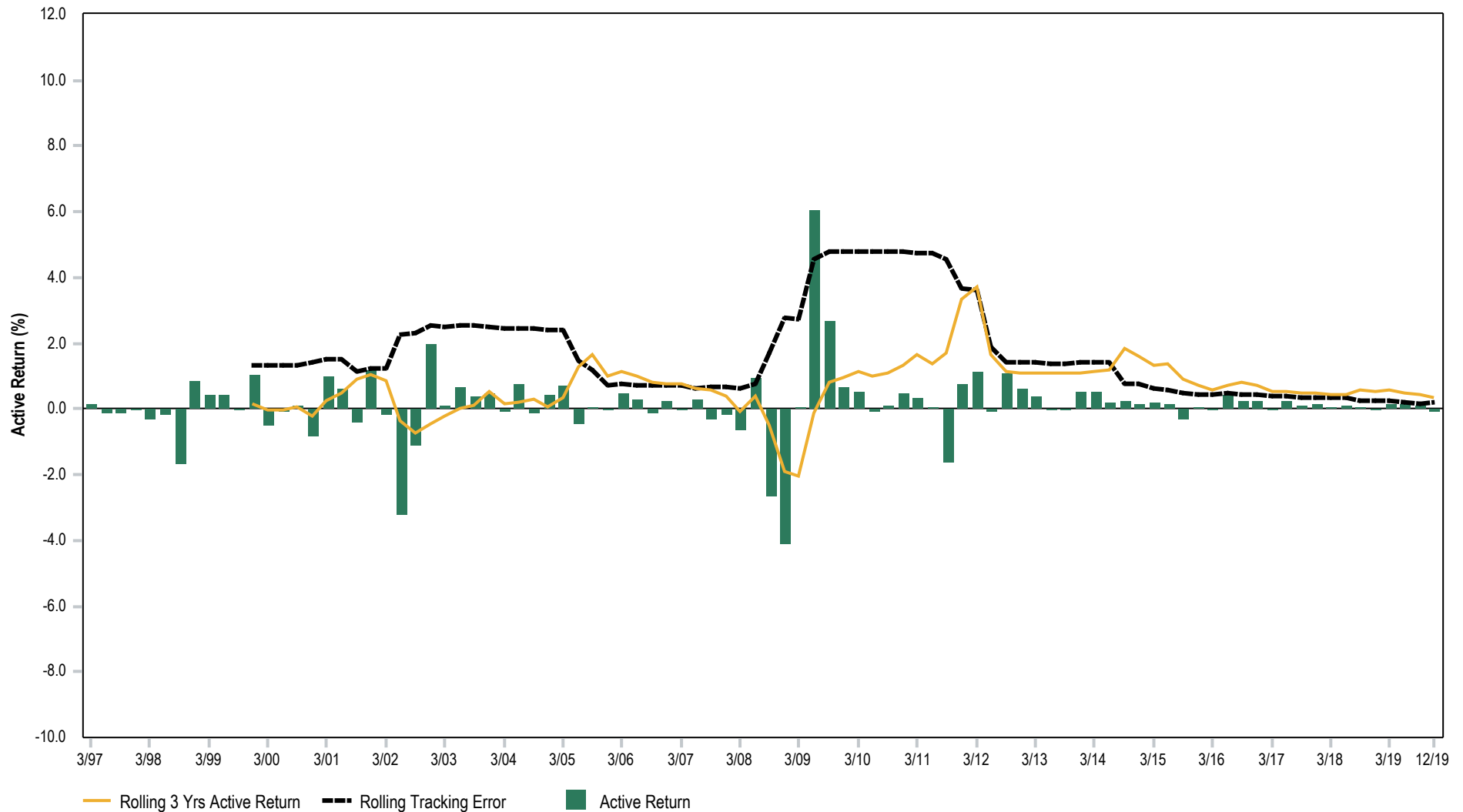
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

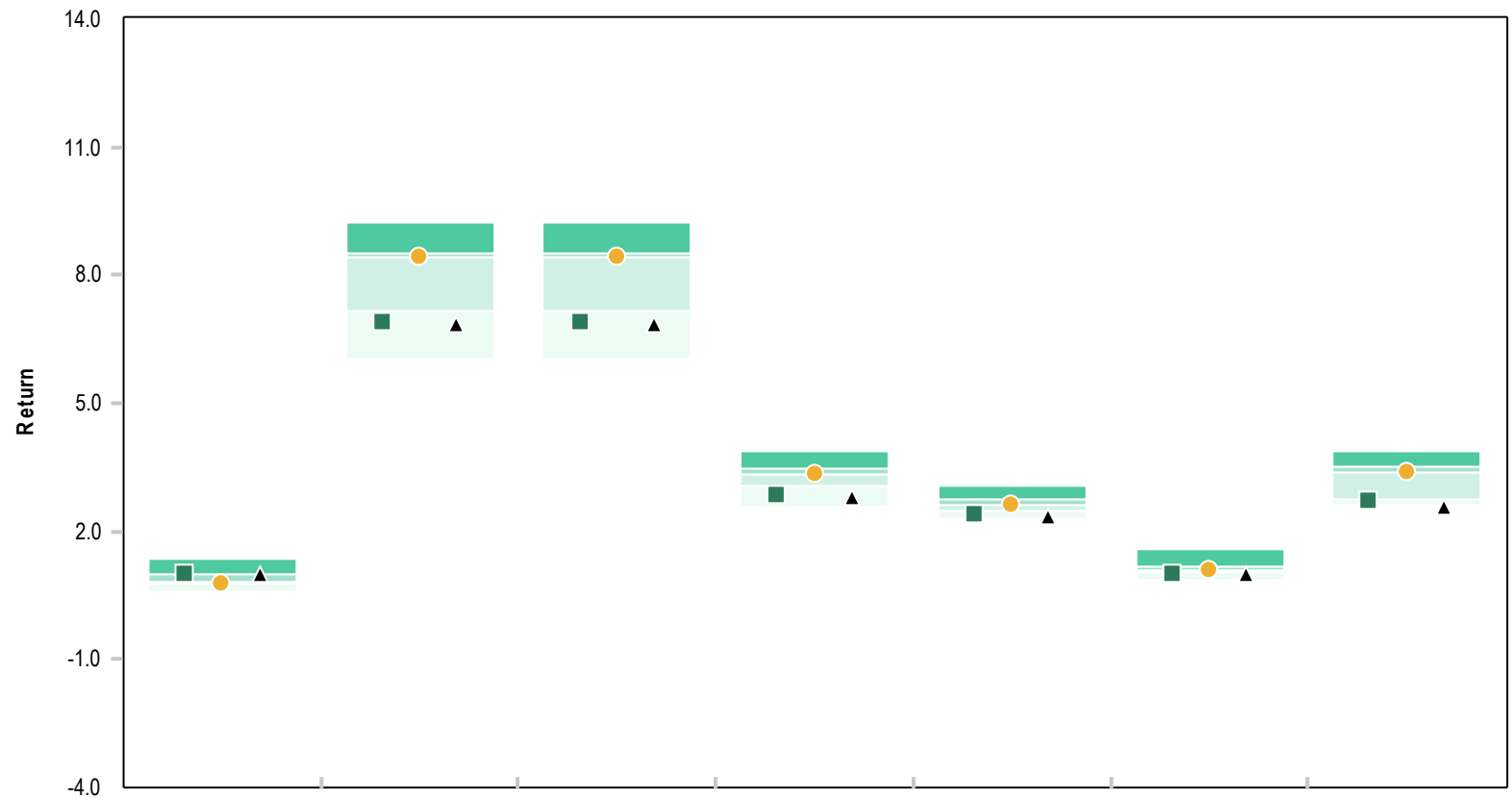
Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Income Research & Management	-0.10	10.05	10.05	4.70	3.64	3.41	4.74	-0.19	4.49	4.00	0.20
Blmbg. Barc. U.S. Gov't/Credit	-0.01	9.71	9.71	4.35	3.23	2.81	3.96	-0.42	4.00	3.05	0.15
Difference	-0.09	0.34	0.34	0.35	0.41	0.60	0.78	0.23	0.49	0.95	0.05

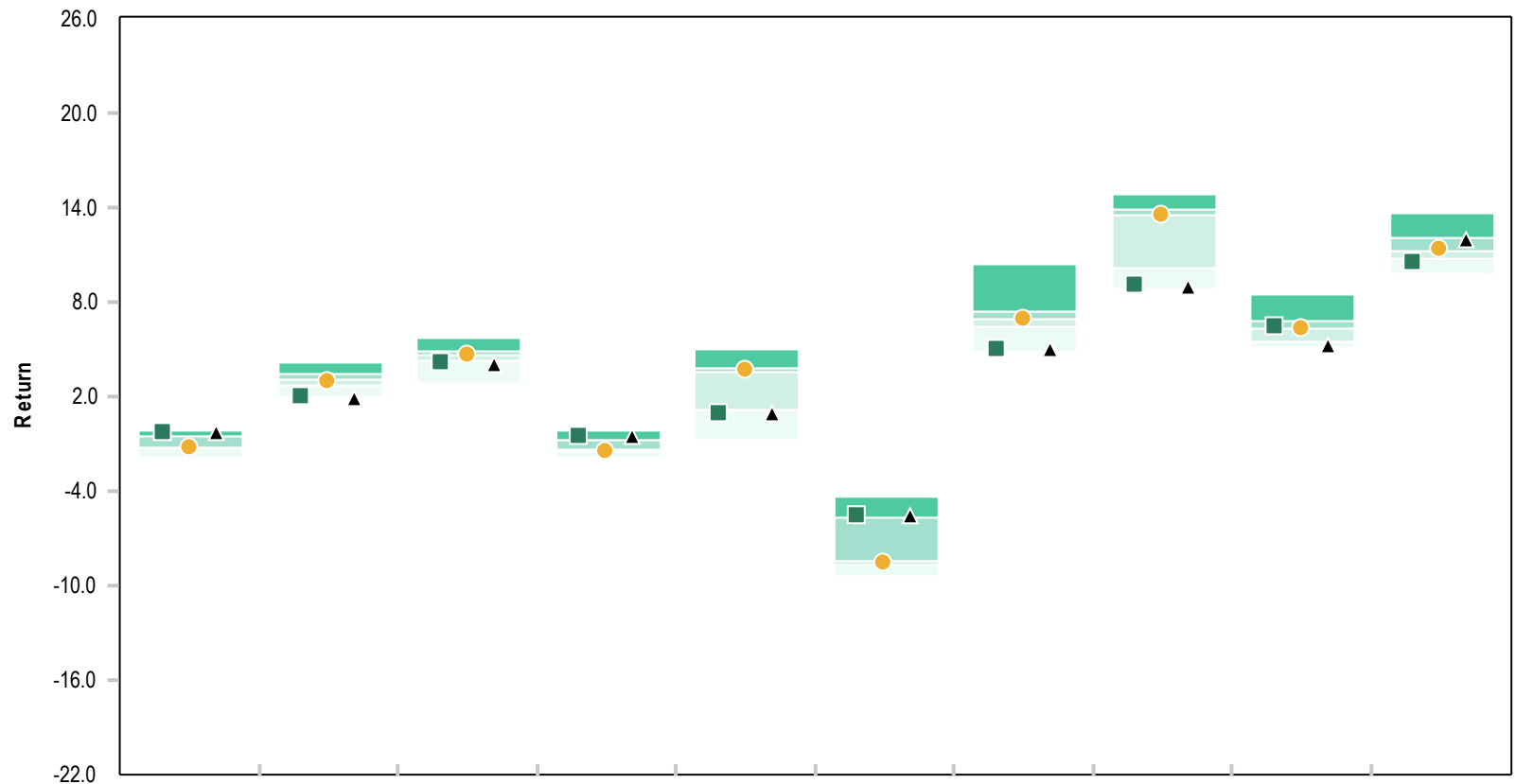




	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
IRM-TIPS	0.99 (28)	6.88 (80)	6.88 (80)	2.82 (89)	2.40 (85)	1.01 (85)	2.71 (80)
Blmbg. Barc. U.S. TIPS	0.79 (57)	8.43 (53)	8.43 (53)	3.32 (66)	2.62 (63)	1.08 (64)	3.36 (50)
Blmbg. Barc. U.S. TIPS 1-10 Year	1.00 (26)	6.85 (88)	6.85 (88)	2.79 (94)	2.36 (94)	0.98 (93)	2.57 (100)

5th Percentile	1.33	9.22	9.22	3.89	3.08	1.57	3.88
1st Quartile	1.00	8.52	8.52	3.46	2.73	1.18	3.51
Median	0.80	8.43	8.43	3.34	2.62	1.10	3.36
3rd Quartile	0.75	7.15	7.15	3.06	2.46	1.06	2.76
95th Percentile	0.58	6.05	6.05	2.59	2.29	0.85	2.61

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
IRM-TIPS	-0.26 (21)	1.97 (96)	4.11 (82)	-0.53 (19)	0.88 (87)	-5.54 (18)	4.96 (89)	9.08 (83)	6.41 (48)	10.49 (82)
Blmbg. Barc. U.S. TIPS	-1.26 (56)	3.01 (69)	4.68 (43)	-1.44 (61)	3.64 (43)	-8.61 (69)	6.98 (49)	13.56 (44)	6.31 (53)	11.41 (39)
Blmbg. Barc. U.S. TIPS 1-10 Year	-0.25 (18)	1.90 (98)	4.01 (90)	-0.52 (19)	0.91 (84)	-5.58 (21)	5.04 (84)	8.93 (90)	5.22 (94)	12.02 (26)

5th Percentile	-0.11	4.17	5.76	-0.18	4.97	-4.42	10.43	14.80	8.48	13.60
1st Quartile	-0.51	3.47	4.89	-0.79	3.84	-5.70	7.43	13.84	6.78	12.05
Median	-1.25	3.09	4.66	-1.41	3.61	-8.46	6.96	13.54	6.36	11.27
3rd Quartile	-1.29	2.75	4.30	-1.51	1.12	-8.66	6.39	10.10	5.49	10.73
95th Percentile	-1.88	1.98	2.85	-1.88	-0.81	-9.41	4.92	8.87	5.10	9.76

