



Quarterly Investment Performance Analysis

City of Jacksonville Employees' Retirement System

Period Ended: March 31, 2019



RVK Honored to Receive 2ND Greenwich *Quality Leader* Award

- In 2018, Greenwich Associates* conducted interviews with 1,128 senior professionals of large plan sponsors and ranked opinions of their investment consulting relationships on a series of key metrics, including, but not limited to:
 - Understanding of Client Goals and Objectives
 - Advice on Long-term Asset Allocation and Liability Issues
 - Proactive Advice and Innovative Ideas
 - Credibility with Boards and/or Investment Committees
 - Knowledge of Investment Managers
 - Advice on DC Plan Structure and Design
 - Client Satisfaction with Manager Recommendations
 - Responsiveness to Client Requests and Needs
 - Competitive Fees
- For a 2nd consecutive year, RVK is 1 of 3 firms among large US consultants to receive this award.



As a valued client, we are humbled by your continued confidence and thankful for your support. From all of us here at RVK, thank you for the opportunity to serve you!

*Greenwich Associates is the leading provider of global market intelligence and advisory services to the financial services industry. They conduct an annual survey of institutional investors whereby approx. 1,100 respondents rank their respective investment consulting relationships on key metrics on a scale from 1 (poor) to 5 (excellent). The award is based upon Greenwich Associates' 2018 US Institutional Investors study.

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Capital Markets Review



First Quarter Economic Environment

Key Economic Indicators

Risk assets and fixed income markets performed well over the first quarter, largely driven by a more accommodative stance by the Federal Open Market Committee (“FOMC”). The global equity market, as represented by the MSCI All Country World Index, rose over 12% during the quarter, while fixed income markets benefited from the shift in interest rate expectations. Volatility markets also declined back to record low levels on the message of greater accommodation by the FOMC. Positive returns were generated despite declining growth forecasts in Asia and Europe, weak global inflation, market uncertainty caused by geopolitical risks, such as Brexit, and global markets destabilized by ongoing trade wars. At its March meeting, the FOMC maintained policy rates in the range of 2.25% to 2.50%. Interest rates declined notably over the period amidst signs of weakness in economic growth and a continued lack of inflationary pressure. During the quarter, the 10-year nominal Treasury yield fell to 2.39%, a level not seen since 2017, while the yield curve continued to flatten and even invert across certain maturities. However, the labor market hasn't reflected recessionary fears as US employment remains at record levels.

Key Economic Indicators



Economic Indicators

	Mar-19	Dec-18	Mar-18	Mar-16	20 Yr
Federal Funds Rate (%)	2.43 ▲	2.40	1.68	0.25	1.91
Breakeven Infl. - 5 Yr (%)	1.79 ▲	1.49	2.04	1.51	1.86
Breakeven Infl. - 10 Yr (%)	1.87 ▲	1.71	2.06	1.63	2.03
CPI YoY (Headline) (%)	1.9 -	1.9	2.4	0.9	2.2
Unemployment Rate (%)	3.8 ▼	3.9	4.0	5.0	5.9
Real GDP YoY (%)	3.2 ▲	3.0	2.6	1.6	2.2
PMI - Manufacturing	55.3 ▲	54.3	59.3	51.2	52.8
USD Total Wtd Idx	92.07 ▲	91.79	86.37	89.72	86.26
WTI Crude Oil per Barrel (\$)	60.1 ▲	45.4	64.9	38.3	60.6
Gold Spot per Oz (\$)	1,292 ▲	1,282	1,326	1,233	892

Treasury Yield Curve (%)



Market Performance (%)

	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	13.65	13.65	9.50	10.91	15.92
Russell 2000	14.58	14.58	2.05	7.05	15.36
MSCI EAFE (Net)	9.98	9.98	-3.71	2.33	8.96
MSCI EAFE SC (Net)	10.65	10.65	-9.36	4.47	12.76
MSCI Emg Mkts (Net)	9.93	9.93	-7.41	3.68	8.95
Bloomberg US Agg Bond	2.94	2.94	4.48	2.74	3.77
ICE BofAML 3 Mo US T-Bill	0.60	0.60	2.12	0.74	0.43
NCREIF ODCE (Gross)	1.42	1.42	7.52	10.18	8.74
FTSE NAREIT Eq REIT (TR)	16.33	16.33	20.86	9.12	18.28
HFRI FOF Comp	4.63	4.63	0.15	2.20	3.55
Bloomberg Cmdb (TR)	6.32	6.32	-5.25	-8.92	-2.56

First Quarter Review

Broad Market

US equity markets rebounded strongly during the first quarter, with all major indices across size and style finishing in positive territory. The S&P 500 Index returned 13.6% during the quarter, marking its best quarterly return since the third quarter of 2009, and the best first quarter return since 1998.

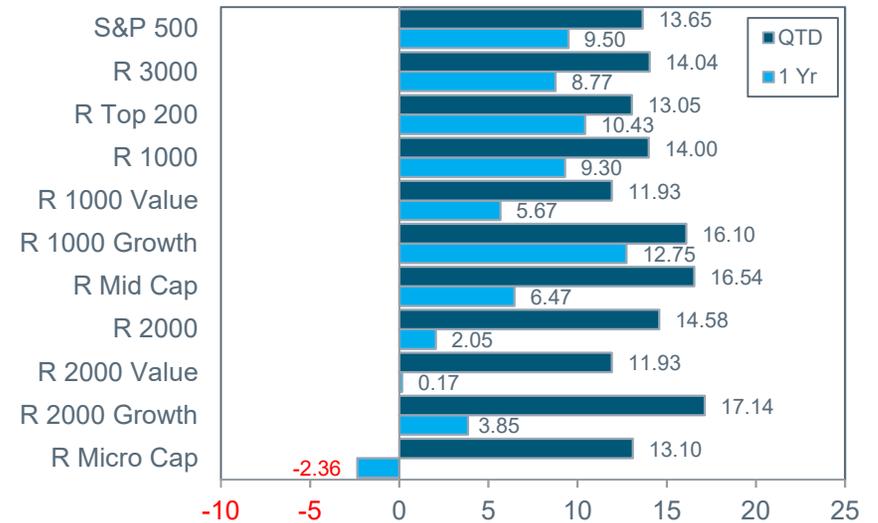
Market Cap

Smaller-capitalization stocks outpaced their large-cap counterparts, but the mid-cap segment provided the highest returns.

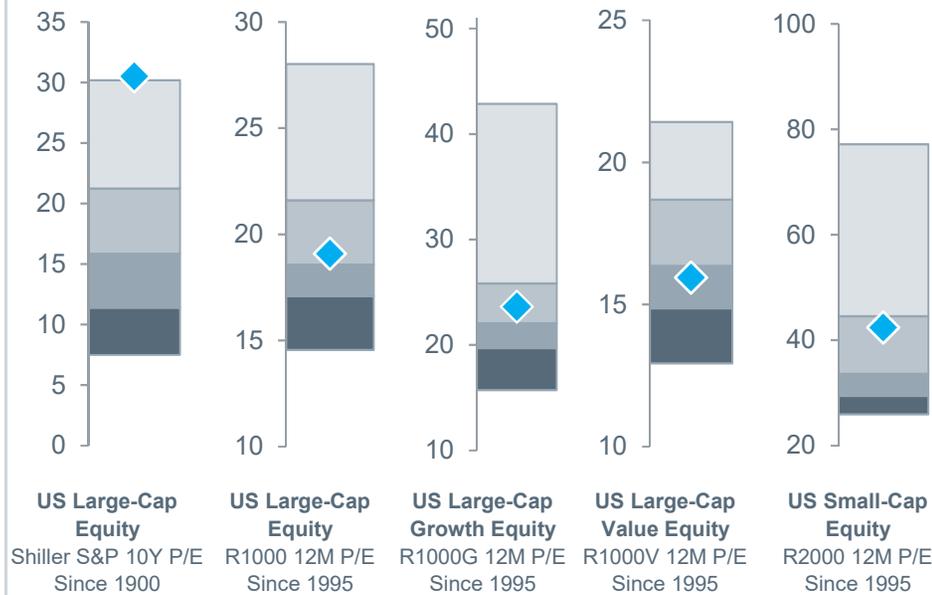
Style and Sector

Returns were positive across all sectors during the quarter, led by technology as the S&P 500 Information Technology Index returned 19.9%. Large- and small-cap growth managers fared moderately well, despite a rally in biotechnology, buoyed by strong performance across broad growth-focused sectors.

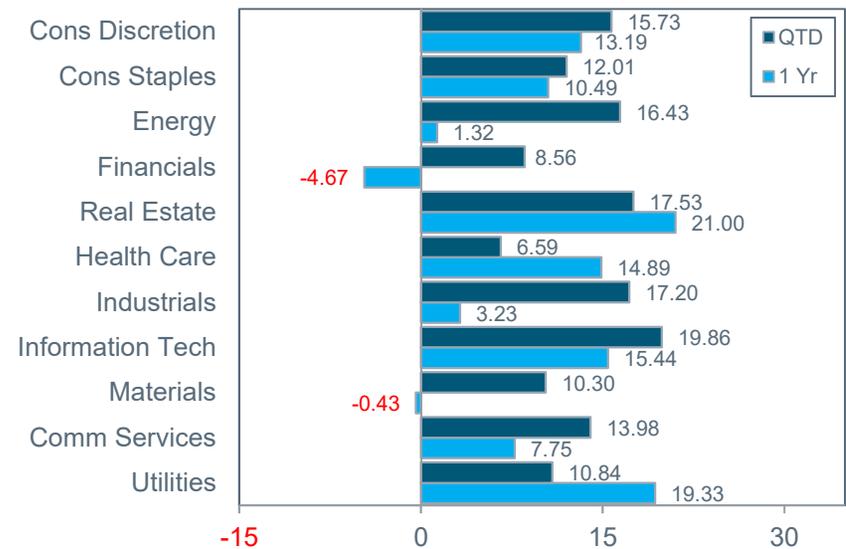
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition. P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

First Quarter Review

Developed Markets

Developed international markets generated positive returns during the quarter, but did not keep pace with the strong US equity returns. The positive returns from developed markets were generated despite the continued economic slowdown in Europe.

Emerging Markets

The emerging markets finished the quarter with similar returns as developed international markets. China was a key driver of emerging market equity returns as it generated the highest return among emerging market countries. This positive quarterly result occurred despite weakening economic growth in China and the ongoing trade dispute with the US.

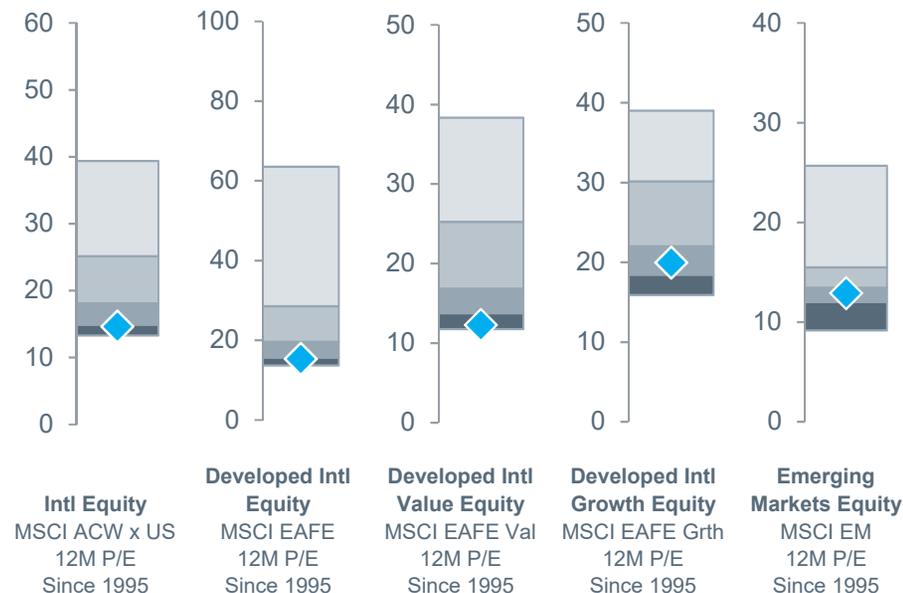
Market Cap & Style

Growth stocks significantly outperformed value stocks. Additionally, small cap outperformed large cap in developed international markets, but emerging markets large cap stocks broadly outperformed the stocks of smaller companies.

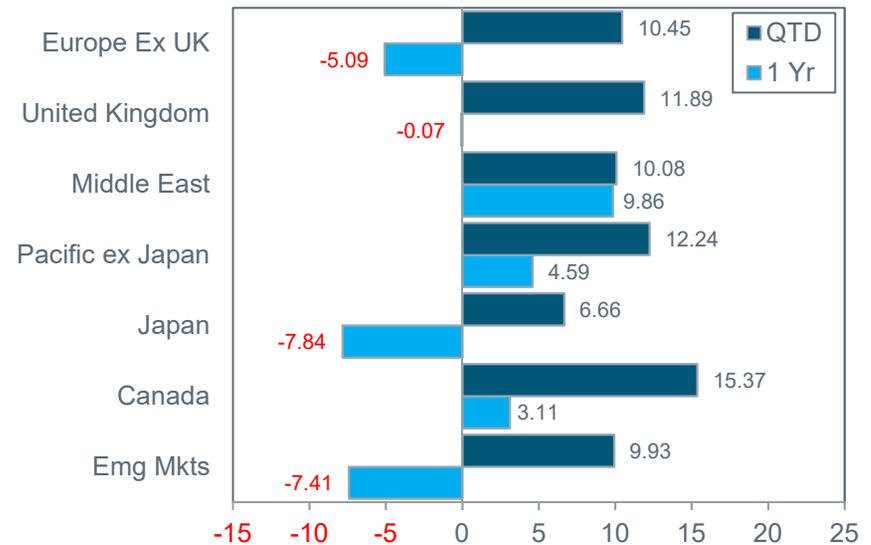
MSCI Style and Capitalization Market Performance (%)



Valuations



MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers. All returns are shown net of foreign taxes on dividends.



First Quarter Review

Broad Market

Aided by US Treasury rates declining across all maturities, the Bloomberg US Aggregate Index began the year strong, returning 2.9% for the quarter. While the rate decline was marginal at the shortest maturities, those dated one-year and longer fell between 0.21% and 0.28% in near-uniform fashion, exacerbating both the flattening and inverting trends of the yield curve. At quarter end, the one-month T-bill had a higher yield than Treasury securities between one- and ten-years.

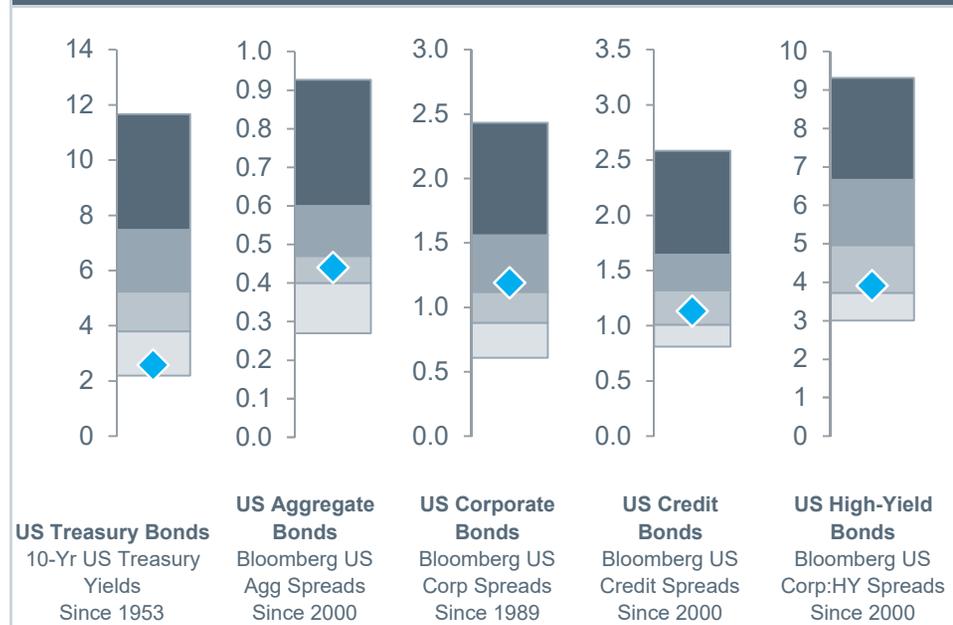
Credit Market

As investors returned to their risk-on sentiment, corporate spreads tightened after a brief widening in the fourth quarter to help boost returns in the sector. Lower-rated debt was particularly positive, with the ICE BofAML US High Yield Master II Index returning 7.4%.

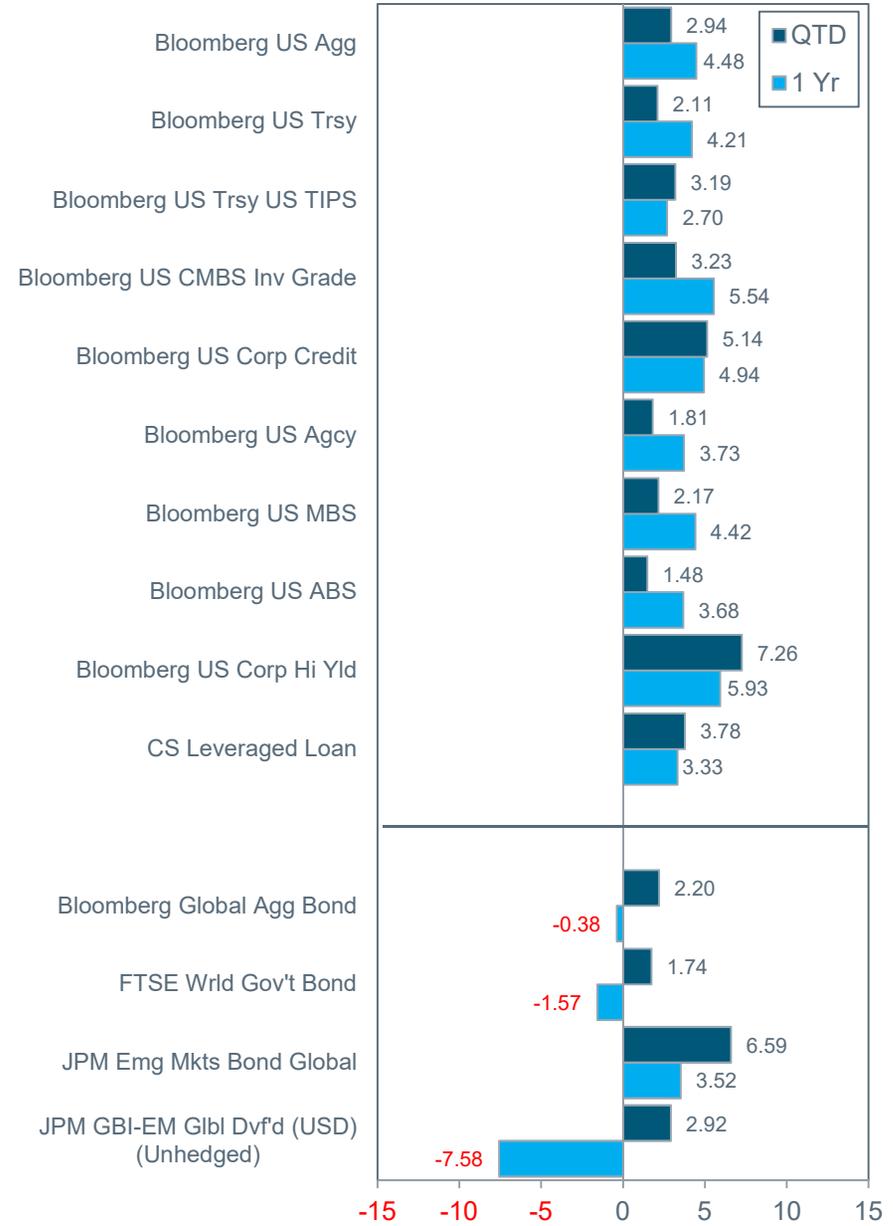
Emerging Market Debt

While a strengthening dollar dampened local currency returns, the JPM GBI-EM Global Diversified Index still managed a 2.9% return for the quarter.

Valuations



Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service. Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

First Quarter Review - Absolute Return

General Market - Hedge Funds

The first quarter of 2019 began on a positive note for the hedge fund industry, with each of the major strategy groups posting positive returns. The HFRI Fund Weighted Composite Index produced a return of 5.7%, its best result since the third quarter of 2009, largely driven by gains within the Long/Short Equity universe (“ELS”). The HFRI Asset Weighted Composite Index, which is more balanced across hedge fund strategies, realized a more muted return of 3.1%.

General Market - Global Tactical Asset Allocation (GTAA)

Most GTAA managers reported positive returns during the first quarter, though still underperformed a blend of 60% US equity and 40% US fixed income given the strong equity market returns. The positive absolute performance across managers is a reversal from the negative returns generated in 2018 and, more specifically, the fourth quarter. Performance across GTAA managers varied during the quarter, as the strongest performers held higher allocations to US equity and credit sensitive fixed income.

First Quarter Review - Real Assets

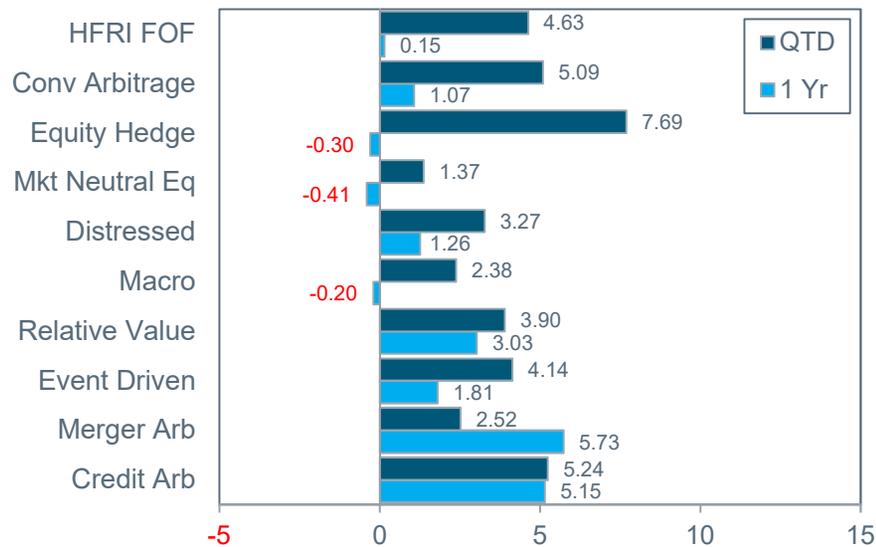
General Market - Diversified Inflation Strategies (DIS)

Most DIS managers provided strong returns during the first quarter. Performance across managers ranged widely and was bifurcated. The best performing DIS managers generally held significantly larger allocations to asset classes such as REITs, natural resource equities, global listed infrastructure, and commodities, which all rebounded during the first quarter. DIS managers that trailed peers, though still providing positive returns, held larger exposure to inflation linked securities such as TIPS.