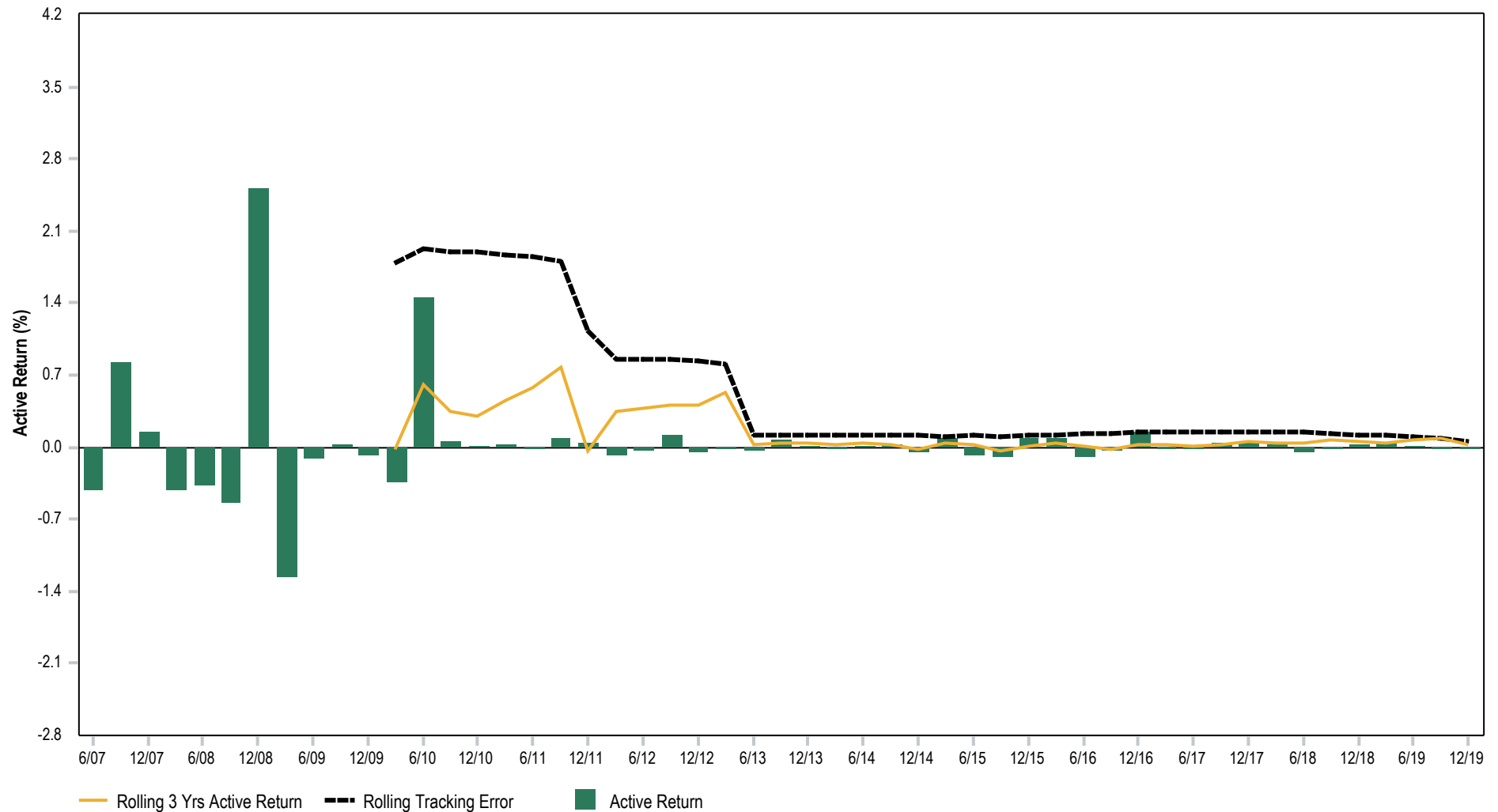
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

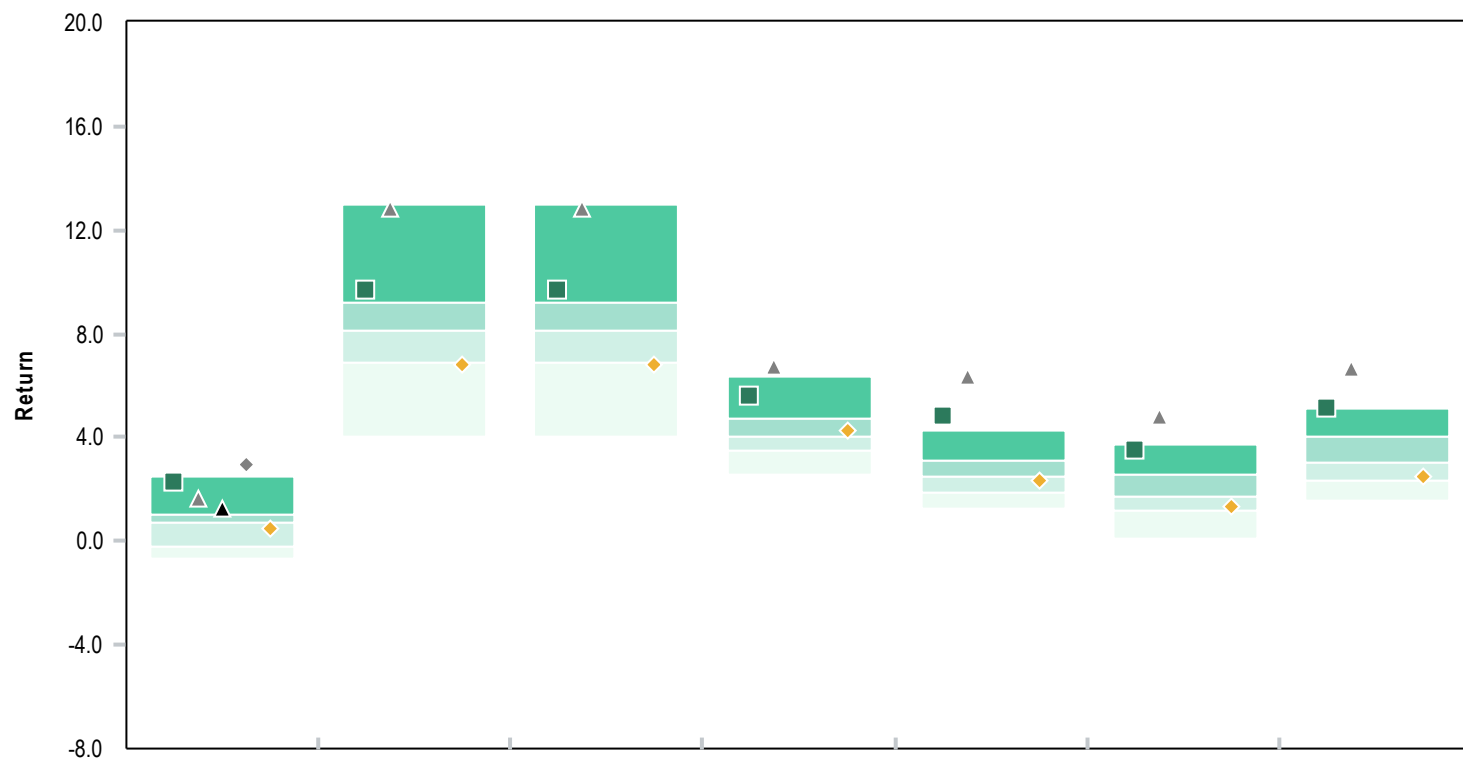
Comparative Performance & Rolling Return

As of December 31, 2019

	YTD	1 Yr	3 Yrs	5 Yrs	2018	2017	2016	Since Inception	Inception Date
IRM-TIPS	6.88	6.88	2.82	2.40	-0.26	1.97	4.11	3.66	02/01/2007
Blmbg. Barc. U.S. TIPS 1-10 Year	6.85	6.85	2.79	2.36	-0.25	1.90	4.01	3.54	
Difference	0.03	0.03	0.03	0.04	-0.01	0.07	0.10	0.12	



Global Fixed Income



■ Total Global Fixed
 ▲ PIMCO Diversified Income
 ▲ Franklin Templeton Global Bond
 ◆ GoldenTree Multi-Sector Opportunistic Fund
 ◆ Blmbg. Barc. Global Aggregate

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Global Fixed	2.28 (6)	9.63 (21)	9.63 (21)	5.57 (9)	4.79 (1)	3.48 (9)	5.13 (6)
PIMCO Diversified Income	1.65 (14)	12.81 (6)	12.81 (6)	6.74 (3)	6.36 (1)	4.81 (1)	6.66 (1)
Franklin Templeton Global Bond	1.25 (21)	N/A	N/A	N/A	N/A	N/A	N/A
GoldenTree Multi-Sector Opportunistic Fund	2.93 (4)	N/A	N/A	N/A	N/A	N/A	N/A
Blmbg. Barc. Global Aggregate	0.49 (64)	6.84 (78)	6.84 (78)	4.27 (43)	2.31 (58)	1.35 (69)	2.48 (73)

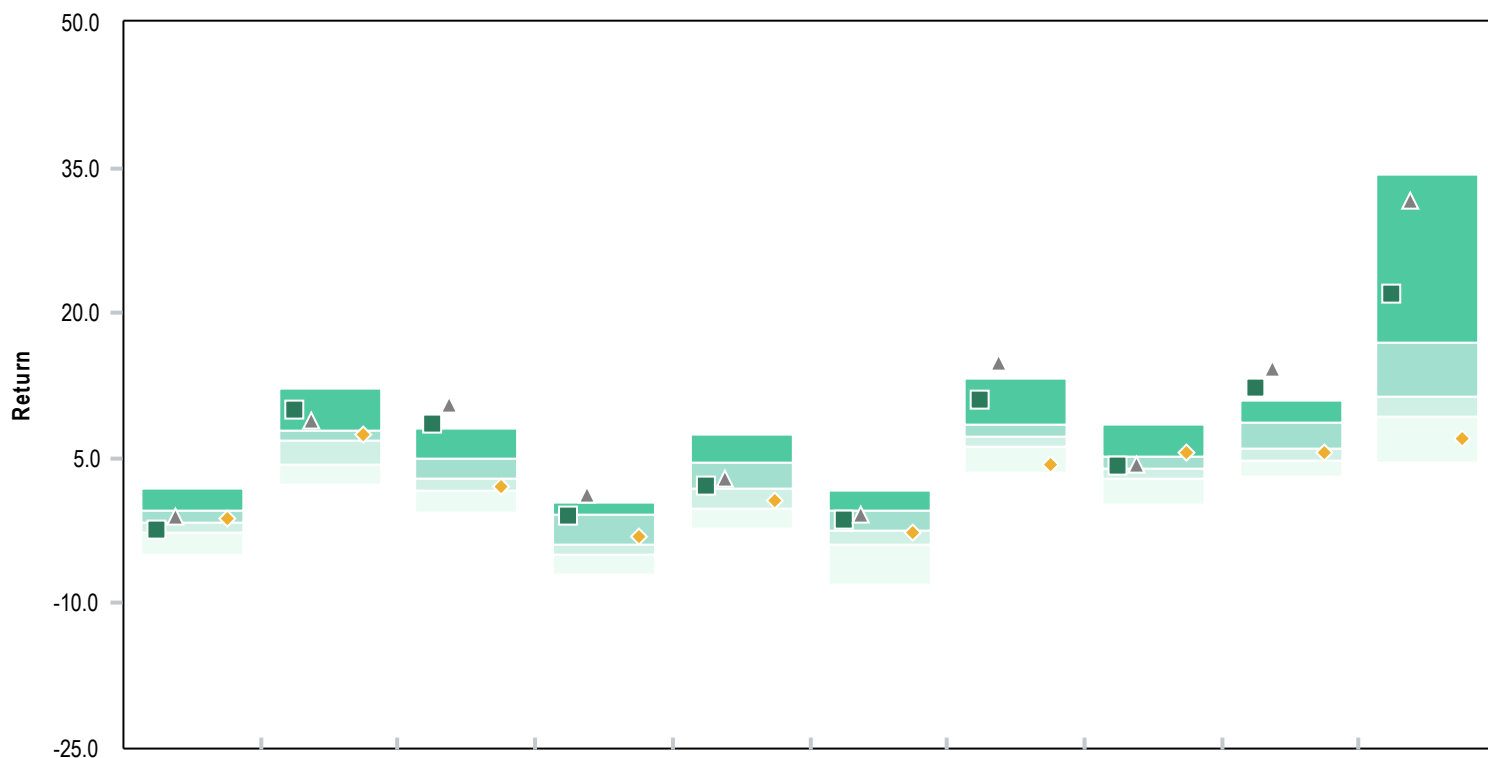
5th Percentile	2.52	12.98	12.98	6.31	4.28	3.74	5.13
1st Quartile	1.01	9.19	9.19	4.76	3.11	2.54	4.01
Median	0.68	8.12	8.12	4.04	2.46	1.70	3.04
3rd Quartile	-0.19	6.89	6.89	3.49	1.88	1.19	2.35
95th Percentile	-0.68	4.00	4.00	2.56	1.28	0.13	1.53

Parentheses contain percentile rankings.
 Calculation based on monthly periodicity.

Bristol County Retirement System

IM Global Fixed Income (MF)

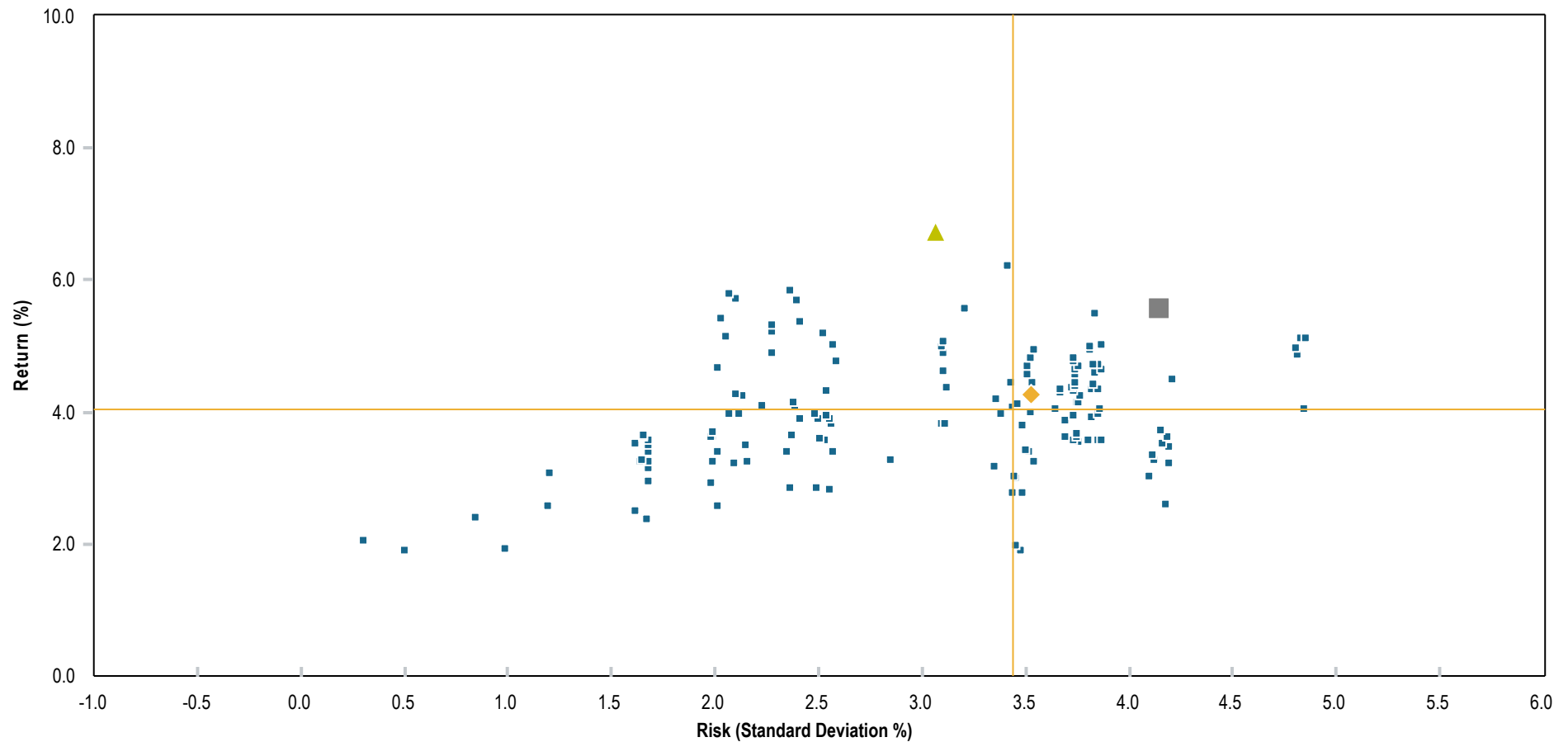
As of December 31, 2019



	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
■ Total Global Fixed	-2.43 (70)	10.00 (9)	8.55 (3)	-1.05 (27)	2.13 (47)	-1.54 (38)	11.04 (14)	4.23 (46)	12.13 (4)	21.87 (17)
▲ PIMCO Diversified Income	-0.96 (36)	8.85 (16)	10.56 (2)	1.24 (1)	2.98 (38)	-0.91 (29)	14.97 (4)	4.44 (38)	14.27 (1)	31.57 (6)
▲ Franklin Templeton Global Bond	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
◆ GoldenTree Multi-Sector Opportunistic Fund	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
◆ Blmbg. Barc. Global Aggregate	-1.19 (40)	7.39 (38)	2.09 (69)	-3.15 (41)	0.59 (62)	-2.60 (52)	4.32 (94)	5.64 (21)	5.54 (59)	6.93 (80)