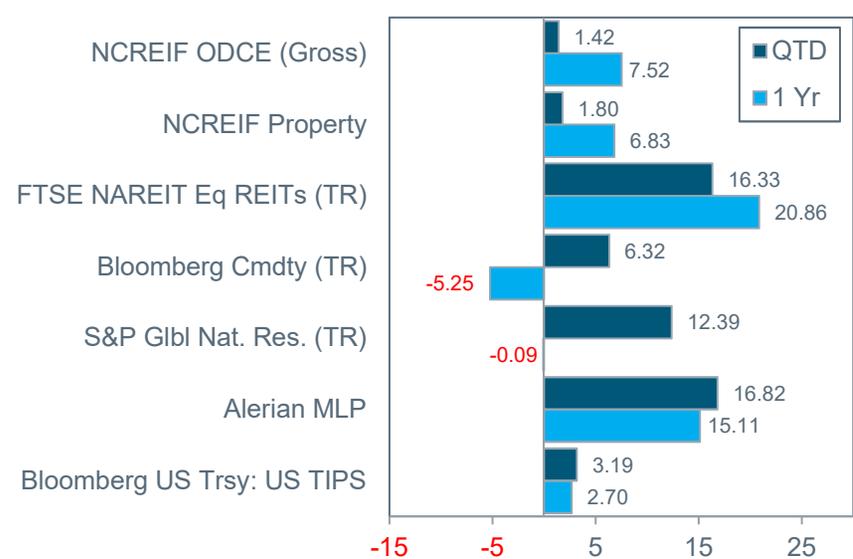
General Market - Real Estate

Core private real estate returned 1.4% during the first quarter, as tracked by the NCREIF-ODCE Index, with the total return comprised of 1.0% income and 0.4% price appreciation. Investors in publicly traded real estate significantly outperformed their private market counterparts during the first quarter. Publicly traded real estate experienced a snap-back from its negative performance in 2018. The first quarter total return was 16.7%, as measured by FTSE/NAREIT All REITs Index.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Annual Asset Class Performance

As of March 31, 2019

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD
Best	34.00	35.03	39.38	8.44	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	16.33
	26.19	32.18	16.23	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	14.58
	21.39	26.34	15.97	2.06	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	13.65
	21.36	19.31	11.63	-2.35	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	10.65
	13.54	18.37	11.17	-10.01	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	9.98
	12.17	16.32	10.25	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	9.93
	7.49	15.79	6.97	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	7.26
	5.34	11.86	6.60	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	6.45
	4.91	10.39	5.49	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	6.32
	4.55	4.85	5.00	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	4.63
	3.07	4.34	1.87	-37.74	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	3.19
	2.84	2.72	1.45	-43.33	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	2.94
	2.74	2.07	-1.57	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.58	1.42
Worst	2.43	0.49	-15.70	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	0.60
	S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp Hi Yield - FI	Bloombrg US Trsy US TIPS - FI	Bloombrg US Gov Credit Lng - FI	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv	

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.



Total Fund



City of Jacksonville Employees' Retirement System
Asset Allocation, Performance & Schedule of Investable Assets

As of March 31, 2019

	Allocation		Performance (%)		Allocation		Performance (%)
	Market Value (\$)	%	QTD		Market Value (\$)	%	QTD
US Equity	819,417,150	35.73	14.78	Real Estate	379,224,357	16.54	1.27
Eagle Capital Large Cap Value (SA)	219,935,350	9.59	12.82	Harrison Street Core Property, LP	100,208,472	4.37	1.24
INTECH Enhanced (SA)	178,582,569	7.79	14.43	PGIM Real Estate PRISA II (CF)	55,261,852	2.41	1.69
Mellon Large Cap Growth Index (CF)	110,335,435	4.81	16.09	Principal US Property (CF)	118,391,461	5.16	1.69
Loomis Sayles Large Cap Growth (CF)	108,213,610	4.72	16.07	UBS Trumbull Property (CF)	104,315,115	4.55	0.48
William Blair Small Cap Value (SA)	109,594,570	4.78	13.51	Vanguard RE Idx;ETF (VNQ)	1,047,457	0.05	17.36
Pinnacle Associates US SMID Cap Growth (SA)	92,755,616	4.04	18.80				
				Diversifying Assets	154,837,080	6.75	11.87
International Equity	497,132,734	21.68	10.32	Harvest Fund Advisors MLP (SA)	50,911,615	2.22	20.40
Silchester International Value (CF)	246,980,555	10.77	6.86	Tortoise Capital Advisors MLP (SA)	50,155,896	2.19	18.36
Baillie Gifford EAFE Fund 4; (BGEFX)	126,700,670	5.52	19.50	Hancock Timberland (SA)	53,769,569	2.34	0.05
Acadian Emerging Markets (CF)	123,451,508	5.38	8.79				
				Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,163,582	0.23	0.57
Fixed Income	437,031,317	19.06	2.80	Transition Account	558,948	0.02	N/A
Richmond Capital Core (SA)	132,144,996	5.76	3.04				
Taplin Canida & Habacht Intermediate Duration (SA)	131,794,291	5.75	3.31				
Franklin Templeton Global Multisector Plus (CF)	105,655,294	4.61	1.37				
Loomis Sayles Multisector Full Discretion (CF)	67,436,737	2.94	3.60				

Schedule of Investable Assets (Total Assets)

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
CYTD	2,107,578,103	523,241	185,263,825	2,293,365,168	8.78	108.78

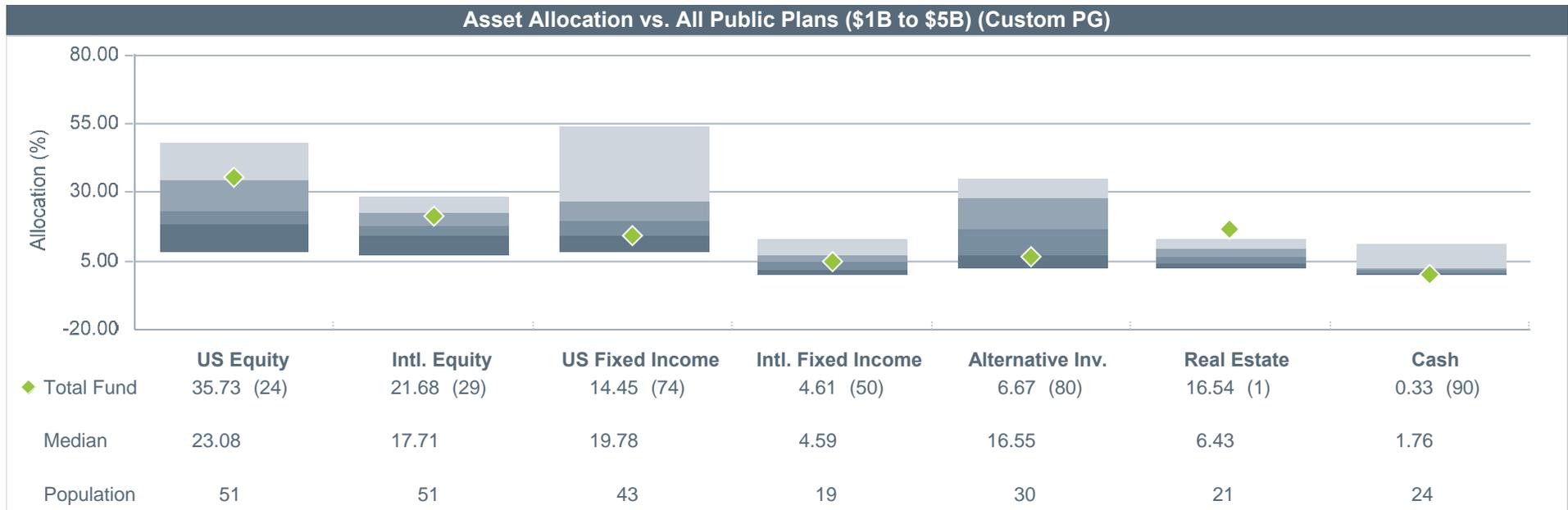
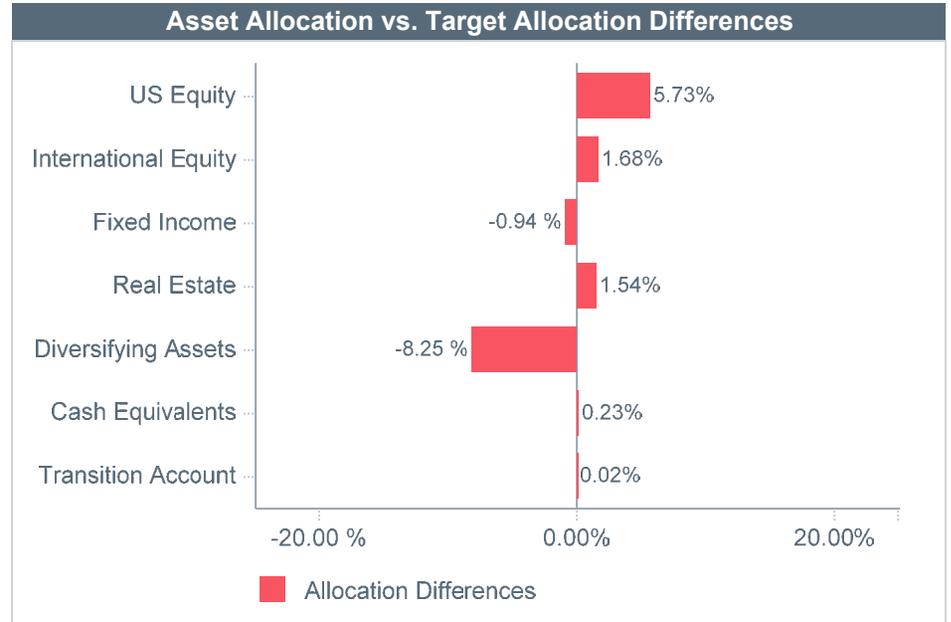
Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding.



City of Jacksonville Employees' Retirement System
Total Fund vs. All Public Plans (\$1B to \$5B) (Custom PG)
Asset Allocation vs. Target and Plan Sponsor Peer Group

As of March 31, 2019

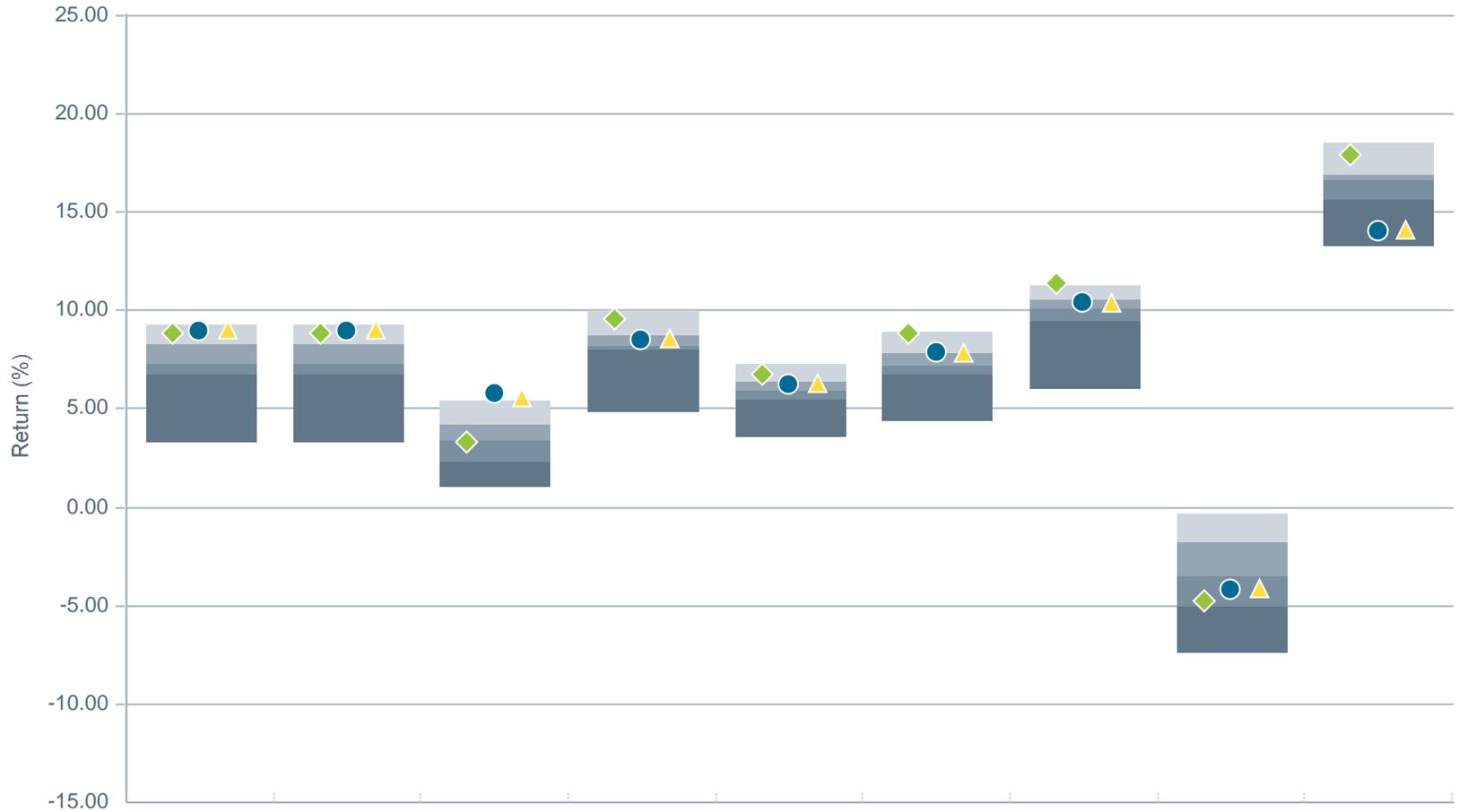
Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
Total Fund	2,293,365,168	100.00	-	100.00	-
US Equity	819,417,150	35.73	20.00	30.00	40.00
International Equity	497,132,734	21.68	10.00	20.00	25.00
Fixed Income	437,031,317	19.06	10.00	20.00	30.00
Real Estate	379,224,357	16.54	0.00	15.00	20.00
Diversifying Assets	154,837,080	6.75	0.00	15.00	20.00
Cash Equivalents	5,163,582	0.23	0.00	0.00	10.00
Transition Account	558,948	0.02	0.00	0.00	0.00



Allocations shown may not sum up to 100% exactly due to rounding. Parentheses contain percentile ranks.

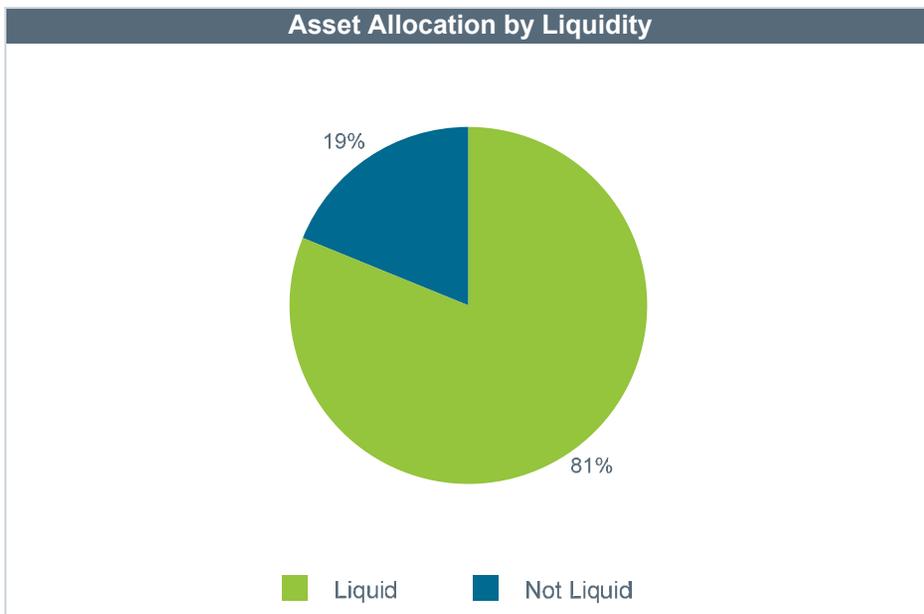
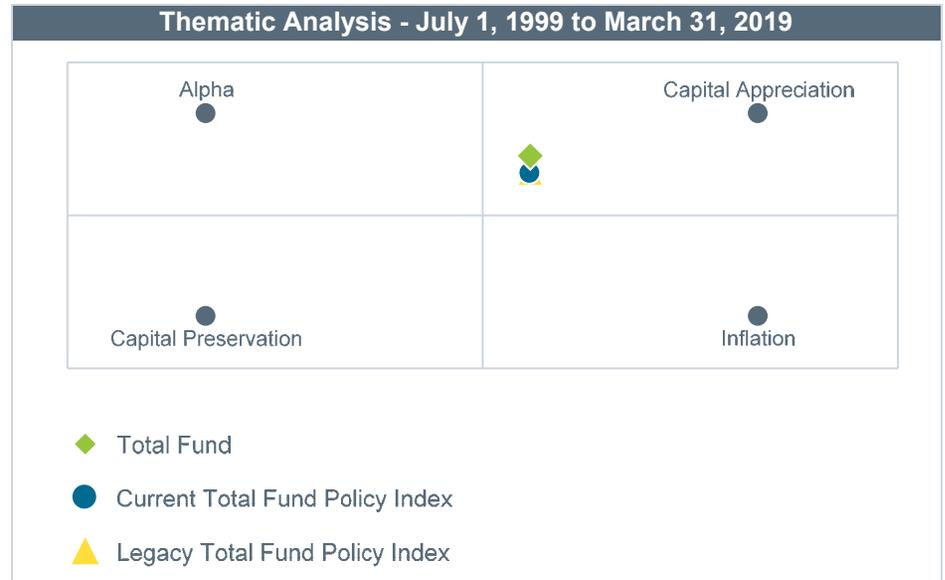
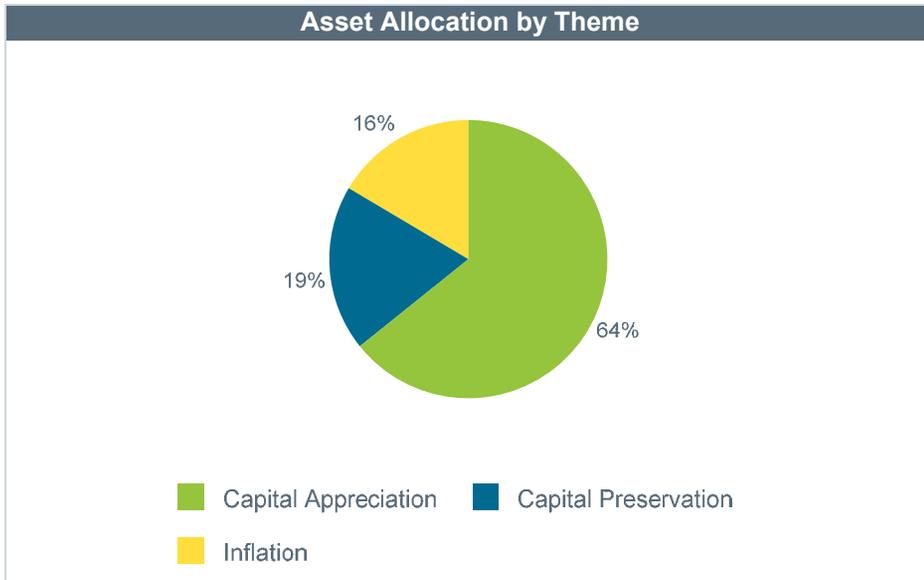
City of Jacksonville Employees' Retirement System
 Total Fund vs. All Public Plans (\$1B to \$5B) (Custom PG)
 Plan Sponsor Peer Group Analysis

As of March 31, 2019



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017
◆ Total Fund	8.90 (13)	8.90 (13)	3.33 (56)	9.60 (9)	6.79 (13)	8.87 (6)	11.43 (1)	-4.72 (70)	17.95 (9)
● Current Total Fund Policy Index	8.95 (12)	8.95 (12)	5.81 (3)	8.52 (42)	6.27 (30)	7.87 (25)	10.36 (30)	-4.24 (66)	14.00 (87)
▲ Legacy Total Fund Policy Index	9.00 (10)	9.00 (10)	5.59 (4)	8.59 (34)	6.31 (28)	7.90 (24)	10.38 (30)	-4.16 (65)	14.07 (86)
5th Percentile	9.35	9.35	5.37	10.08	7.33	8.95	11.26	-0.32	18.52
1st Quartile	8.27	8.27	4.19	8.78	6.44	7.86	10.57	-1.73	16.97
Median	7.34	7.34	3.43	8.26	5.93	7.18	10.11	-3.49	16.64
3rd Quartile	6.81	6.81	2.33	8.02	5.49	6.74	9.49	-5.03	15.67
95th Percentile	3.30	3.30	1.06	4.90	3.58	4.45	6.07	-7.36	13.28

Performance shown is gross of fees. Parentheses contain percentile ranks.



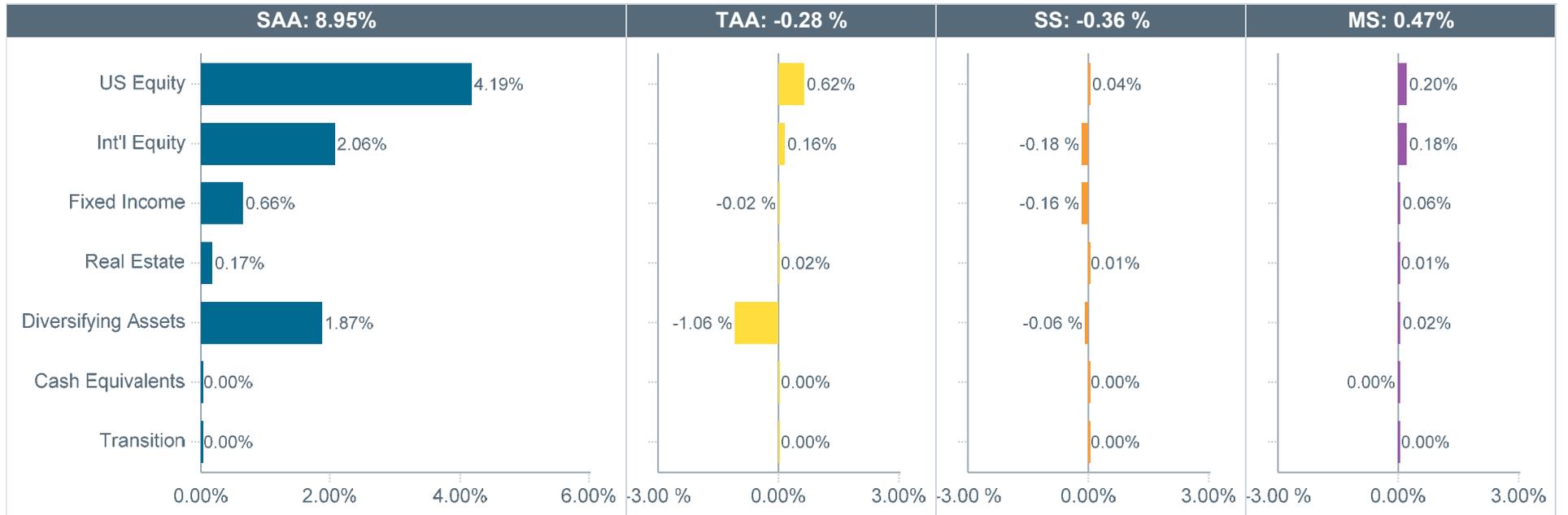
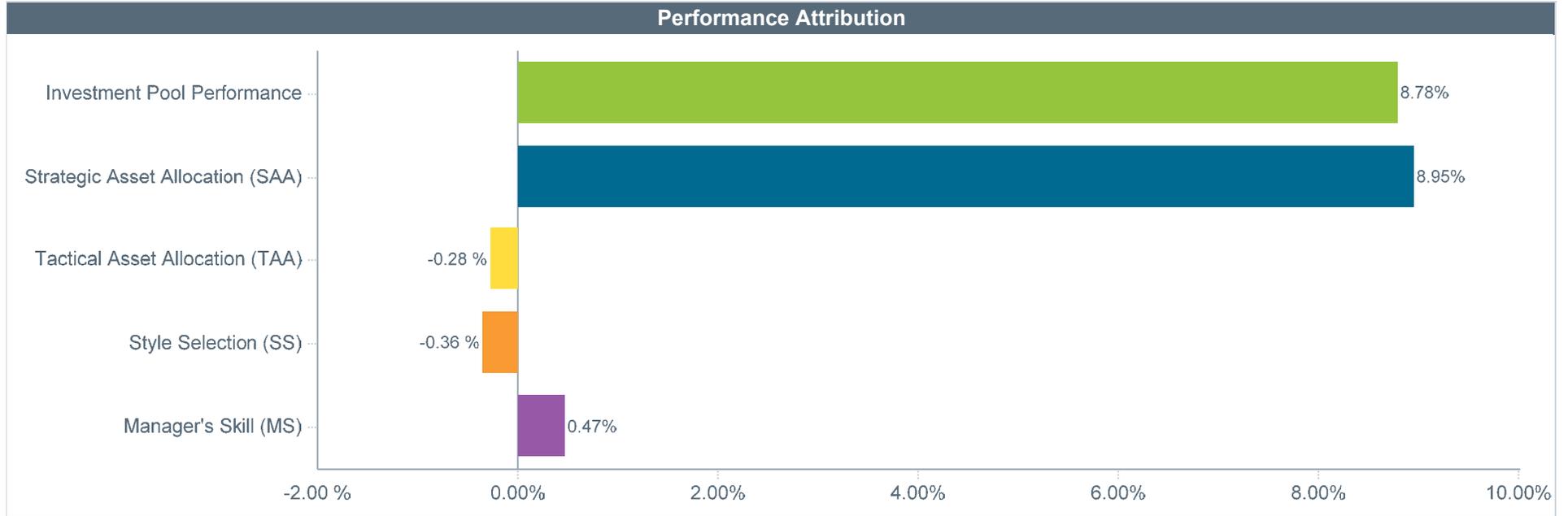
Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.64	1.00		
C	-0.30	-0.37	1.00	
D	0.51	0.81	-0.06	1.00