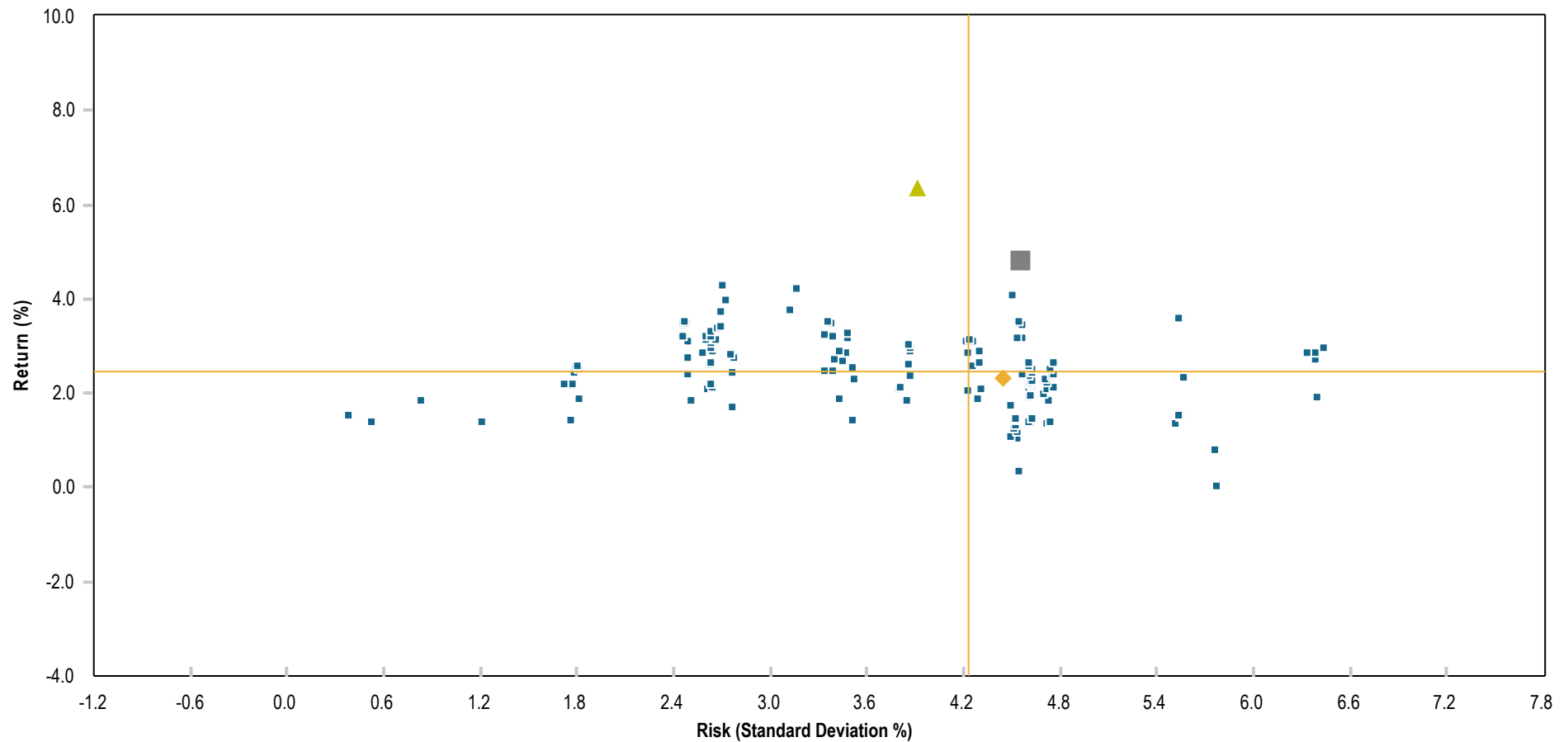
5th Percentile	1.84	12.27	7.96	0.40	7.36	1.66	13.22	8.48	11.05	34.25
1st Quartile	-0.44	7.86	4.95	-0.86	4.52	-0.49	8.43	5.14	8.64	16.98
Median	-1.75	6.81	2.92	-3.83	1.91	-2.52	7.33	4.01	5.97	11.42
3rd Quartile	-2.78	4.42	1.70	-4.94	-0.14	-3.90	6.27	2.81	4.72	9.32
95th Percentile	-4.98	2.21	-0.62	-7.00	-2.35	-8.15	3.48	0.26	3.08	4.45

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total Global Fixed	5.57	4.14
▲ PIMCO Diversified Income	6.74	3.06
▲ Franklin Templeton Global Bond	N/A	N/A
◆ GoldenTree Multi-Sector Opportunistic Fund	N/A	N/A
◆ Blmbg. Barc. Global Aggregate	4.27	3.53
— Median	4.04	3.44

Calculation based on monthly periodicity.



	Return	Standard Deviation
■ Total Global Fixed	4.79	4.56
▲ PIMCO Diversified Income	6.36	3.91
▲ Franklin Templeton Global Bond	N/A	N/A
◆ GoldenTree Multi-Sector Opportunistic Fund	N/A	N/A
◆ Blmbg. Barc. Global Aggregate	2.31	4.45
— Median	2.46	4.23

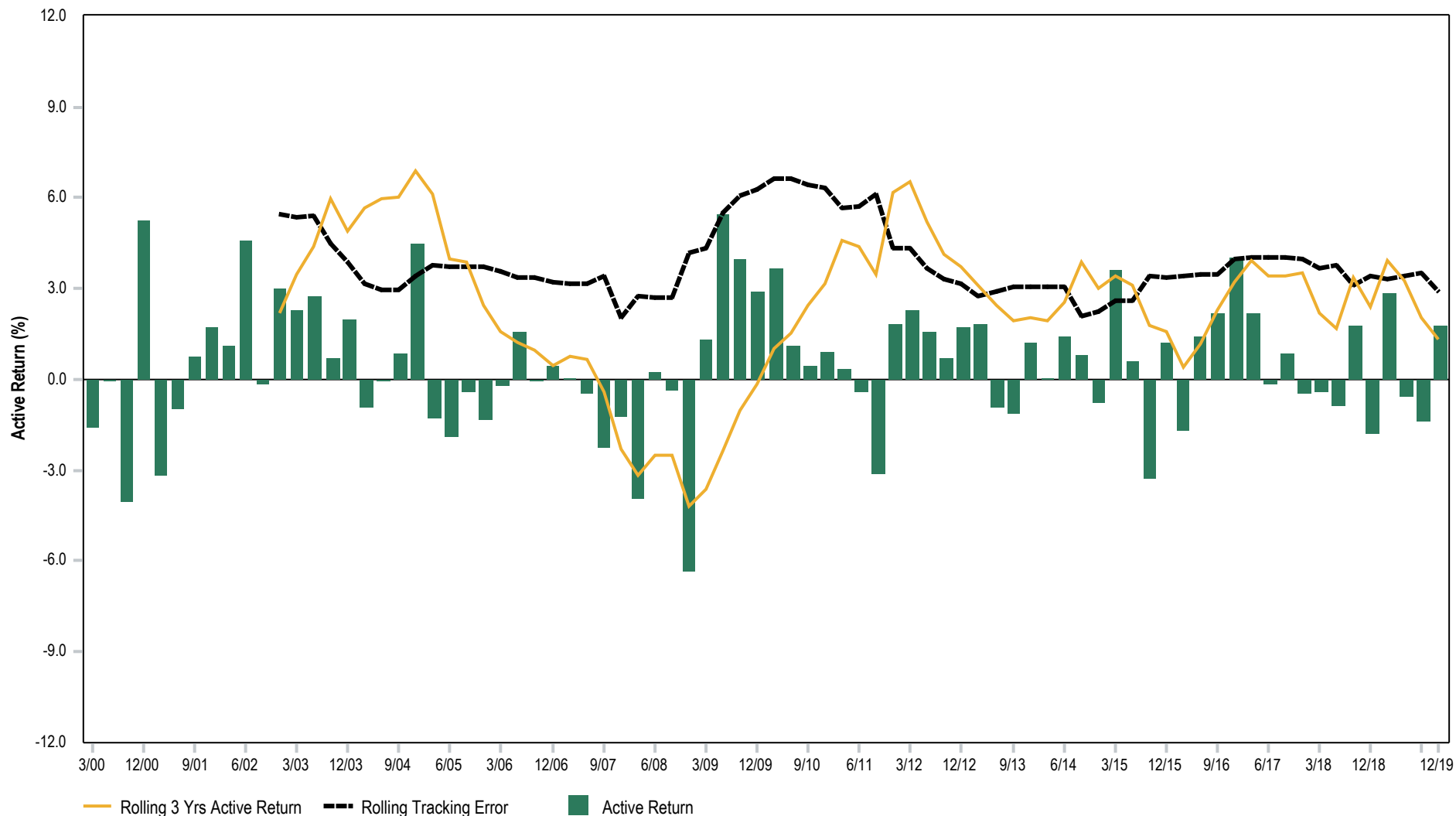
Calculation based on monthly periodicity.

Bristol County Retirement System

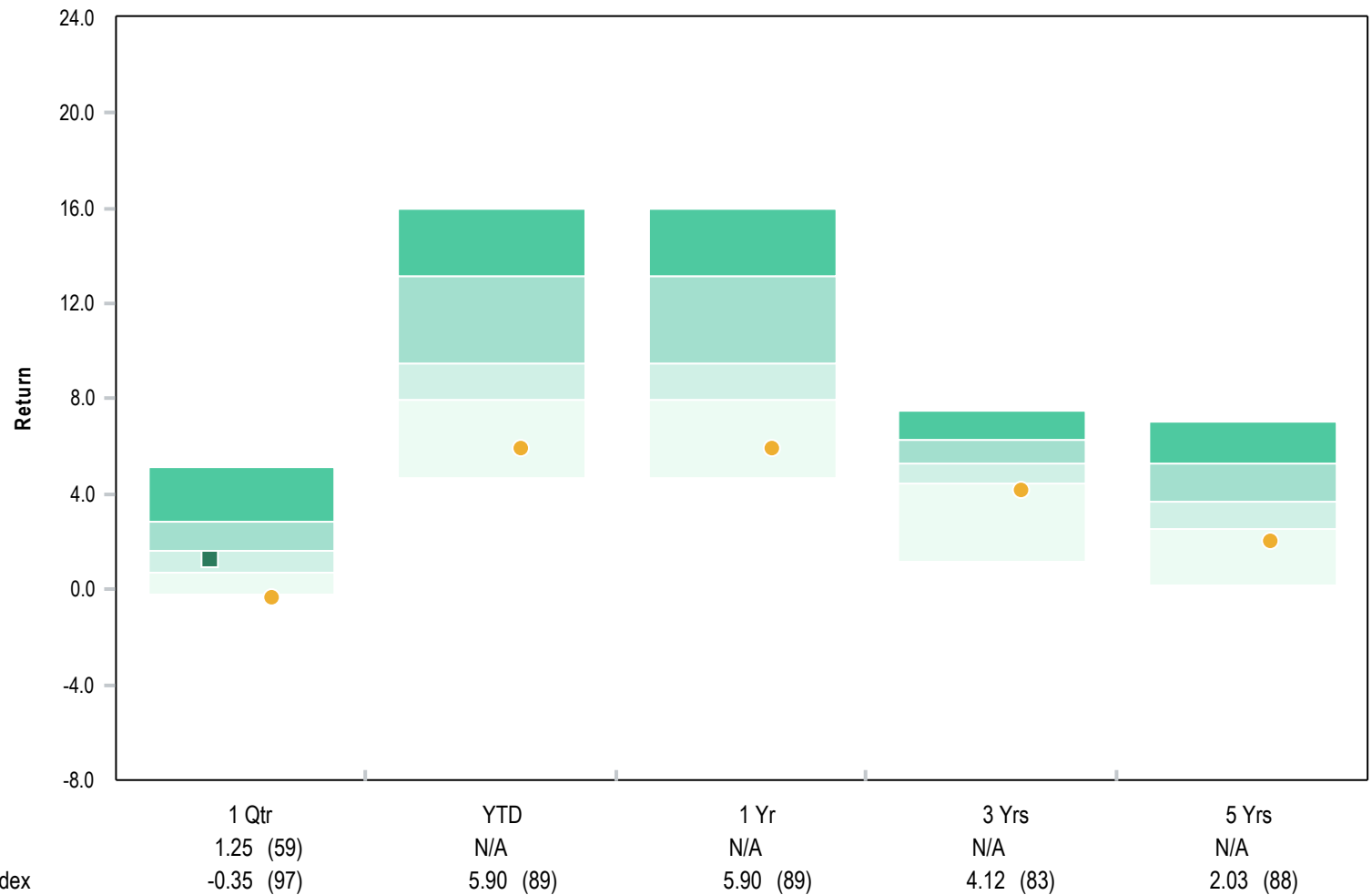
Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Total Global Fixed	2.28	9.63	9.63	5.57	4.79	3.48	5.13	-2.43	10.00	8.55	-1.05
Blmbg. Barc. Global Aggregate	0.49	6.84	6.84	4.27	2.31	1.35	2.48	-1.19	7.39	2.09	-3.15
Difference	1.79	2.79	2.79	1.30	2.48	2.13	2.65	-1.24	2.61	6.46	2.10



Net of fees.



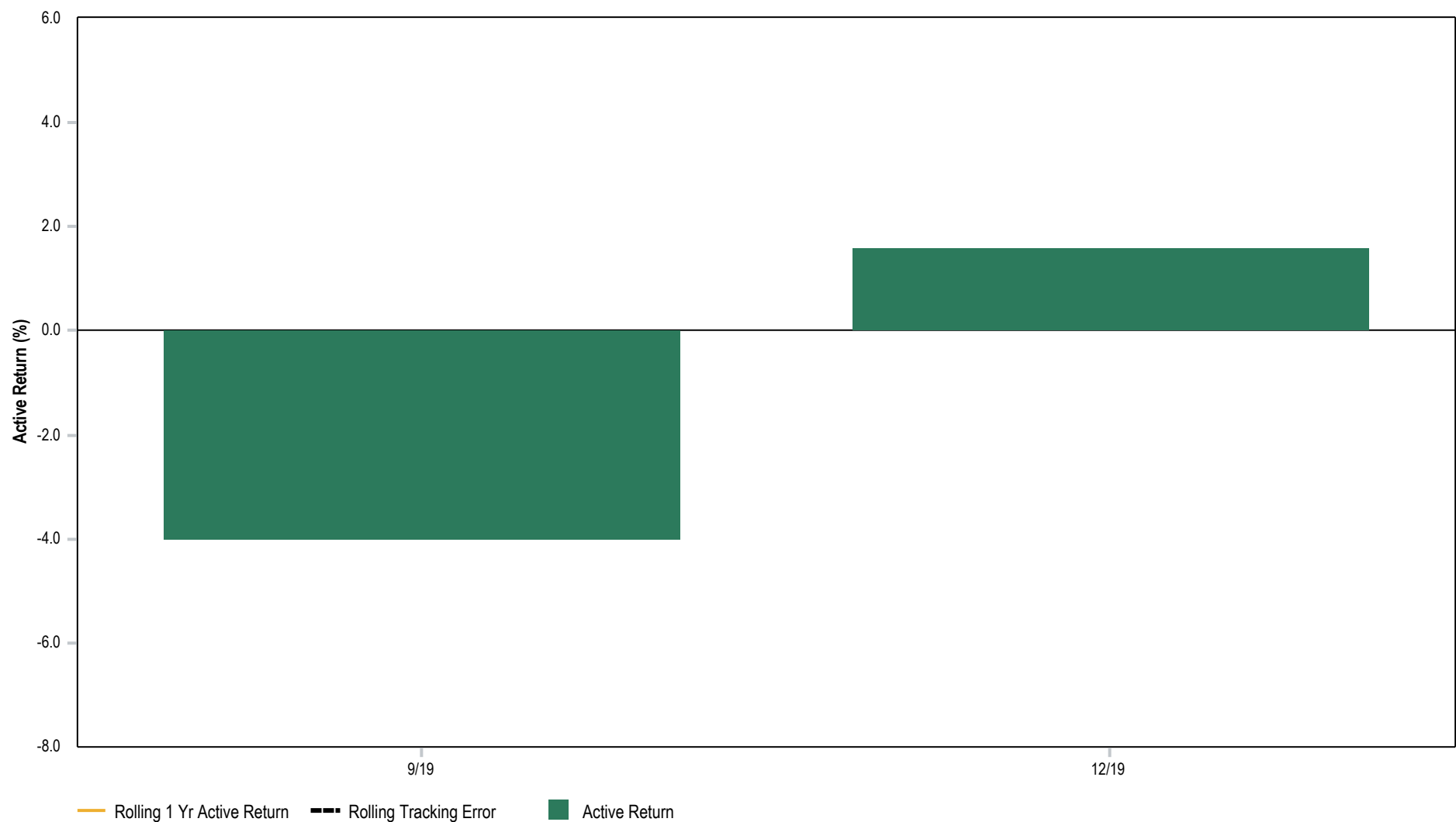
5th Percentile	5.13	16.02	16.02	7.47	7.02
1st Quartile	2.84	13.12	13.12	6.31	5.32
Median	1.62	9.46	9.46	5.30	3.67
3rd Quartile	0.71	7.97	7.97	4.43	2.52
95th Percentile	-0.21	4.66	4.66	1.16	0.15

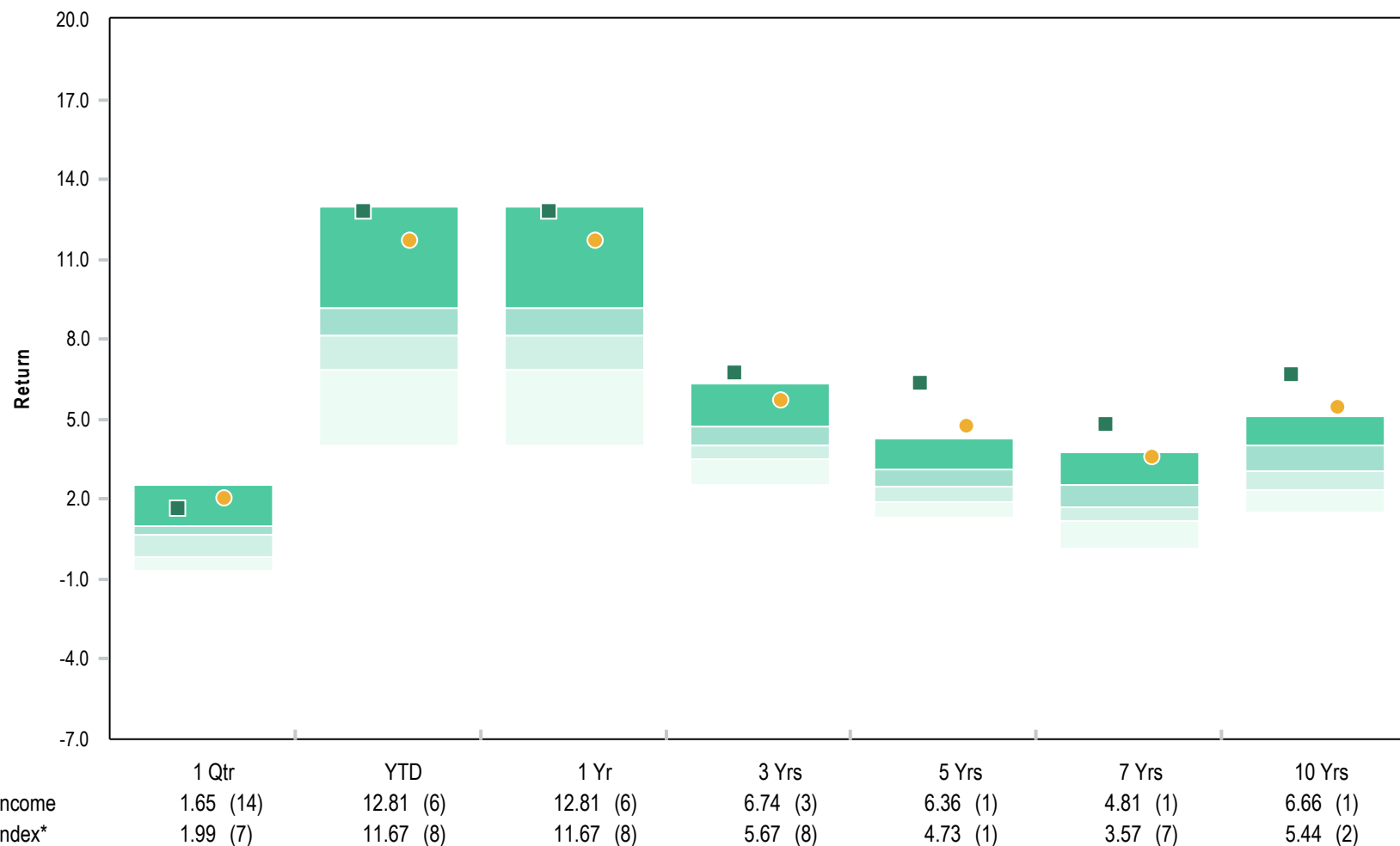
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return As of December 31, 2019

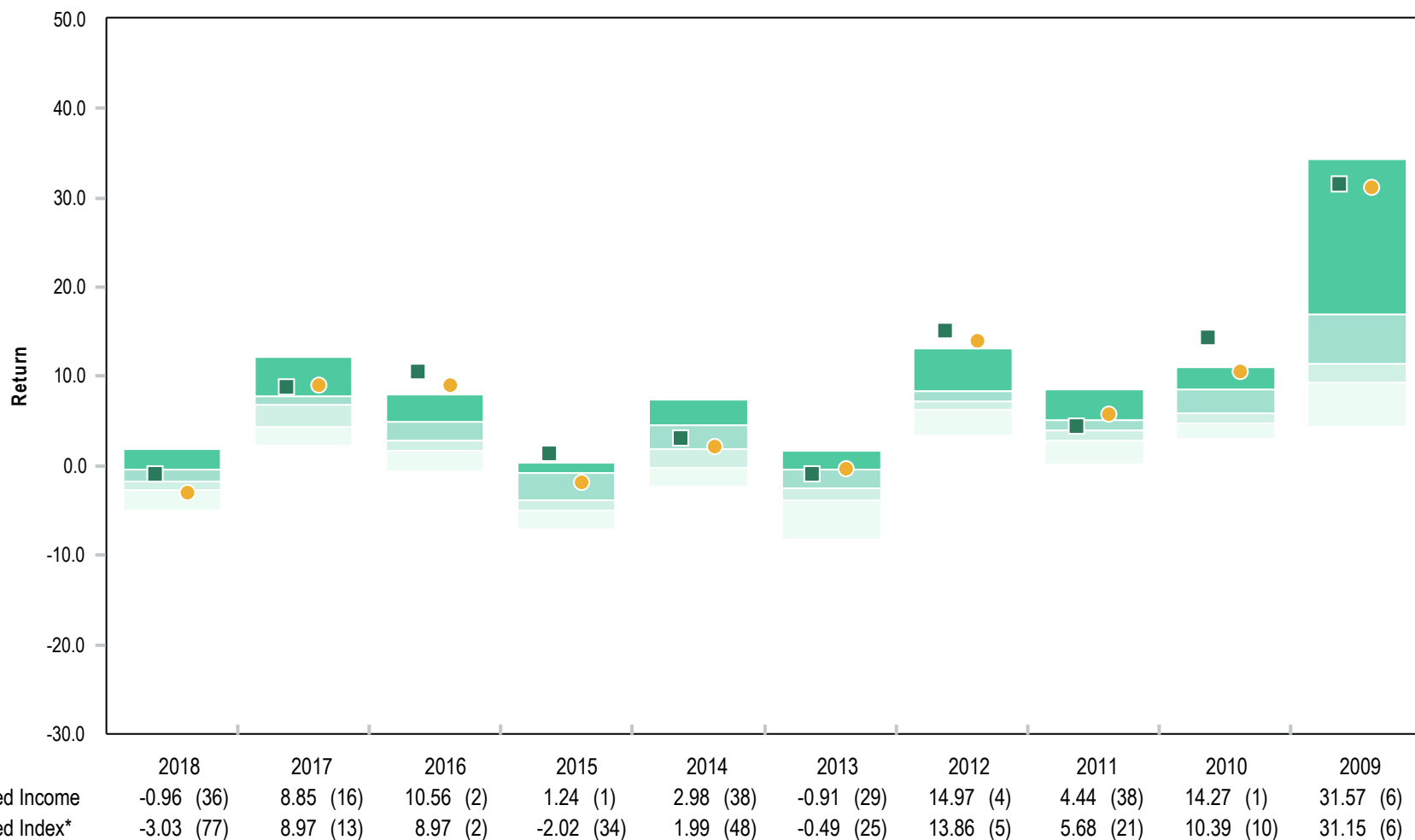
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Franklin Templeton Global Bond	1.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FTSE World Government Bond Index	-0.35	5.90	5.90	4.12	2.03	0.79	1.85	-0.84	7.49	1.60	-3.57
Difference	1.60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A





5th Percentile	2.52	12.98	12.98	6.31	4.28	3.74	5.13
1st Quartile	1.01	9.19	9.19	4.76	3.11	2.54	4.01
Median	0.68	8.12	8.12	4.04	2.46	1.70	3.04
3rd Quartile	-0.19	6.89	6.89	3.49	1.88	1.19	2.35
95th Percentile	-0.68	4.00	4.00	2.56	1.28	0.13	1.53

*33.3% ML Global HY/33.3% JPM EMBI Global/33.3% LB Global Agg



5th Percentile	1.84	12.27	7.96	0.40	7.36	1.66	13.22	8.48	11.05	34.25
1st Quartile	-0.44	7.86	4.95	-0.86	4.52	-0.49	8.43	5.14	8.64	16.98
Median	-1.75	6.81	2.92	-3.83	1.91	-2.52	7.33	4.01	5.97	11.42
3rd Quartile	-2.78	4.42	1.70	-4.94	-0.14	-3.90	6.27	2.81	4.72	9.32
95th Percentile	-4.98	2.21	-0.62	-7.00	-2.35	-8.15	3.48	0.26	3.08	4.45

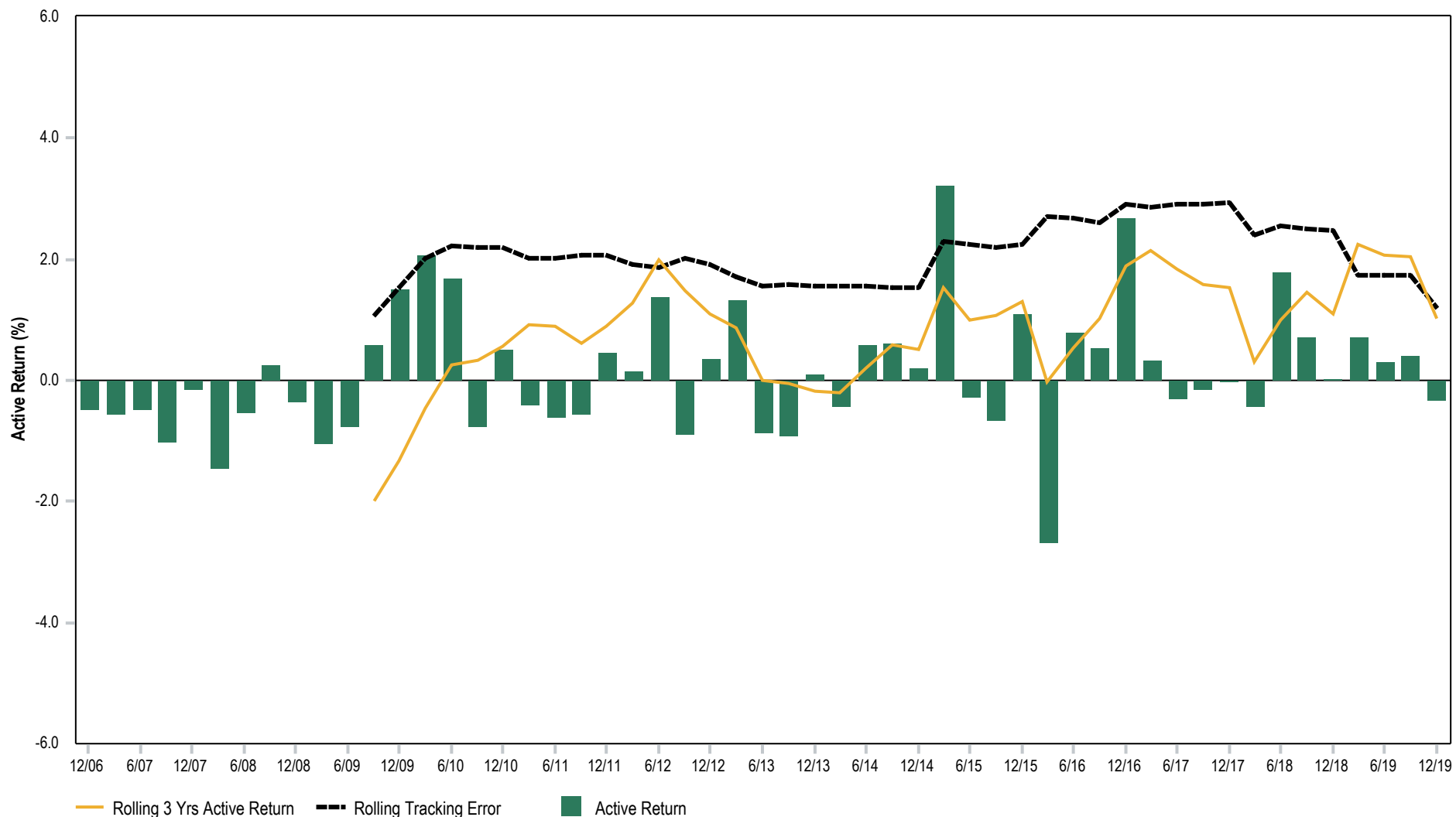
*33.3% ML Global HY/33.3% JPM EMBI Global/33.3% LB Global Agg