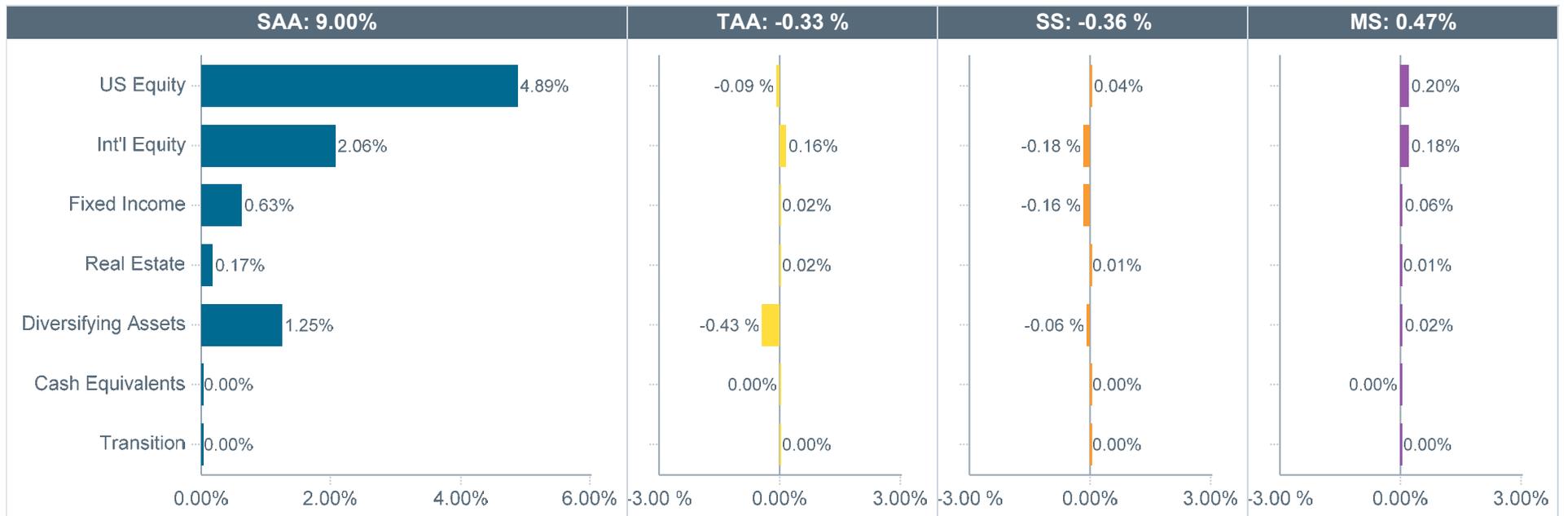
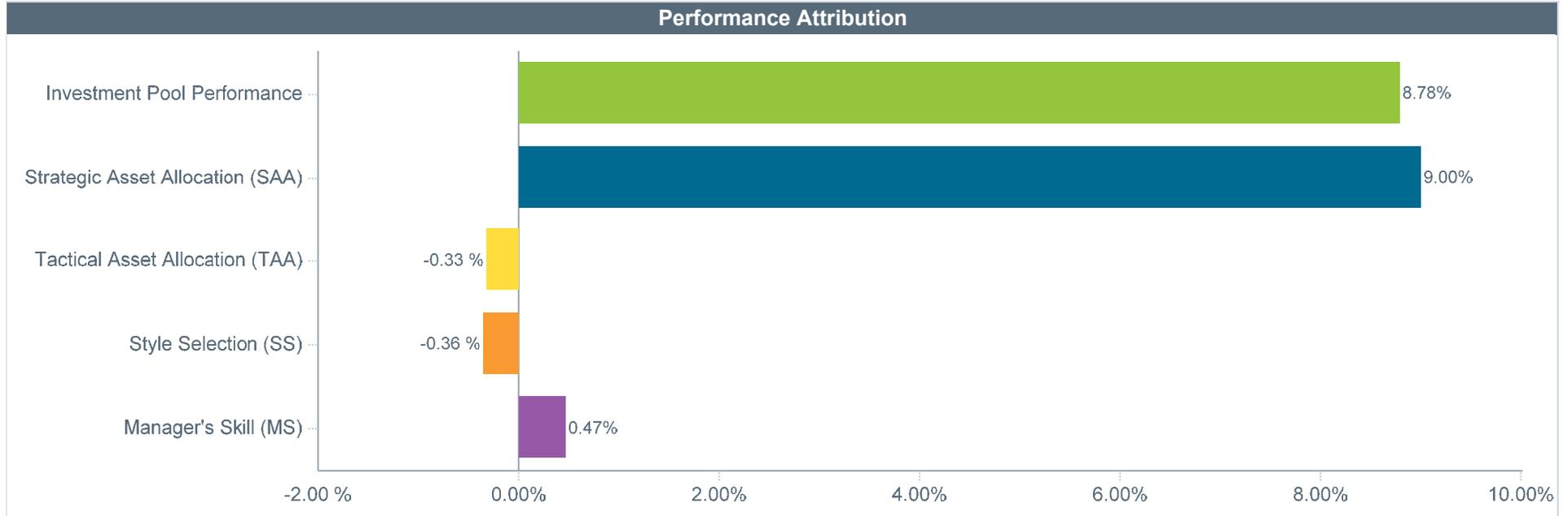
Legend:

- A = HFRI EH: Eq Mkt Neut Index (Alpha)
- B = MSCI ACW Index (USD) (Gross) (Capital Appreciation)
- C = Bloomberg US Gov't Bond Index (Capital Preservation)
- D = Real Return Custom Index (Inflation)

Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions.



Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



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City of Jacksonville Employees' Retirement System
Asset Allocation & Performance (Gross of Fees)

As of March 31, 2019

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,293,365,168	100.00	8.90	8.90	-0.66	3.33	9.60	6.79	8.87	11.43	6.49	07/01/1999
Current Total Fund Policy Index			8.95	8.95	0.23	5.81	8.52	6.27	7.87	10.36	5.75	
Difference			-0.05	-0.05	-0.89	-2.48	1.08	0.52	1.00	1.07	0.74	
Legacy Total Fund Policy Index			9.00	9.00	0.14	5.59	8.59	6.31	7.90	10.38	5.76	
Difference			-0.10	-0.10	-0.80	-2.26	1.01	0.48	0.97	1.05	0.73	
All Public Plans (\$1B to \$5B) (Custom PG) Median			7.34	7.34	0.00	3.43	8.26	5.93	7.18	10.11	5.92	
Rank			13	13	83	56	9	13	6	1	16	
Total Equity	1,316,549,883	57.41	13.12	13.12	-3.02	0.83	12.25	8.06	10.70	14.23	6.20	07/01/1999
US Equity	819,417,150	35.73	14.80	14.80	-2.81	7.08	13.21	9.80	12.38	15.91	6.57	07/01/1999
US Equity Index			14.04	14.04	-2.27	8.77	13.49	10.36	12.63	16.00	6.24	
Difference			0.76	0.76	-0.54	-1.69	-0.28	-0.56	-0.25	-0.09	0.33	
IM U.S. Equity (SA+CF) Median			13.93	13.93	-3.86	5.86	12.60	8.91	12.07	16.13	8.48	
Rank			38	38	41	44	43	40	44	56	79	
International Equity	497,132,734	21.68	10.47	10.47	-3.35	-8.22	10.68	4.94	7.58	10.98	6.05	07/01/1999
International Equity Index			10.31	10.31	-2.33	-4.22	8.09	2.57	4.72	8.38	3.78	
Difference			0.16	0.16	-1.02	-4.00	2.59	2.37	2.86	2.60	2.27	
IM International Equity (SA+CF) Median			10.49	10.49	-2.33	-5.69	8.48	3.94	6.46	10.73	6.94	
Rank			51	51	59	70	27	33	32	45	63	
Fixed Income	437,031,317	19.06	2.92	2.92	4.03	3.34	3.75	2.71	3.20	6.00	5.45	07/01/1999
Fixed Income Index			3.32	3.32	4.53	4.53	2.05	2.75	2.49	3.77	4.84	
Difference			-0.40	-0.40	-0.50	-1.19	1.70	-0.04	0.71	2.23	0.61	
IM Global Fixed Income (SA+CF) Median			3.84	3.84	2.84	1.89	3.78	2.53	3.34	5.14	6.52	
Rank			70	70	21	34	52	49	53	43	66	
Real Estate	379,224,357	16.54	1.50	1.50	3.21	8.45	8.29	9.91	9.88	8.53	6.54	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	7.26	
Difference			0.08	0.08	0.01	0.93	0.32	-0.27	-0.89	-0.21	-0.72	
Diversifying Assets	154,837,080	6.75	12.03	12.03	-1.92	14.16	8.32	1.69	6.53	N/A	7.70	03/01/2011
Diversifying Assets Index			12.45	12.45	-0.94	12.90	6.64	0.99	4.41	7.87	4.53	
Difference			-0.42	-0.42	-0.98	1.26	1.68	0.70	2.12	N/A	3.17	

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City of Jacksonville Employees' Retirement System
Asset Allocation & Performance (Gross of Fees)