Bristol County Retirement System

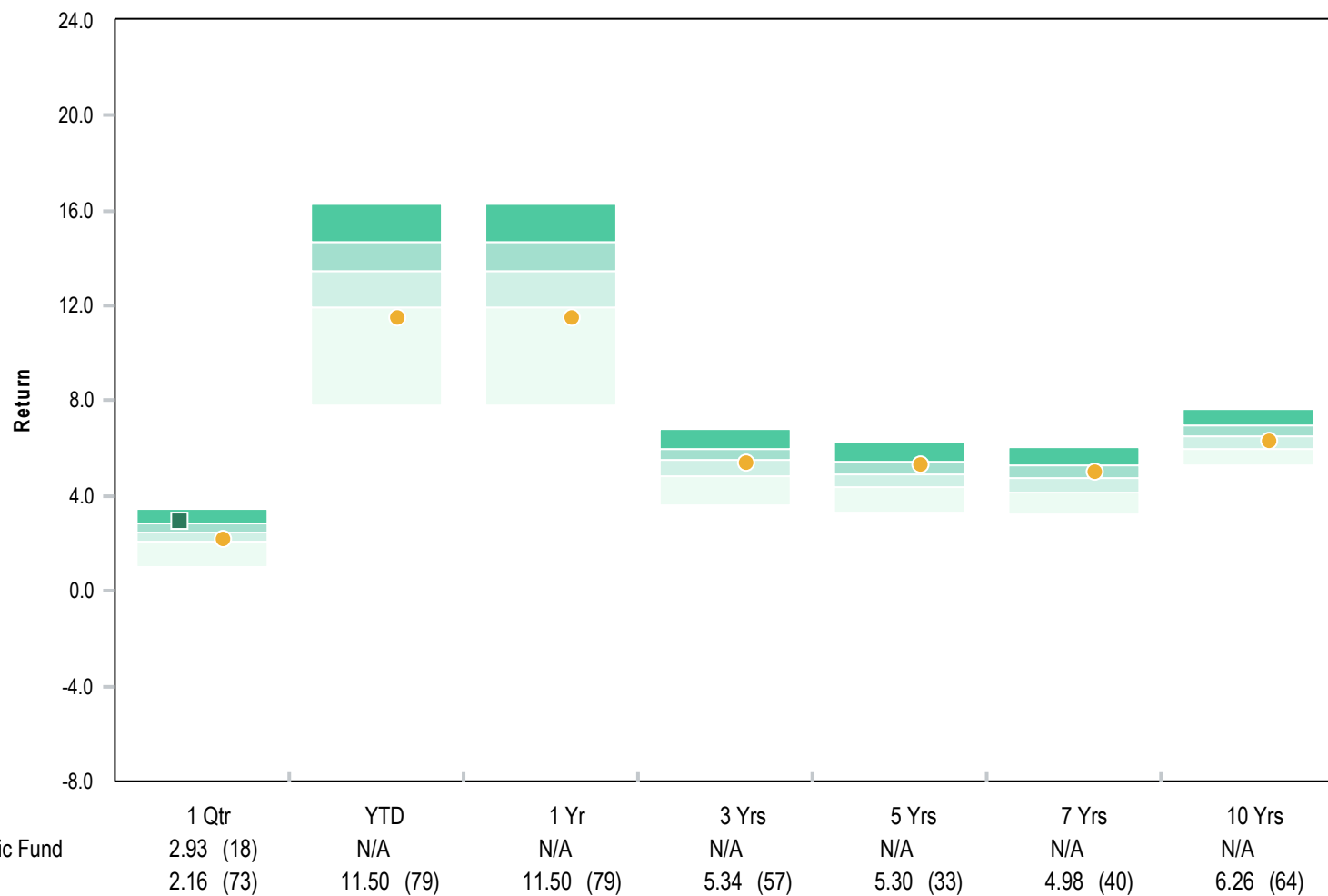
Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
PIMCO Diversified Income	1.65	12.81	12.81	6.74	6.36	4.81	6.66	-0.96	8.85	10.56	1.24
PIMCO Diversified Index*	1.99	11.67	11.67	5.67	4.73	3.57	5.44	-3.03	8.97	8.97	-2.02
Difference	-0.34	1.14	1.14	1.07	1.63	1.24	1.22	2.07	-0.12	1.59	3.26

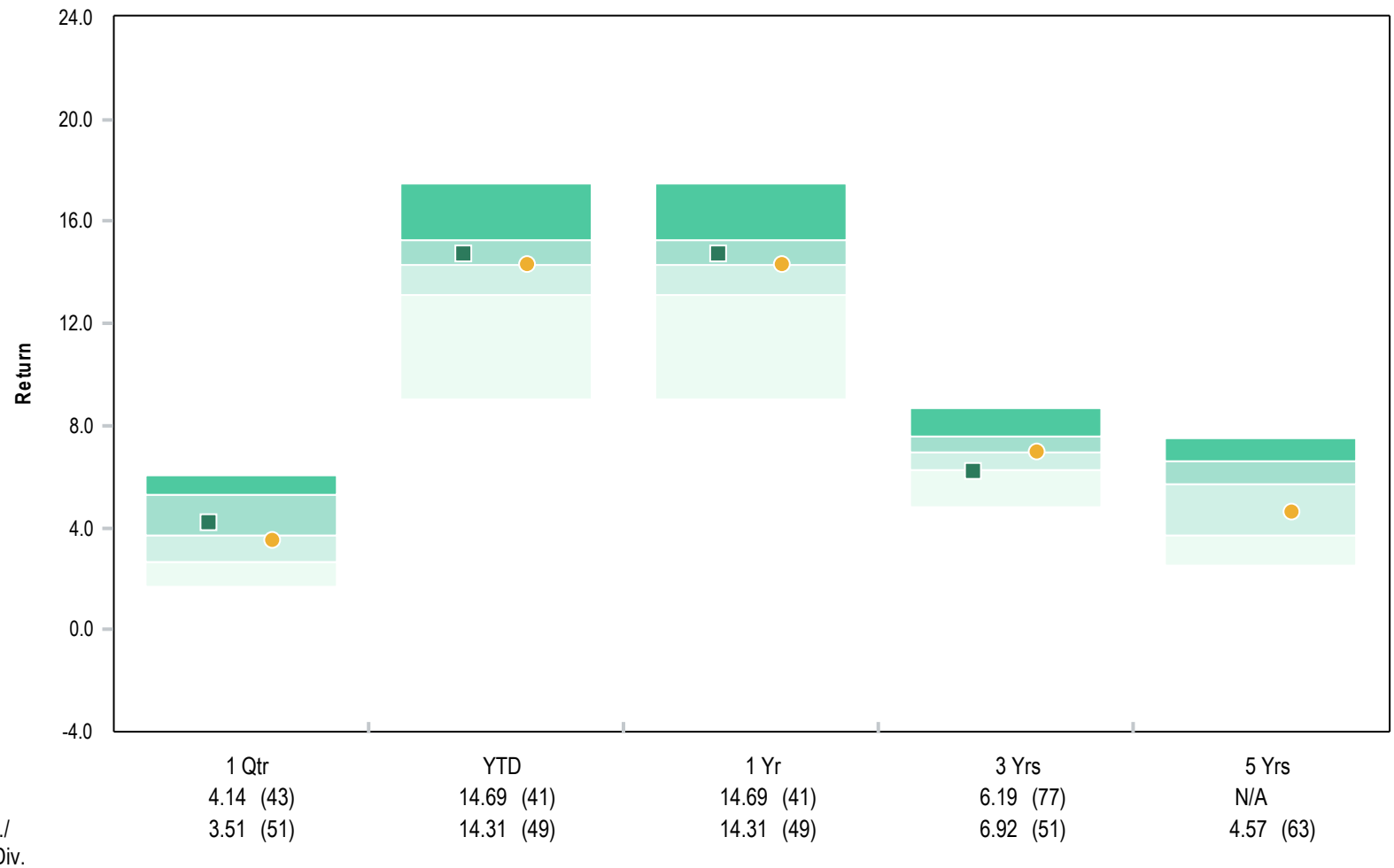


*PIMCO Index: 33% BC Global Agg/33% ML Global HY/33% JPM EMBI Global.



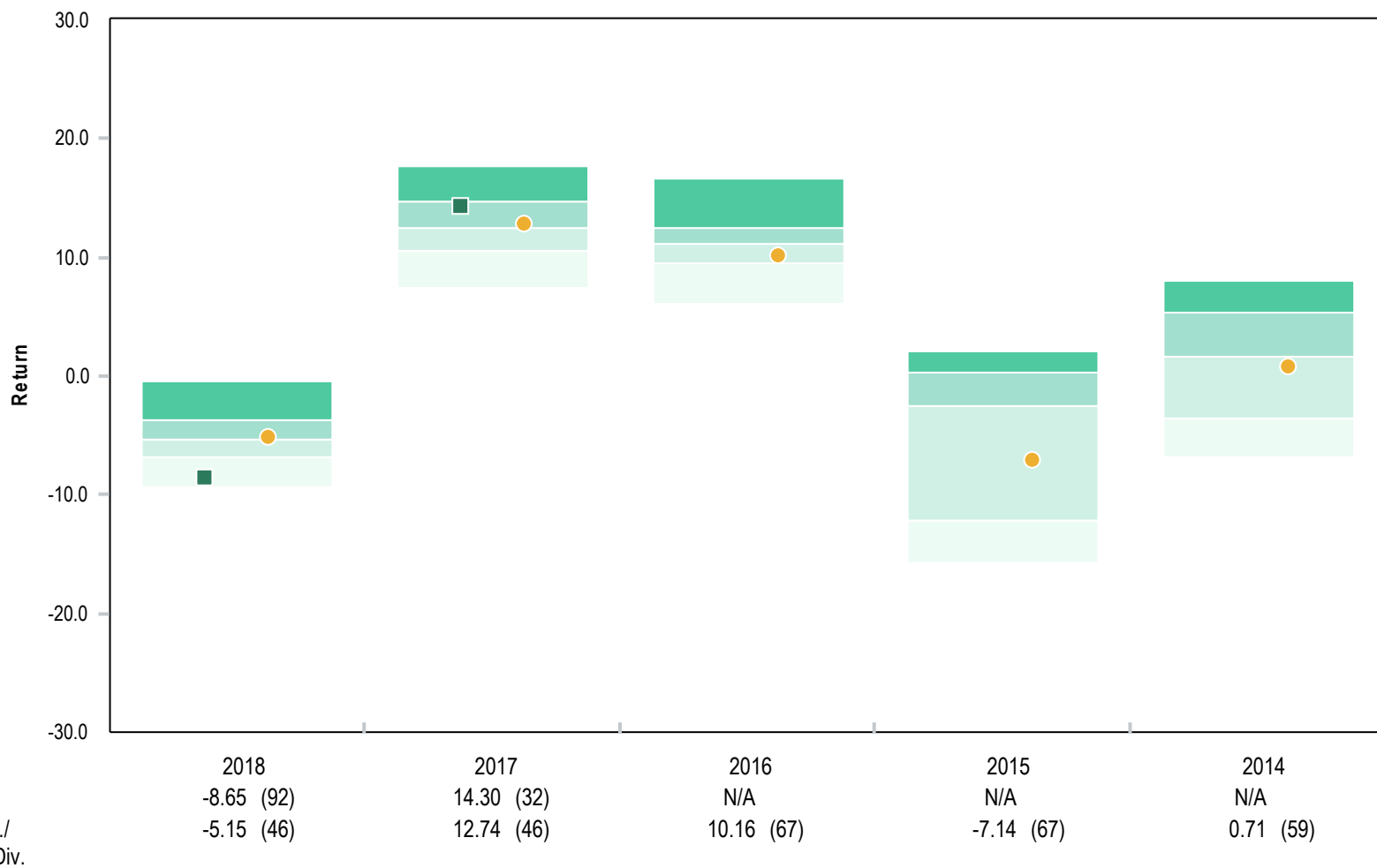
5th Percentile	3.48	16.32	16.32	6.81	6.29	6.04	7.67
1st Quartile	2.81	14.71	14.71	5.97	5.48	5.26	6.99
Median	2.46	13.50	13.50	5.50	4.93	4.74	6.55
3rd Quartile	2.12	11.91	11.91	4.86	4.37	4.15	5.99
95th Percentile	1.02	7.83	7.83	3.61	3.33	3.22	5.29

*50% Merrill Lynch High Yield Index / 50% S&P/LSTA Leveraged Loan Index



5th Percentile	6.06	17.50	17.50	8.68	7.49
1st Quartile	5.28	15.30	15.30	7.60	6.58
Median	3.68	14.29	14.29	6.93	5.72
3rd Quartile	2.62	13.13	13.13	6.24	3.72
95th Percentile	1.67	9.02	9.02	4.83	2.55

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



5th Percentile	-0.47	17.69	16.60	2.04	8.07
1st Quartile	-3.65	14.71	12.54	0.27	5.41
Median	-5.34	12.43	11.09	-2.53	1.62
3rd Quartile	-6.90	10.50	9.47	-12.19	-3.59
95th Percentile	-9.34	7.47	6.06	-15.76	-6.81

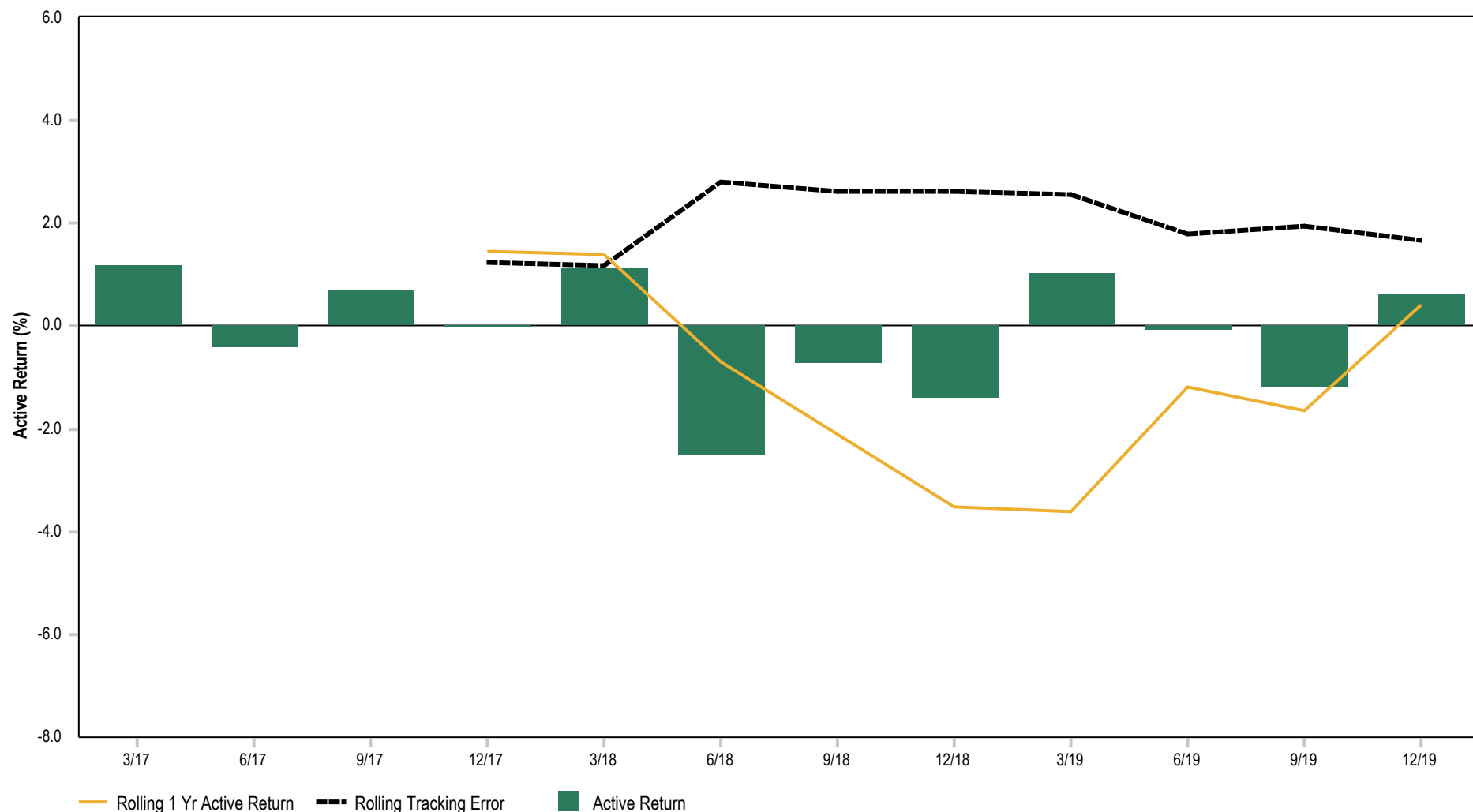
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

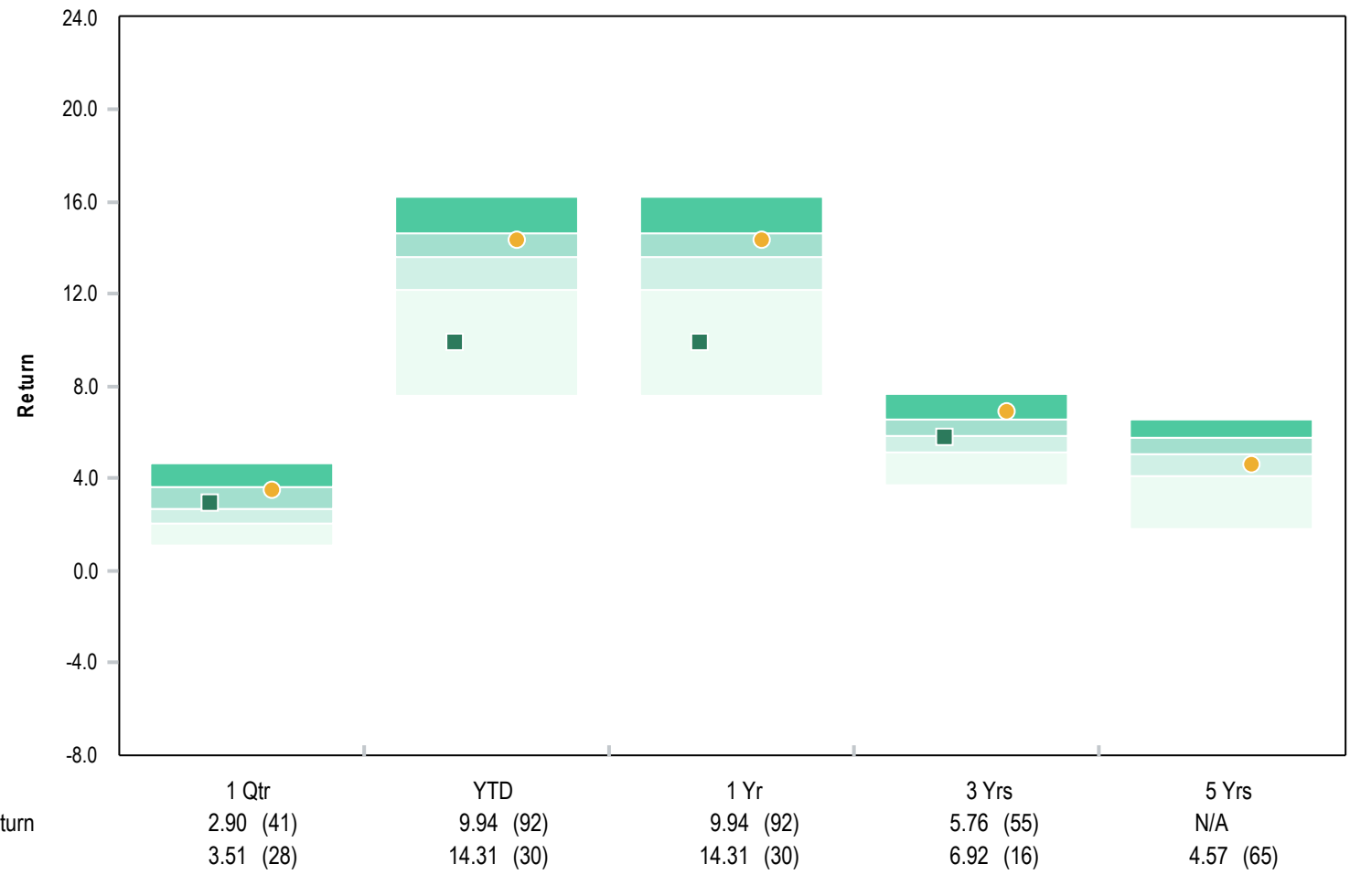
Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

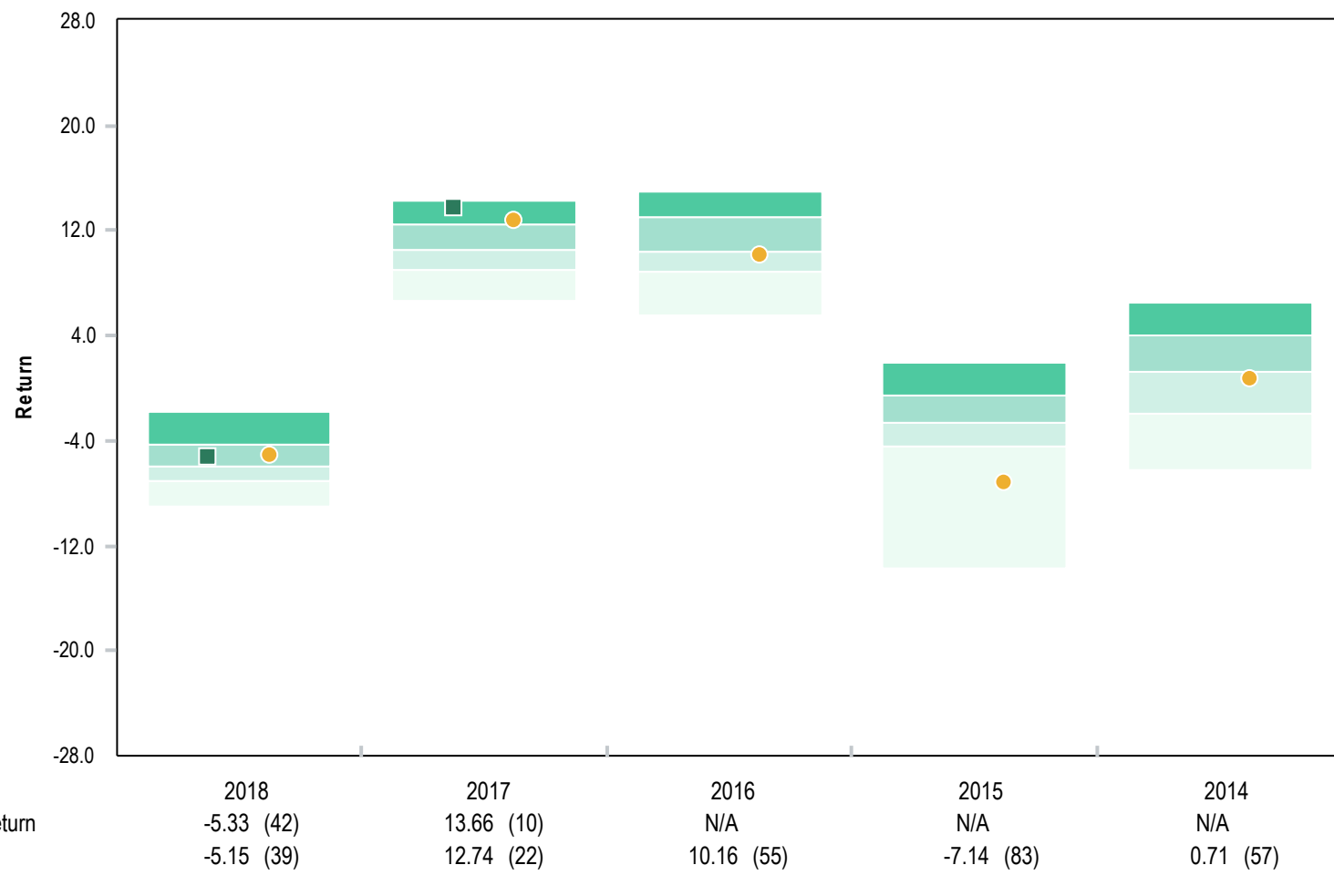
	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Stone Harbor EMD	4.14	14.69	14.69	6.19	N/A	N/A	N/A	-8.65	14.30	N/A	N/A
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified US	3.51	14.31	14.31	6.92	4.57	2.27	4.86	-5.15	12.74	10.16	-7.14
Difference	0.63	0.38	0.38	-0.73	N/A	N/A	N/A	-3.50	1.56	N/A	N/A





5th Percentile	4.64	16.24	16.24	7.70	6.59
1st Quartile	3.62	14.67	14.67	6.58	5.79
Median	2.68	13.62	13.62	5.90	5.03
3rd Quartile	2.09	12.18	12.18	5.18	4.09
95th Percentile	1.15	7.63	7.63	3.71	1.80

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.



5th Percentile	-1.82	14.25	14.96	1.98	6.51
1st Quartile	-4.28	12.52	13.09	-0.60	4.05
Median	-5.92	10.49	10.42	-2.57	1.31
3rd Quartile	-7.11	9.02	8.88	-4.49	-1.88
95th Percentile	-8.99	6.67	5.57	-13.69	-6.22

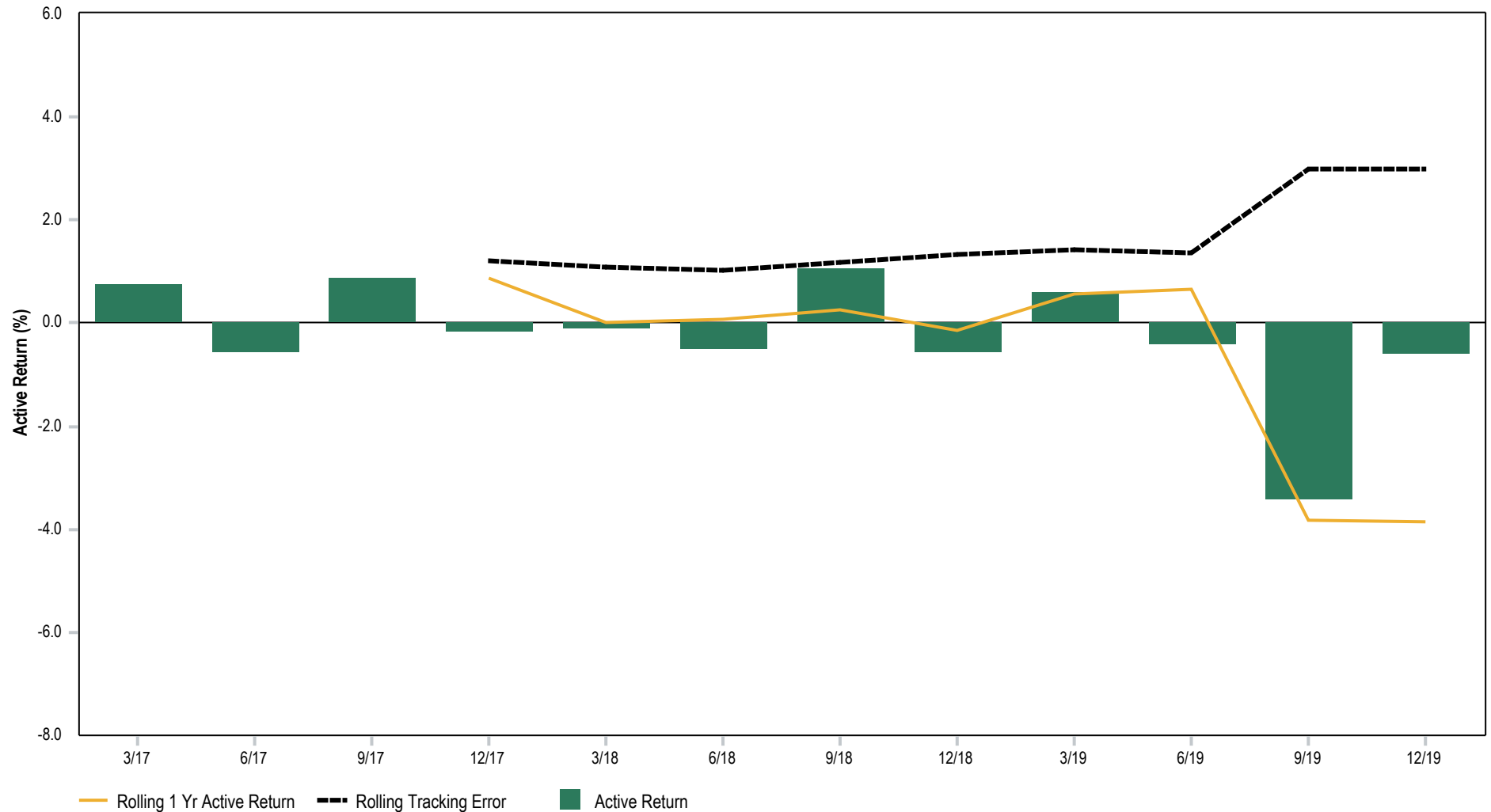
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

Comparative Performance & Rolling Return

As of December 31, 2019

	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	2018	2017	2016	2015
Ashmore Emerging Markets Total Return	2.90	9.94	9.94	5.76	N/A	N/A	N/A	-5.33	13.66	N/A	N/A
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified US	3.51	14.31	14.31	6.92	4.57	2.27	4.86	-5.15	12.74	10.16	-7.14
Difference	-0.61	-4.37	-4.37	-1.16	N/A	N/A	N/A	-0.18	0.92	N/A	N/A



Other Fixed Income

Bristol County Retirement System

Comparative Performance - IRR

As of December 31, 2019

	Market Value (\$)	%	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Invesco Mortgage Recovery Fund	251,357	0.03	0.00	1.49	1.49	2.89	10.79	16.69	N/A	13.90	03/31/2010

Bristol County Retirement System

Schedule of Investable Assets

Invesco Mortgage Recovery Fund

Since Inception Ending December 31, 2019

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Contributions (\$)	Withdrawals (\$)	Gain/Loss (\$)	Ending Market Value (\$)	%Return	Unit Value	Income (\$)	Income % of Beginning Market Value
Jun-2010	-	2,047,799	2,089,844	42,045	-	2,151,396	5.74	105.74	27,307	0.00
Sep-2010	2,151,396	739,731	921,104	181,373	142,577	3,033,704	5.94	112.02	75,028	3.49
Dec-2010	3,033,704	-448,204	33,362	481,566	96,495	2,681,995	3.67	116.13	209,106	6.89
Mar-2011	2,681,995	-265,432	215,509	480,941	114,718	2,531,281	4.31	121.13	206,684	7.71
Jun-2011	2,531,281	-248,483	200,172	448,655	-37,226	2,245,572	-1.67	119.11	33,871	1.34
Sep-2011	2,245,572	1,186,159	1,302,619	116,460	-15,163	3,416,568	-0.67	118.31	8,310	0.37
Dec-2011	3,416,568	-974,627	-	974,627	7,383	2,449,324	0.24	118.60	38,619	1.13
Mar-2012	2,449,324	-880,764	-	880,764	106,038	1,674,598	4.64	124.10	18,649	0.76
Jun-2012	1,674,598	-3,746	159,003	162,749	44,872	1,715,724	2.45	127.14	75,013	4.48
Sep-2012	1,715,724	-10,305	-	10,305	37,498	1,742,917	2.19	129.92	-	0.00
Dec-2012	1,742,917	-510,562	-	510,562	85,492	1,317,847	5.91	137.60	-	0.00
Mar-2013	1,317,847	-65,326	-	65,326	22,847	1,275,368	1.74	140.00	-	0.00
Jun-2013	1,275,368	-59,917	20,152	80,069	26,281	1,241,732	2.19	143.07	-	0.00
Sep-2013	1,241,732	221,939	221,939	-	2,024	1,465,695	0.14	143.27	-	0.00
Dec-2013	1,465,695	132,967	329,829	196,862	124,547	1,723,209	8.11	154.89	-	0.00
Mar-2014	1,723,209	-97,979	-	97,979	39,216	1,664,446	2.35	158.54	-	0.00
Jun-2014	1,664,446	-64,464	70,551	135,015	53,465	1,653,447	3.34	163.84	-	0.00
Sep-2014	1,653,447	-38,489	40,092	78,581	82,363	1,697,321	5.10	172.19	-	0.00
Dec-2014	1,697,321	53,602	88,065	34,463	315,116	2,066,039	18.00	203.18	-	0.00
Mar-2015	2,066,039	-338,868	42,571	381,439	49,102	1,776,273	2.88	209.03	-	0.00
Jun-2015	1,776,273	28,704	28,704	-	67,010	1,871,987	3.91	217.20	-	0.00
Sep-2015	1,871,987	-239,366	44,631	283,997	184,643	1,817,264	11.31	241.76	-	0.00
Dec-2015	1,817,264	-255,351	-	255,351	107,519	1,669,432	6.88	258.40	-	0.00
Mar-2016	1,669,432	9,080	57,199	48,119	-204	1,678,308	-0.01	258.37	-	0.00
Jun-2016	1,678,308	-423,449	-	423,449	62,718	1,317,577	5.00	271.28	-	0.00
Sep-2016	1,317,577	-175,341	-	175,341	1,890	1,144,126	0.17	271.73	-	0.00
Dec-2016	1,144,126	-1,965	-	1,965	-85,161	1,057,000	-7.44	251.51	-	0.00
Mar-2017	1,057,000	-	-	-	-25,343	1,031,657	-2.40	245.48	-	0.00
Jun-2017	1,031,657	-559,332	-	559,332	-399	471,926	-0.08	245.27	-	0.00
Sep-2017	471,926	-80,808	-	80,808	-25,848	365,270	-6.61	229.06	-	0.00

*% return represents a time weighted return.