As of March 31, 2019

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	219,935,350	9.59	12.82	12.82	-2.42	7.62	15.75	11.26	14.30	17.81	10.66	02/01/2007
Russell 1000 Val Index			11.93	11.93	-1.19	5.67	10.45	7.72	11.14	14.52	5.91	
Difference			0.89	0.89	-1.23	1.95	5.30	3.54	3.16	3.29	4.75	
IM U.S. Large Cap Value Equity (SA+CF) Median			11.76	11.76	-2.95	4.23	11.10	8.03	11.45	14.80	7.04	
Rank			26	26	41	25	2	5	2	2	1	
INTECH Enhanced (SA)	178,582,569	7.79	14.43	14.43	-2.98	4.72	12.08	10.64	12.84	15.96	9.22	02/01/2008
INTECH Enhanced Index			13.65	13.65	-1.72	9.50	13.51	10.91	12.85	16.02	9.04	
Difference			0.78	0.78	-1.26	-4.78	-1.43	-0.27	-0.01	-0.06	0.18	
IM U.S. Large Cap Equity (SA+CF) Median			13.29	13.29	-2.25	7.99	12.91	10.32	12.62	15.84	9.11	
Rank			31	31	63	73	61	43	41	46	45	
Mellon Large Cap Growth Index (CF)	110,335,435	4.81	16.10	16.10	-2.34	12.69	N/A	N/A	N/A	N/A	15.50	08/01/2017
Russell 1000 Grth Index			16.10	16.10	-2.34	12.75	16.53	13.50	14.34	17.52	15.55	
Difference			0.00	0.00	0.00	-0.06	N/A	N/A	N/A	N/A	-0.05	
IM U.S. Large Cap Growth Equity (SA+CF) Median			15.92	15.92	-1.57	12.46	16.34	12.80	13.86	16.87	14.68	
Rank			46	46	61	48	N/A	N/A	N/A	N/A	45	
Loomis Sayles Large Cap Growth (CF)	108,213,610	4.72	16.19	16.19	2.75	13.31	N/A	N/A	N/A	N/A	15.34	08/01/2017
Russell 1000 Grth Index			16.10	16.10	-2.34	12.75	16.53	13.50	14.34	17.52	15.55	
Difference			0.09	0.09	5.09	0.56	N/A	N/A	N/A	N/A	-0.21	
IM U.S. Large Cap Growth Equity (SA+CF) Median			15.92	15.92	-1.57	12.46	16.34	12.80	13.86	16.87	14.68	
Rank			45	45	11	40	N/A	N/A	N/A	N/A	47	
William Blair Small Cap Value (SA)	109,594,570	4.78	13.51	13.51	-8.16	0.73	9.13	N/A	N/A	N/A	6.35	11/01/2014
Russell 2000 Val Index			11.93	11.93	-8.97	0.17	10.86	5.59	9.61	14.12	6.32	
Difference			1.58	1.58	0.81	0.56	-1.73	N/A	N/A	N/A	0.03	
IM U.S. Small Cap Value Equity (SA+CF) Median			12.95	12.95	-8.82	-1.63	9.78	6.24	10.70	16.21	6.76	
Rank			41	41	37	28	64	N/A	N/A	N/A	57	
Pinnacle Associates US SMID Cap Growth (SA)	92,755,616	4.04	18.80	18.80	-3.41	6.35	14.23	8.48	12.51	N/A	14.10	03/01/2010
Russell 2500 Grth Index			18.99	18.99	-4.90	7.54	15.60	9.72	12.56	17.50	14.06	
Difference			-0.19	-0.19	1.49	-1.19	-1.37	-1.24	-0.05	N/A	0.04	
IM U.S. SMID Cap Growth Equity (SA+CF) Median			17.89	17.89	-5.28	10.29	16.21	10.02	12.70	17.75	14.58	
Rank			34	34	26	73	75	76	52	N/A	63	

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City of Jacksonville Employees' Retirement System
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As of March 31, 2019

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity												
Silchester International Value (CF)	246,980,555	10.77	7.01	7.01	-4.55	-6.89	8.34	4.80	9.10	N/A	10.36	06/01/2009
MSCI EAFE Val Index (USD) (Net)			7.92	7.92	-4.71	-6.13	6.90	0.67	4.71	8.12	5.32	
Difference			-0.91	-0.91	0.16	-0.76	1.44	4.13	4.39	N/A	5.04	
IM EAFE Value (SA+CF) Median			9.33	9.33	-5.39	-5.57	7.04	2.54	6.18	9.76	7.55	
Rank			100	100	41	57	16	13	11	N/A	7	
Baillie Gifford EAFE Fund 4; (BGEFX)	126,700,670	5.52	19.64	19.64	-3.16	-6.03	15.51	6.52	9.20	N/A	10.76	06/01/2009
Baillie Gifford Index			12.31	12.31	-1.39	-3.05	7.17	3.67	6.29	9.61	7.62	
Difference			7.33	7.33	-1.77	-2.98	8.34	2.85	2.91	N/A	3.14	
IM ACWI Ex US Growth (SA+CF) Median			13.06	13.06	-3.51	-3.73	8.76	4.61	7.14	11.69	9.06	
Rank			2	2	44	75	4	17	11	N/A	11	
Acadian Emerging Markets (CF)	123,451,508	5.38	8.94	8.94	-1.10	-13.18	9.95	3.49	3.14	N/A	2.73	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			9.93	9.93	1.71	-7.41	10.68	3.68	2.69	8.95	1.75	
Difference			-0.99	-0.99	-2.81	-5.77	-0.73	-0.19	0.45	N/A	0.98	
IM Emerging Markets Equity (SA+CF) Median			10.09	10.09	2.55	-7.94	10.45	4.28	4.31	10.56	3.08	
Rank			68	68	90	92	57	73	77	N/A	61	
Fixed Income												
Richmond Capital Core (SA)	132,144,996	5.76	3.04	3.04	4.74	4.80	2.41	3.16	2.97	4.67	5.25	06/01/1999
Richmond Capital Index			2.94	2.94	4.63	4.48	2.03	2.74	2.48	3.69	4.83	
Difference			0.10	0.10	0.11	0.32	0.38	0.42	0.49	0.98	0.42	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			3.23	3.23	4.65	4.70	2.54	3.10	2.94	4.65	5.20	
Rank			65	65	36	37	59	47	46	49	44	
Taplin Canida & Habacht Intermediate Duration (SA)	131,794,291	5.75	3.31	3.31	3.53	4.34	2.95	2.51	2.76	4.60	4.96	06/01/1999
ICE BofAML US Corp & Gov't 1-10 Yr Index			2.35	2.35	3.99	4.26	1.71	2.19	2.07	3.27	4.35	
Difference			0.96	0.96	-0.46	0.08	1.24	0.32	0.69	1.33	0.61	
IM U.S. Intermediate Duration (SA+CF) Median			2.45	2.45	3.90	4.36	2.04	2.43	2.36	3.66	4.68	
Rank			3	3	79	55	9	39	20	18	20	
Franklin Templeton Global Multisector Plus (CF)	105,655,294	4.61	1.67	1.67	3.95	-0.07	4.71	N/A	N/A	N/A	5.79	03/01/2016
Frank. Temp. Global Multisector Index			2.39	2.39	3.44	-0.29	1.85	1.20	1.41	6.76	2.74	
Difference			-0.72	-0.72	0.51	0.22	2.86	N/A	N/A	N/A	3.05	
IM Global Fixed Income (SA+CF) Median			3.84	3.84	2.84	1.89	3.78	2.53	3.34	5.14	4.78	
Rank			94	94	23	64	43	N/A	N/A	N/A	39	
Loomis Sayles Multisector Full Discretion (CF)	67,436,737	2.94	3.91	3.91	3.76	4.15	6.80	4.50	5.98	10.47	6.87	10/01/2007
Bloomberg Gbl Agg Bond Index			2.20	2.20	3.43	-0.38	1.49	1.04	1.19	3.05	3.06	
Difference			1.71	1.71	0.33	4.53	5.31	3.46	4.79	7.42	3.81	
IM Global Fixed Income (SA+CF) Median			3.84	3.84	2.84	1.89	3.78	2.53	3.34	5.14	4.36	
Rank			49	49	28	27	20	20	15	8	8	

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Real Estate												
Harrison Street Core Property, LP	100,208,472	4.37	1.50	1.50	3.59	9.22	9.32	N/A	N/A	N/A	8.55	11/01/2015
NCREIF ODCE Index (AWA) (Gross)			1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	8.69	
Difference			0.08	0.08	0.39	1.70	1.35	N/A	N/A	N/A	-0.14	
PGIM Real Estate PRISA II (CF)	55,261,852	2.41	1.99	1.99	3.47	11.39	9.65	N/A	N/A	N/A	10.58	01/01/2015
NCREIF ODCE Index (AWA) (Gross)			1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	9.65	
Difference			0.57	0.57	0.27	3.87	1.68	N/A	N/A	N/A	0.93	
Principal US Property (CF)	118,391,461	5.16	1.90	1.90	3.41	8.86	9.35	11.25	N/A	N/A	11.17	01/01/2014
NCREIF ODCE Index (AWA) (Gross)			1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	10.19	
Difference			0.48	0.48	0.21	1.34	1.38	1.07	N/A	N/A	0.98	
UBS Trumbull Property (CF)	104,315,115	4.55	0.69	0.69	2.43	5.71	6.31	8.56	8.97	7.99	6.70	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	7.26	
Difference			-0.73	-0.73	-0.77	-1.81	-1.66	-1.62	-1.80	-0.75	-0.56	
Vanguard RE Idx;ETF (VNQ)	1,047,457	0.05	17.36	17.36	9.81	20.14	5.55	8.63	8.78	17.42	14.33	12/01/2008
Custom REITs Index			17.30	17.30	9.42	21.79	6.31	9.19	9.28	18.59	15.29	
Difference			0.06	0.06	0.39	-1.65	-0.76	-0.56	-0.50	-1.17	-0.96	
Diversifying Assets												
Harvest Fund Advisors MLP (SA)	50,911,615	2.22	20.95	20.95	-4.02	15.97	8.57	-1.36	5.46	N/A	7.49	03/01/2011
S&P MLP Index (TR)			18.75	18.75	-2.39	17.50	8.84	-3.86	1.74	11.01	2.62	
Difference			2.20	2.20	-1.63	-1.53	-0.27	2.50	3.72	N/A	4.87	
Tortoise Capital Advisors MLP (SA)	50,155,896	2.19	18.36	18.36	-0.87	14.35	7.52	-1.83	5.27	N/A	6.34	03/01/2011
S&P MLP Index (TR)			18.75	18.75	-2.39	17.50	8.84	-3.86	1.74	11.01	2.62	
Difference			-0.39	-0.39	1.52	-3.15	-1.32	2.03	3.53	N/A	3.72	
Hancock Timberland (SA)	53,769,569	2.34	0.05	0.05	-0.79	12.52	9.63	7.65	7.85	4.36	3.82	10/01/2006
NCREIF Timberland Index			0.11	0.11	0.86	2.38	3.27	4.63	5.97	3.74	5.74	
Difference			-0.06	-0.06	-1.65	10.14	6.36	3.02	1.88	0.62	-1.92	
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,163,582	0.23	0.61	0.61	1.15	2.33	1.26	0.82	0.61	0.47	1.42	04/01/2001
FTSE 3 Mo T-Bill Index			0.60	0.60	1.17	2.11	1.17	0.72	0.54	0.40	1.38	
Difference			0.01	0.01	-0.02	0.22	0.09	0.10	0.07	0.07	0.04	

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City of Jacksonville Employees' Retirement System
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	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,293,365,168	100.00	8.78	8.78	-0.90	2.83	9.05	6.27	8.34	10.94	6.21	07/01/1999
Current Total Fund Policy Index			8.95	8.95	0.23	5.81	8.52	6.27	7.87	10.36	5.75	
Difference			-0.17	-0.17	-1.13	-2.98	0.53	0.00	0.47	0.58	0.46	
Legacy Total Fund Policy Index			9.00	9.00	0.14	5.59	8.59	6.31	7.90	10.38	5.76	
Difference			-0.22	-0.22	-1.04	-2.76	0.46	-0.04	0.44	0.56	0.45	
Total Equity	1,316,549,883	57.41	13.05	13.05	-3.22	0.35	11.66	7.49	10.11	13.70	5.92	07/01/1999
US Equity	819,417,150	35.73	14.78	14.78	-2.97	6.63	12.64	9.24	11.80	15.40	6.30	07/01/1999
US Equity Index			14.04	14.04	-2.27	8.77	13.49	10.36	12.63	16.00	6.24	
Difference			0.74	0.74	-0.70	-2.14	-0.85	-1.12	-0.83	-0.60	0.06	
International Equity	497,132,734	21.68	10.32	10.32	-3.62	-8.74	10.06	4.34	6.97	10.43	5.75	07/01/1999
International Equity Index			10.31	10.31	-2.33	-4.22	8.09	2.57	4.72	8.38	3.78	
Difference			0.01	0.01	-1.29	-4.52	1.97	1.77	2.25	2.05	1.97	
Fixed Income	437,031,317	19.06	2.80	2.80	3.88	3.15	3.52	2.52	3.02	5.78	5.31	07/01/1999
Fixed Income Index			3.32	3.32	4.53	4.53	2.05	2.75	2.49	3.77	4.84	
Difference			-0.52	-0.52	-0.65	-1.38	1.47	-0.23	0.53	2.01	0.47	
Real Estate	379,224,357	16.54	1.27	1.27	2.74	7.53	7.52	9.11	9.03	7.75	5.88	12/01/2005
NCREIF ODCE Index (AWA) (Net)			1.20	1.20	2.74	6.55	7.00	9.18	9.75	7.73	6.18	
Difference			0.07	0.07	0.00	0.98	0.52	-0.07	-0.72	0.02	-0.30	
Diversifying Assets	154,837,080	6.75	11.87	11.87	-2.12	13.72	7.86	1.22	6.03	N/A	7.20	03/01/2011
Diversifying Assets Index			12.45	12.45	-0.94	12.90	6.64	0.99	4.41	7.87	4.53	
Difference			-0.58	-0.58	-1.18	0.82	1.22	0.23	1.62	N/A	2.67	