Bristol County Retirement System

Schedule of Investable Assets

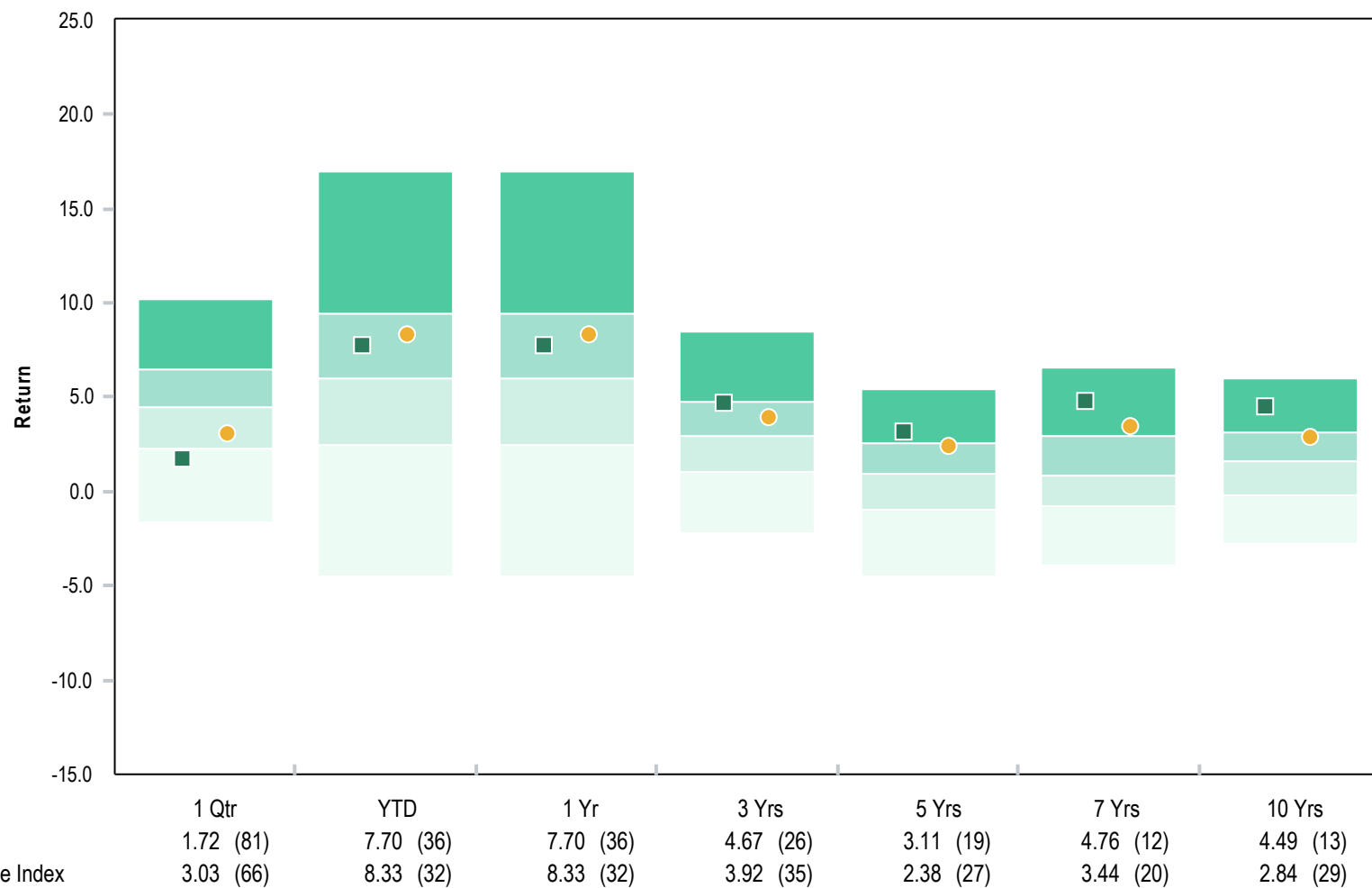
Invesco Mortgage Recovery Fund

Since Inception Ending December 31, 2019

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Contributions (\$)	Withdrawals (\$)	Gain/Loss (\$)	Ending Market Value (\$)	%Return	Unit Value	Income (\$)	Income % of Beginning Market Value
Dec-2017	365,270	-	-	-	18,088	383,358	4.95	240.40	-	0.00
Mar-2018	383,358	840	840	-	12,252	396,450	3.36	248.49	-	0.00
Jun-2018	396,450	-76,638	-	76,638	22,664	342,476	5.75	262.78	-	0.00
Sep-2018	342,476	-	-	-	13,122	355,598	3.83	272.85	-	0.00
Dec-2018	355,598	-	-	-	18,584	374,182	5.23	287.11	-	0.00
Mar-2019	374,182	-126,979	-	126,979	5,019	252,222	1.37	291.05	-	0.00
Jun-2019	252,222	-	-	-	-824	251,398	-0.33	290.10	-	0.00
Sep-2019	251,398	-	-	-	-41	251,357	-0.02	290.05	-	0.00
Dec-2019	251,357	-	-	-	-	251,357	0.00	290.05	-	0.00
	-	-1,525,574	5,866,186	7,391,760	1,673,334	251,357	11.54	290.05	692,587	0.00

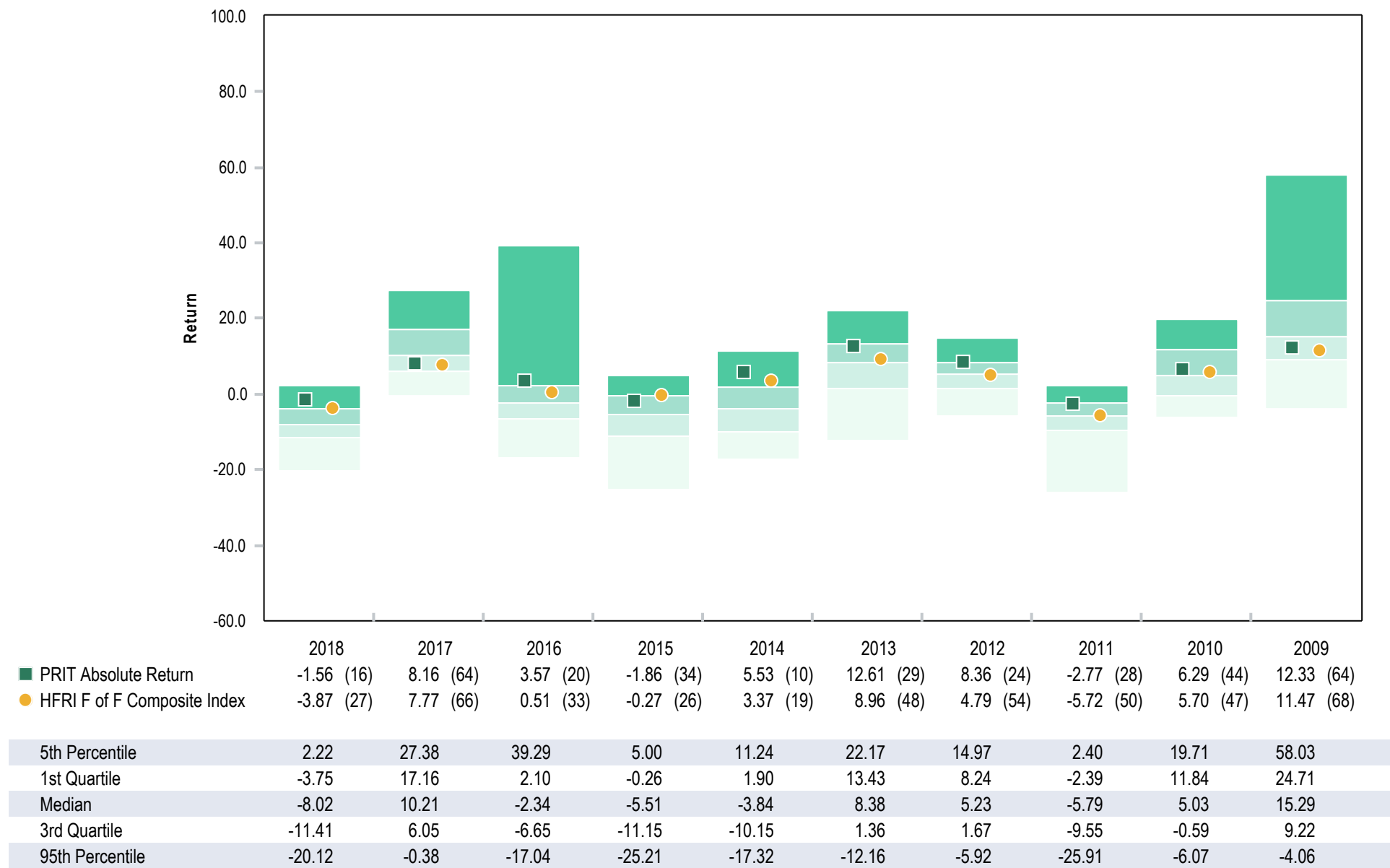
*% return represents a time weighted return.

Alternatives



5th Percentile	10.17	16.99	16.99	8.50	5.44	6.54	5.96
1st Quartile	6.44	9.39	9.39	4.73	2.52	2.99	3.13
Median	4.44	6.05	6.05	2.99	0.97	0.89	1.58
3rd Quartile	2.25	2.46	2.46	1.07	-1.01	-0.73	-0.19
95th Percentile	-1.62	-4.50	-4.50	-2.21	-4.52	-3.89	-2.83

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

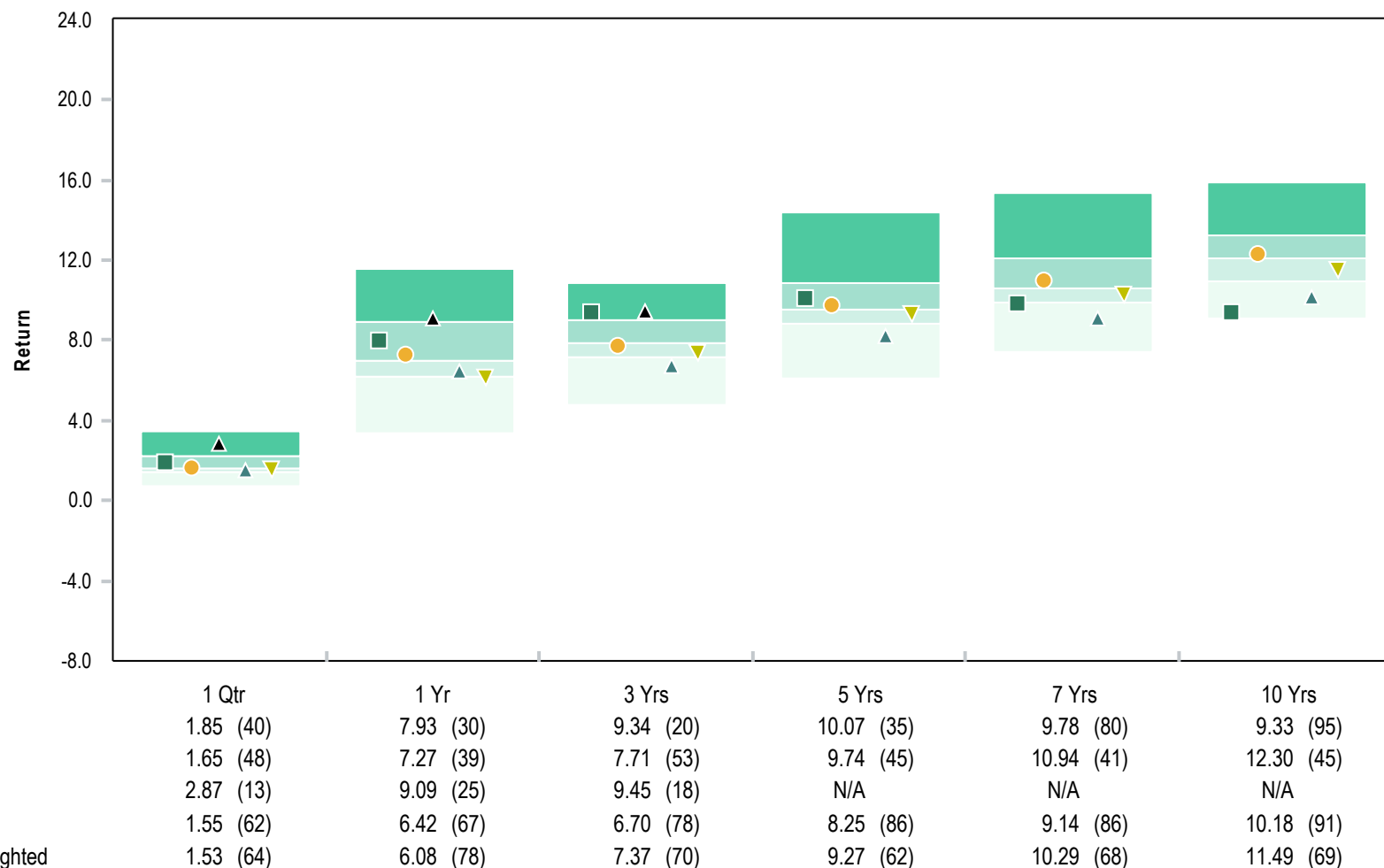


Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Bristol County Retirement System

IM U.S. Open End Private Real Estate (SA+CF)

As of December 31, 2019



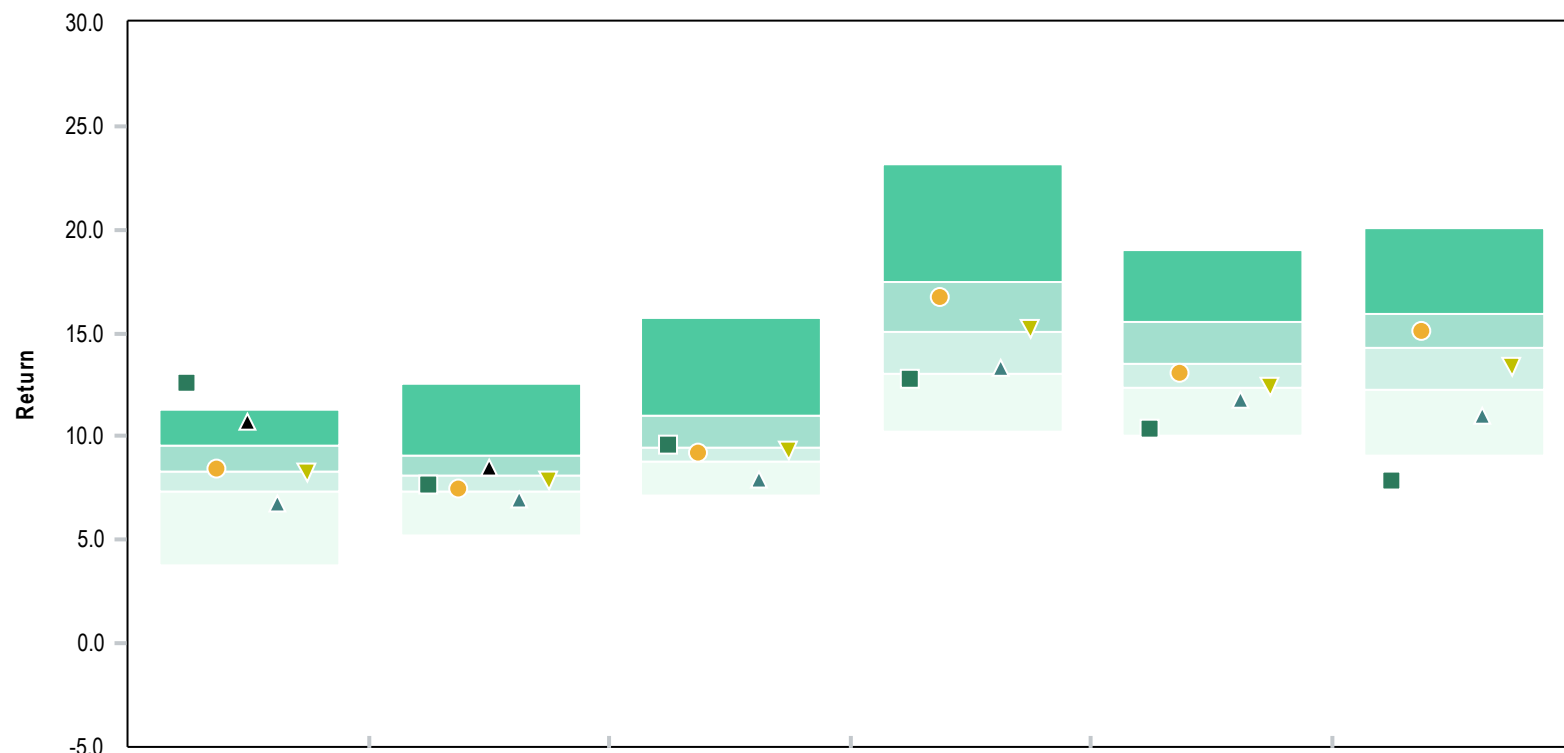
5th Percentile	3.42	11.55	10.90	14.42	15.36	15.92
1st Quartile	2.19	8.97	8.99	10.91	12.06	13.25
Median	1.63	7.02	7.91	9.58	10.63	12.09
3rd Quartile	1.46	6.22	7.14	8.85	9.92	10.98
95th Percentile	0.68	3.41	4.74	6.10	7.45	9.14

Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.

Bristol County Retirement System

IM U.S. Open End Private Real Estate (SA+CF)

As of December 31, 2019



- Total Real Estate
- RREEF America REIT II
- ▲ Intercontinental
- ▲ NCREIF Property Index
- ▼ NCREIF ODCE Equal Weighted

	2018	2017	2016	2015	2014	2013
Total Real Estate	12.55 (4)	7.60 (61)	9.60 (49)	12.77 (83)	10.35 (94)	7.79 (99)
RREEF America REIT II	8.43 (49)	7.44 (68)	9.14 (60)	16.70 (34)	12.99 (66)	15.01 (36)
Intercontinental	10.74 (14)	8.53 (41)	N/A	N/A	N/A	N/A
NCREIF Property Index	6.72 (81)	6.96 (79)	7.97 (85)	13.33 (73)	11.82 (80)	10.98 (83)
NCREIF ODCE Equal Weighted	8.25 (53)	7.80 (55)	9.27 (53)	15.17 (49)	12.38 (75)	13.36 (58)

5th Percentile	11.32	12.56	15.77	23.14	18.97	20.07
1st Quartile	9.53	9.11	11.04	17.47	15.49	15.90
Median	8.35	8.07	9.47	15.01	13.51	14.30
3rd Quartile	7.31	7.36	8.82	13.06	12.35	12.22
95th Percentile	3.75	5.22	7.16	10.26	9.99	9.11

Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.

Bristol County Retirement System

Total Active Hard Assets and Real Estate Composite Overview

As of December 31, 2019

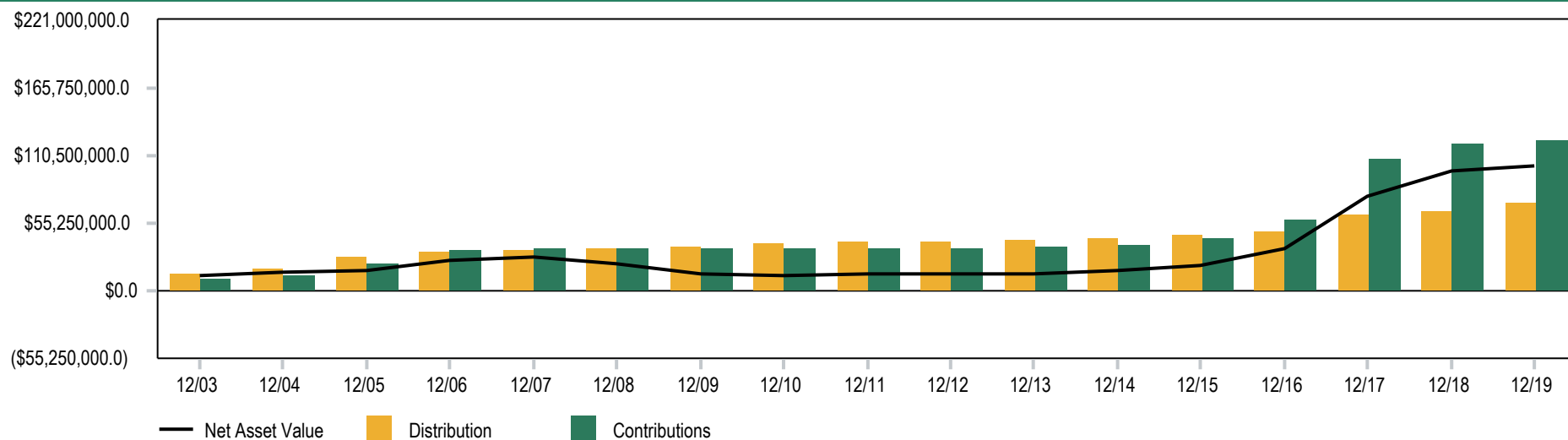
Cash Flow Summary

Capital Committed: \$138,427,501
 Total Contributions: \$132,026,247
 Remaining Capital Commitment: \$15,111,363

Total Distributions: \$72,386,695
 Market Value: \$102,748,787

Inception Date: 01/01/1995
 Inception IRR: 15.75
 TVPI: 1.33

Cash Flow Analysis



Bristol County Retirement System

Total Active Hard Assets and Real Estate

As of December 31, 2019

Partnerships	Vintage Year	Investment Strategy	Capital Commitment (\$)	Drawn Down (\$)	Distributed (\$)	Market Value (\$)	IRR (%)	TVPI Multiple
Brookfield Timberlands Fund V	2013	Timber	5,000,000	1,143,788	552,750	1,124,097	8.53	1.47
Eastern Timberland Opportunities II	2014	Timber	2,500,000	2,258,324	548,256	2,848,636	8.56	1.50
GCM Customized Infrastructures Strategies II, LP	2015	Infrastructure	13,000,000	11,281,094	4,818,205	8,098,072	8.65	1.14
Invesco Mortgage Recovery II	2016	Real Estate	15,000,000	13,845,087	13,292,489	4,513,292	14.09	1.34
TerraCap Partners IV			10,000,000	10,570,453	1,019,042	10,670,285	7.35	1.11
Total Hard Assets			138,427,501	132,026,247	72,386,695	102,748,787	15.75	1.33

Bristol County Retirement System

Active Closed End Real Estate and Hard Asset Funds

As of December 31, 2019

Internal Rates of Return

	Market Value (\$)	%	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Brookfield Timberlands Fund V	1,124,097	0.15	0.00	5.29	5.29	7.90	6.07	N/A	N/A	8.53	12/23/2013
Eastern Timberland Opportunities II	2,848,636	0.38	0.00	7.51	7.51	7.60	9.10	N/A	N/A	8.56	07/03/2014
GCM Customized Infrastructures Strategies II, LP	8,098,072	1.09	0.00	5.55	5.55	9.76	N/A	N/A	N/A	8.65	03/10/2016
Invesco Mortgage Recovery II	4,513,292	0.61	0.00	12.11	12.11	13.76	N/A	N/A	N/A	14.09	05/20/2016
TerraCap Partners IV	10,670,285	1.44	0.00	2.72	2.72	N/A	N/A	N/A	N/A	7.35	07/17/2018

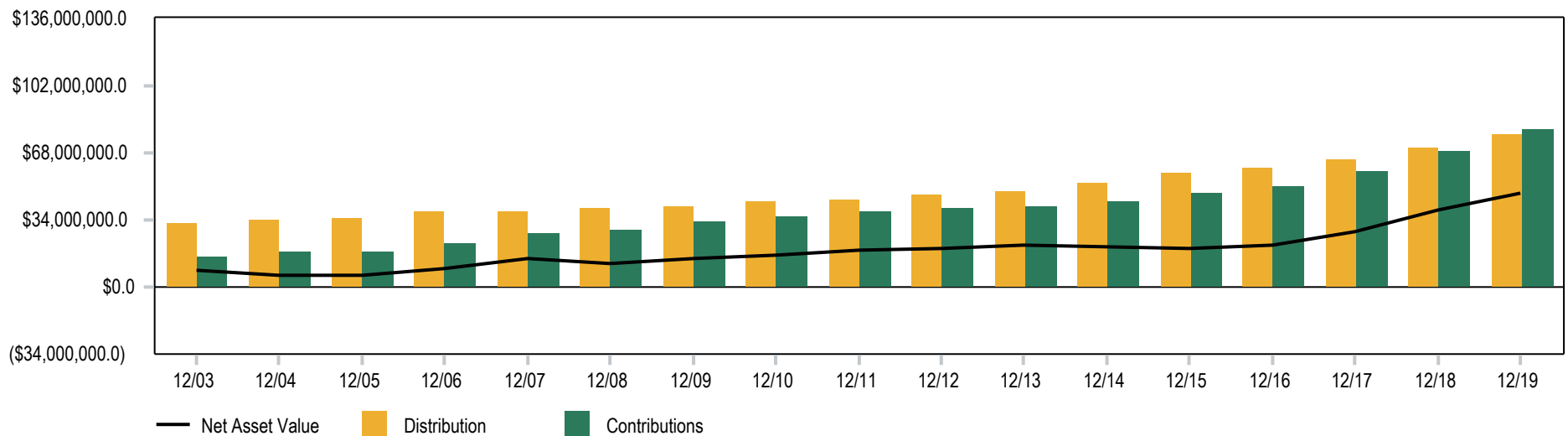
Cash Flow Summary

Capital Committed: \$119,343,419
 Total Contributions: \$79,908,605
 Remaining Capital Commitment: \$41,732,362

Total Distributions: \$76,981,081
 Market Value: \$47,640,992

Inception Date: 01/05/1995
 Inception IRR: 177.68
 TVPI: 1.56

Cash Flow Analysis



Bristol County Retirement System

Private Equity Summary of Partnership

As of December 31, 2019

Partnerships	Vintage Year	Capital Commitment (\$)	Contributions (\$)	Distributions (\$)	Market Value (\$)	IRR (%)	DPI Multiple	TVPI Multiple	Remaining Commitment (\$)
DuPont Capital Management II	2005	5,000,000	3,659,898	3,282,368	512,841	0.48	0.90	1.04	1,590,170
BlackRock Vesey Street Fund III	2005	5,000,000	4,433,304	5,701,598	275,633	4.11	1.29	1.35	650,000
DN Partners II	2005	6,000,000	2,829,275	-	1,933,386	-4.17	-	0.68	3,170,725
BlackRock Vesey Street Fund IV	2007	10,000,000	9,279,971	11,303,032	3,822,898	8.24	1.22	1.63	2,315,977
Mesirow PE Fund V	2008	5,000,000	4,122,431	4,400,658	3,688,092	14.26	1.07	1.96	881,700
PRIT Vintage 2014	2014	9,090,291	7,300,284	3,223,305	8,882,280	19.29	0.44	1.66	1,802,858
PRIT Vintage 2015	2015	12,290,670	10,506,358	2,848,797	13,760,640	22.89	0.27	1.58	1,890,894
PRIT Vintage 2016	2016	8,302,928	5,701,434	654,853	5,257,065	2.25	0.12	1.04	2,614,439
PRIT Vintage 2017	2017	15,535,926	6,304,364	125,805	5,537,568	-11.65	0.02	0.90	9,243,646
PRIT Vintage 2018	2018	14,323,604	3,256,563	281,493	2,701,085	-11.05	0.09	0.92	11,075,485
PRIT Vintage 2019	2019	10,000,000	1,381,129	1,869	1,124,332	-44.21	0.00	0.82	8,621,316
Total Private Equity		119,343,419	79,908,605	76,981,081	47,640,992	177.68	0.96	1.56	41,732,362

*Active Private Equity managers shown

Bristol County Retirement System

Active Private Equity Funds

As of December 31, 2019

Internal Rates of Return

	Market Value (\$)	%	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
Total Private Equity	47,640,992	6.42	-2.63	10.70	10.70	15.34	10.66	10.44	9.62	177.68	01/05/1995
BlackRock Vesey Street Fund III	275,633	0.04	0.00	-5.73	-5.73	-6.79	3.09	8.82	10.19	4.11	07/17/2006
DuPont Capital Management II	512,841	0.07	0.00	-6.07	-6.07	-1.45	-4.38	-0.24	4.63	0.48	08/14/2006
DN Partners II	1,933,386	0.26	-0.31	-1.34	-1.34	27.82	1.71	-1.70	-0.96	-4.17	01/11/2007
BlackRock Vesey Street Fund IV	3,822,898	0.52	0.00	8.38	8.38	9.67	6.98	10.11	9.98	8.24	02/24/2009
Mesirow PE Fund V	3,688,092	0.50	0.00	12.73	12.73	14.80	14.19	15.84	14.49	14.26	04/09/2009
PRIT Vintage 2014	8,882,280	1.20	3.35	16.65	16.65	25.00	20.82	N/A	N/A	19.29	05/01/2014
PRIT Vintage 2015	13,760,640	1.85	1.63	23.48	23.48	28.92	22.89	N/A	N/A	22.89	03/01/2015
PRIT Vintage 2016	5,257,065	0.71	-3.87	-0.42	-0.42	4.24	N/A	N/A	N/A	2.25	03/01/2016
PRIT Vintage 2017	5,537,568	0.75	-20.59	-2.04	-2.04	N/A	N/A	N/A	N/A	-11.65	04/30/2017
PRIT Vintage 2018	2,701,085	0.36	-8.62	-0.75	-0.75	N/A	N/A	N/A	N/A	-11.05	05/30/2018
PRIT Vintage 2019	1,124,332	0.15	-28.74	N/A	N/A	N/A	N/A	N/A	N/A	-44.21	03/31/2019