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	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	219,935,350	9.59	12.82	12.82	-2.64	6.99	14.95	10.47	13.47	17.08	10.00	02/01/2007
Russell 1000 Val Index			11.93	11.93	-1.19	5.67	10.45	7.72	11.14	14.52	5.91	
Difference			0.89	0.89	-1.45	1.32	4.50	2.75	2.33	2.56	4.09	
INTECH Enhanced (SA)	178,582,569	7.79	14.43	14.43	-3.09	4.45	11.74	10.29	12.48	15.64	8.93	02/01/2008
INTECH Enhanced Index			13.65	13.65	-1.72	9.50	13.51	10.91	12.85	16.02	9.04	
Difference			0.78	0.78	-1.37	-5.05	-1.77	-0.62	-0.37	-0.38	-0.11	
Mellon Large Cap Growth Index (CF)	110,335,435	4.81	16.09	16.09	-2.36	12.63	N/A	N/A	N/A	N/A	15.44	08/01/2017
Russell 1000 Grth Index			16.10	16.10	-2.34	12.75	16.53	13.50	14.34	17.52	15.55	
Difference			-0.01	-0.01	-0.02	-0.12	N/A	N/A	N/A	N/A	-0.11	
Loomis Sayles Large Cap Growth (CF)	108,213,610	4.72	16.07	16.07	2.52	12.79	N/A	N/A	N/A	N/A	14.78	08/01/2017
Russell 1000 Grth Index			16.10	16.10	-2.34	12.75	16.53	13.50	14.34	17.52	15.55	
Difference			-0.03	-0.03	4.86	0.04	N/A	N/A	N/A	N/A	-0.77	
William Blair Small Cap Value (SA)	109,594,570	4.78	13.51	13.51	-8.38	0.10	8.45	N/A	N/A	N/A	5.61	11/01/2014
Russell 2000 Val Index			11.93	11.93	-8.97	0.17	10.86	5.59	9.61	14.12	6.32	
Difference			1.58	1.58	0.59	-0.07	-2.41	N/A	N/A	N/A	-0.71	
Pinnacle Associates US SMID Cap Growth (SA)	92,755,616	4.04	18.80	18.80	-3.59	5.84	13.61	7.74	11.70	N/A	13.33	03/01/2010
Russell 2500 Grth Index			18.99	18.99	-4.90	7.54	15.60	9.72	12.56	17.50	14.06	
Difference			-0.19	-0.19	1.31	-1.70	-1.99	-1.98	-0.86	N/A	-0.73	
International Equity												
Silchester International Value (CF)	246,980,555	10.77	6.86	6.86	-4.82	-7.42	7.72	4.19	8.47	N/A	9.71	06/01/2009
MSCI EAFE Val Index (USD) (Net)			7.92	7.92	-4.71	-6.13	6.90	0.67	4.71	8.12	5.32	
Difference			-1.06	-1.06	-0.11	-1.29	0.82	3.52	3.76	N/A	4.39	
Baillie Gifford EAFE Fund 4; (BGEFX)	126,700,670	5.52	19.50	19.50	-3.41	-6.53	14.90	5.94	8.67	N/A	10.38	06/01/2009
Baillie Gifford Index			12.31	12.31	-1.39	-3.05	7.17	3.67	6.29	9.61	7.62	
Difference			7.19	7.19	-2.02	-3.48	7.73	2.27	2.38	N/A	2.76	
Acadian Emerging Markets (CF)	123,451,508	5.38	8.79	8.79	-1.39	-13.70	9.32	2.89	2.51	N/A	2.14	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			9.93	9.93	1.71	-7.41	10.68	3.68	2.69	8.95	1.75	
Difference			-1.14	-1.14	-3.10	-6.29	-1.36	-0.79	-0.18	N/A	0.39	

Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30.



City of Jacksonville Employees' Retirement System
Asset Allocation & Performance (Net of Fees)

As of March 31, 2019

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income												
Richmond Capital Core (SA)	132,144,996	5.76	3.04	3.04	4.70	4.66	2.25	2.99	2.80	4.52	5.16	06/01/1999
Richmond Capital Index			2.94	2.94	4.63	4.48	2.03	2.74	2.48	3.69	4.83	
Difference			0.10	0.10	0.07	0.18	0.22	0.25	0.32	0.83	0.33	
Taplin Canada & Habacht Intermediate Duration (SA)	131,794,291	5.75	3.31	3.31	3.50	4.24	2.84	2.39	2.64	4.49	4.90	06/01/1999
ICE BofAML US Corp & Gov't 1-10 Yr Index			2.35	2.35	3.99	4.26	1.71	2.19	2.07	3.27	4.35	
Difference			0.96	0.96	-0.49	-0.02	1.13	0.20	0.57	1.22	0.55	
Franklin Templeton Global Multisector Plus (CF)	105,655,294	4.61	1.37	1.37	3.63	-0.38	4.34	N/A	N/A	N/A	5.43	03/01/2016
Frank. Temp. Global Multisector Index			2.39	2.39	3.44	-0.29	1.85	1.20	1.41	6.76	2.74	
Difference			-1.02	-1.02	0.19	-0.09	2.49	N/A	N/A	N/A	2.69	
Loomis Sayles Multisector Full Discretion (CF)	67,436,737	2.94	3.60	3.60	3.46	3.84	6.41	4.10	5.55	10.10	6.53	10/01/2007
Bloomberg Gbl Agg Bond Index			2.20	2.20	3.43	-0.38	1.49	1.04	1.19	3.05	3.06	
Difference			1.40	1.40	0.03	4.22	4.92	3.06	4.36	7.05	3.47	
Real Estate												
Harrison Street Core Property, LP	100,208,472	4.37	1.24	1.24	3.07	8.39	9.04	N/A	N/A	N/A	8.31	11/01/2015
NCREIF ODCE Index (AWA) (Net)			1.20	1.20	2.74	6.55	7.00	9.18	9.75	7.73	7.50	
Difference			0.04	0.04	0.33	1.84	2.04	N/A	N/A	N/A	0.81	
PGIM Real Estate PRISA II (CF)	55,261,852	2.41	1.69	1.69	2.87	10.01	8.60	N/A	N/A	N/A	9.71	01/01/2015
NCREIF ODCE Index (AWA) (Net)			1.20	1.20	2.74	6.55	7.00	9.18	9.75	7.73	8.66	
Difference			0.49	0.49	0.13	3.46	1.60	N/A	N/A	N/A	1.05	
Principal US Property (CF)	118,391,461	5.16	1.69	1.69	3.00	7.92	8.46	10.35	N/A	N/A	10.27	01/01/2014
NCREIF ODCE Index (AWA) (Net)			1.20	1.20	2.74	6.55	7.00	9.18	9.75	7.73	9.19	
Difference			0.49	0.49	0.26	1.37	1.46	1.17	N/A	N/A	1.08	
UBS Trumbull Property (CF)	104,315,115	4.55	0.48	0.48	2.01	4.85	5.32	7.53	7.92	6.97	5.73	12/01/2005
NCREIF ODCE Index (AWA) (Net)			1.20	1.20	2.74	6.55	7.00	9.18	9.75	7.73	6.18	
Difference			-0.72	-0.72	-0.73	-1.70	-1.68	-1.65	-1.83	-0.76	-0.45	
Vanguard RE Idx;ETF (VNQ)	1,047,457	0.05	17.36	17.36	9.81	20.14	5.55	8.63	8.78	17.42	14.33	12/01/2008
Custom REITs Index			17.30	17.30	9.42	21.79	6.31	9.19	9.28	18.59	15.29	
Difference			0.06	0.06	0.39	-1.65	-0.76	-0.56	-0.50	-1.17	-0.96	

Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30.



City of Jacksonville Employees' Retirement System
 Asset Allocation & Performance (Net of Fees)

As of March 31, 2019

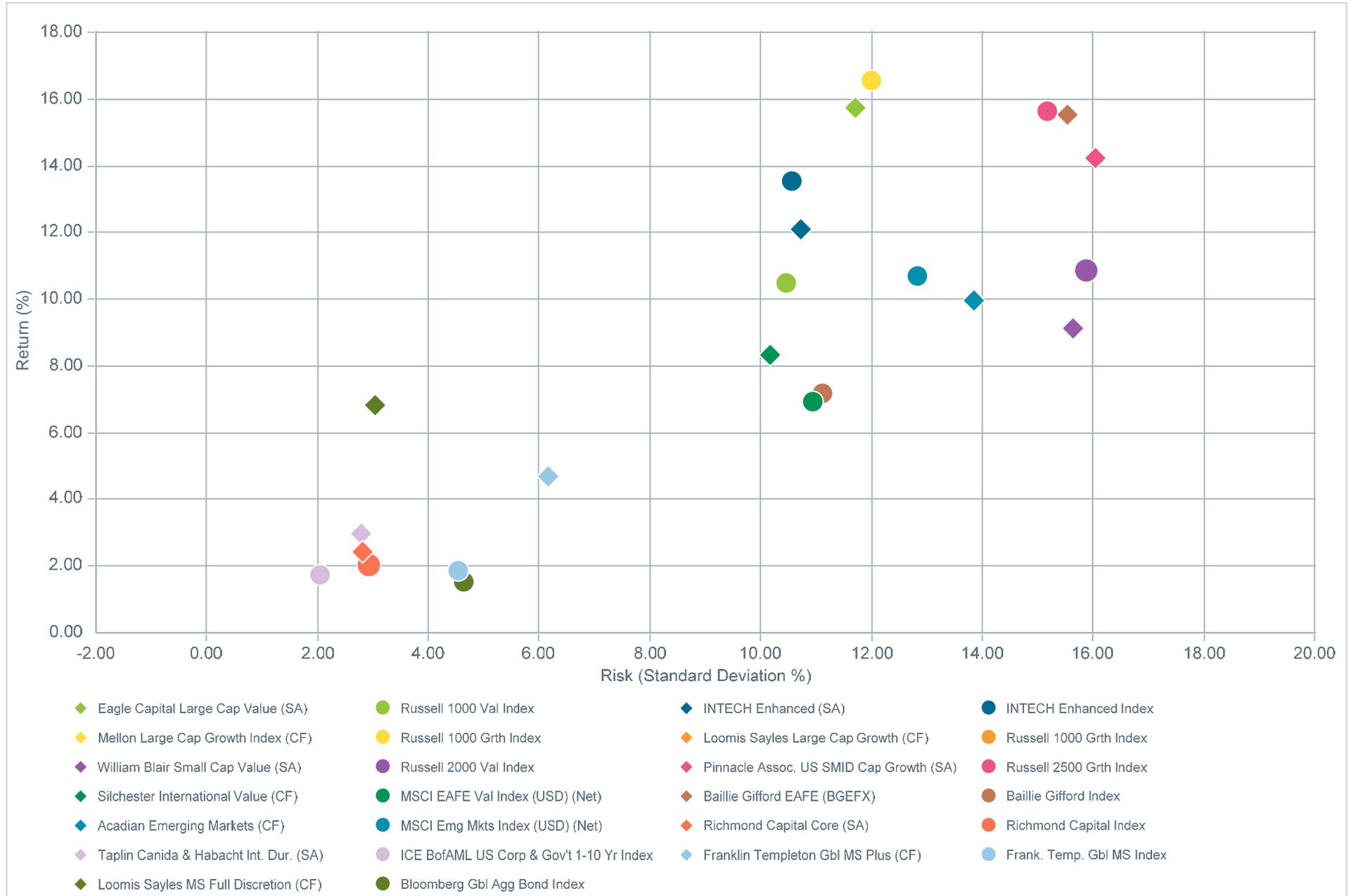
	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Diversifying Assets												
Harvest Fund Advisors MLP (SA)	50,911,615	2.22	20.40	20.40	-4.45	15.23	7.82	-2.10	4.68	N/A	6.73	03/01/2011
S&P MLP Index (TR)			18.75	18.75	-2.39	17.50	8.84	-3.86	1.74	11.01	2.62	
Difference			1.65	1.65	-2.06	-2.27	-1.02	1.76	2.94	N/A	4.11	
Tortoise Capital Advisors MLP (SA)	50,155,896	2.19	18.36	18.36	-1.09	13.70	6.79	-2.55	4.50	N/A	5.60	03/01/2011
S&P MLP Index (TR)			18.75	18.75	-2.39	17.50	8.84	-3.86	1.74	11.01	2.62	
Difference			-0.39	-0.39	1.30	-3.80	-2.05	1.31	2.76	N/A	2.98	
Hancock Timberland (SA)	53,769,569	2.34	0.05	0.05	-0.79	12.52	9.63	7.65	7.85	4.36	3.82	10/01/2006
NCREIF Timberland Index			0.11	0.11	0.86	2.38	3.27	4.63	5.97	3.74	5.74	
Difference			-0.06	-0.06	-1.65	10.14	6.36	3.02	1.88	0.62	-1.92	
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,163,582	0.23	0.57	0.57	1.07	2.25	1.24	0.80	0.59	0.46	1.40	04/01/2001
FTSE 3 Mo T-Bill Index			0.60	0.60	1.17	2.11	1.17	0.72	0.54	0.40	1.38	
Difference			-0.03	-0.03	-0.10	0.14	0.07	0.08	0.05	0.06	0.02	

Performance shown is net of fees and is annualized for periods greater than one year. Allocations may not sum up to 100% due to the exclusion of managers in liquidation. Please see the addendum for custom benchmark definitions. Fiscal year for the COJ ends 09/30.



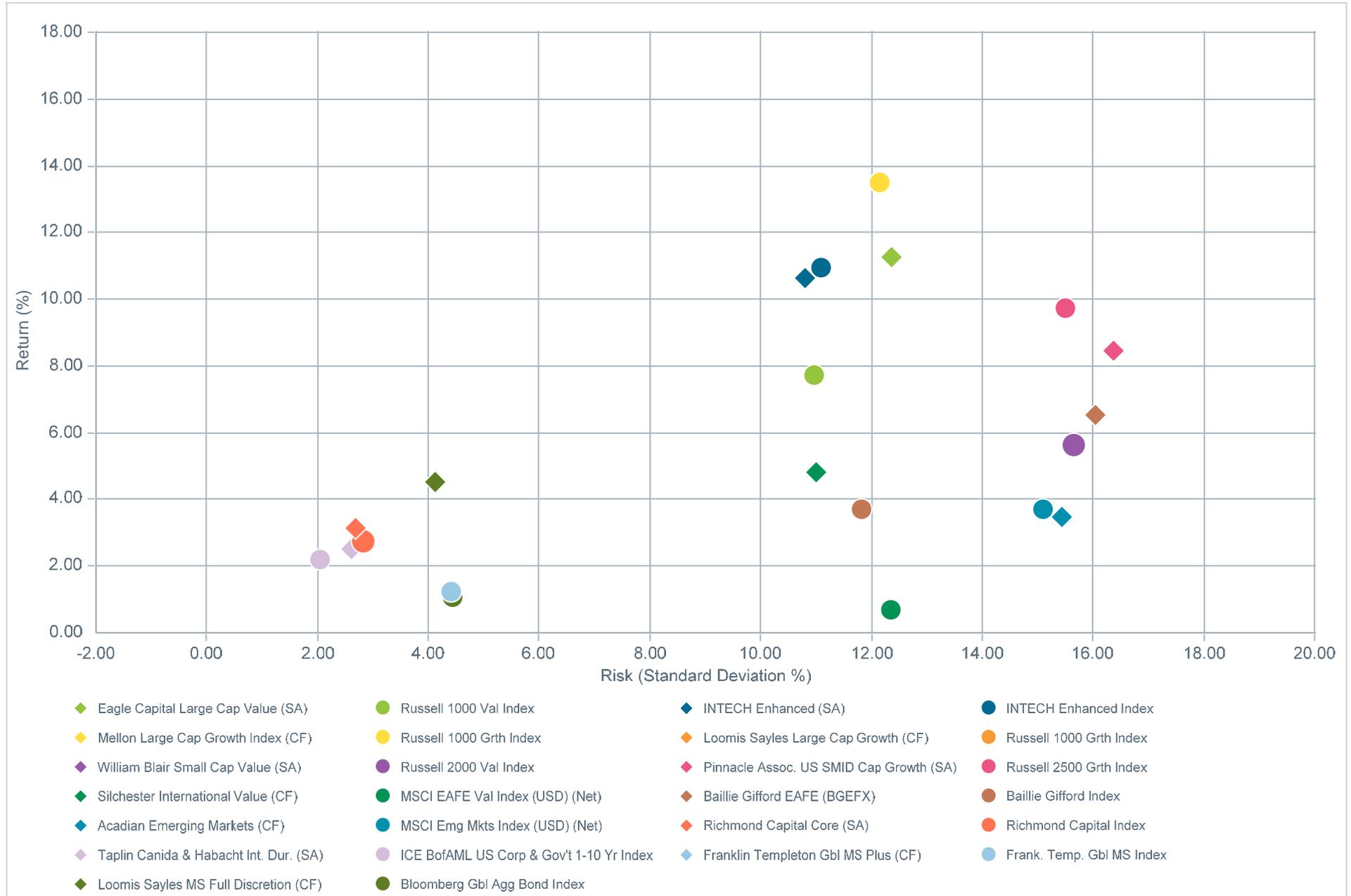
City of Jacksonville Employees' Retirement System
 Risk and Return
 Traditional Managers

3 Years Ending March 31, 2019

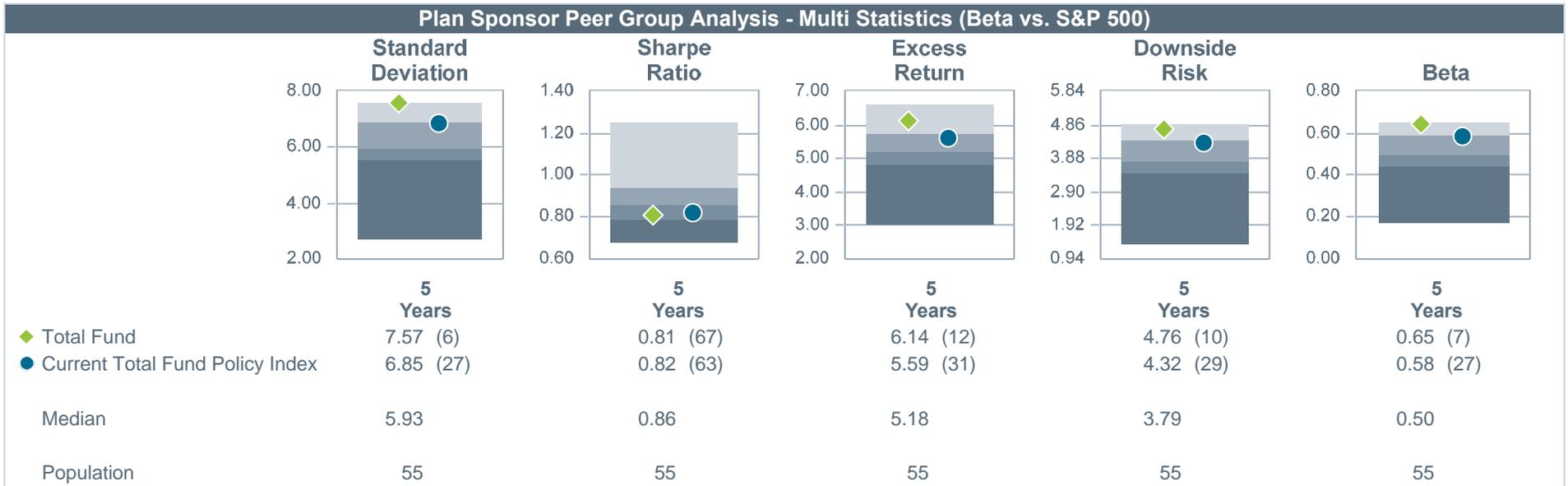
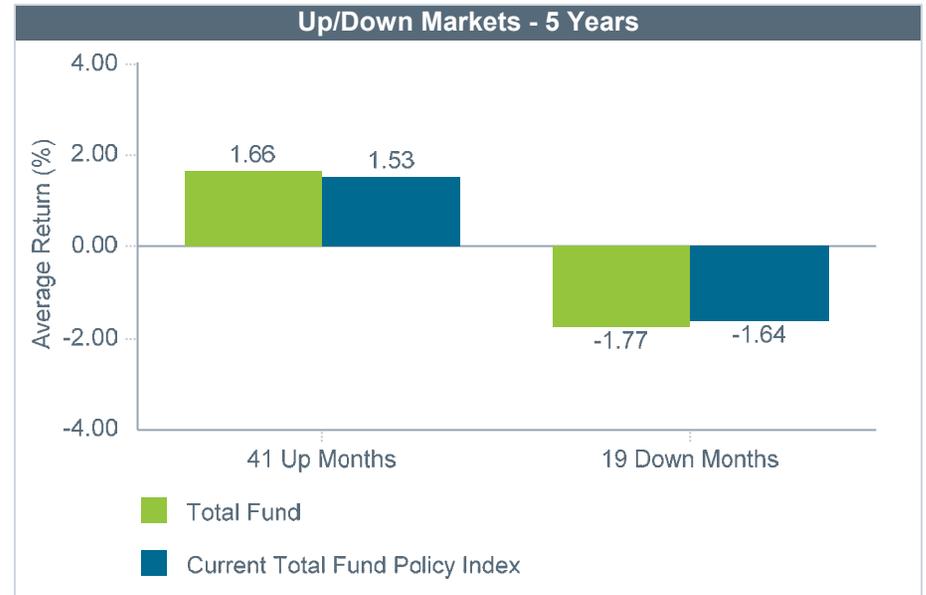
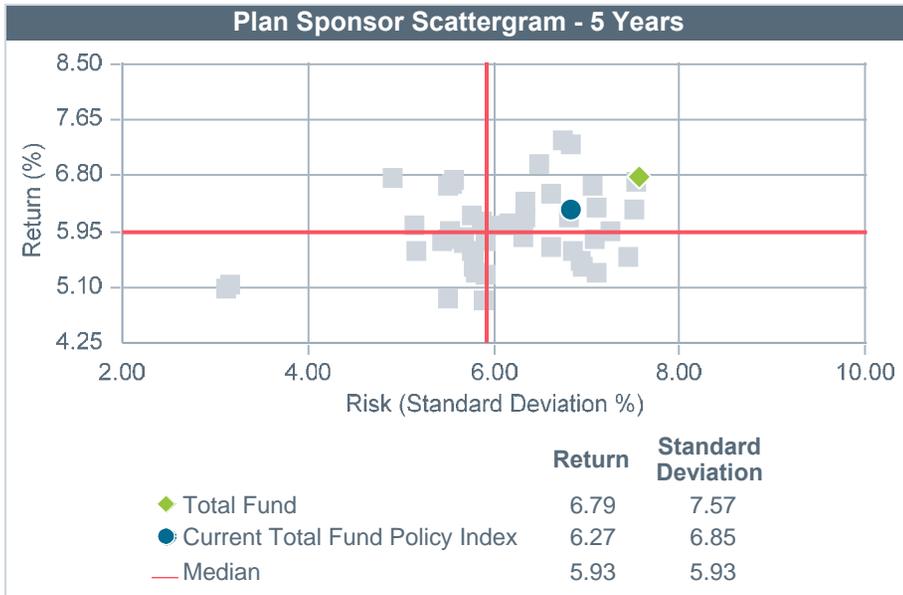


Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period will not appear. Please see the Addendum for custom index definitions.

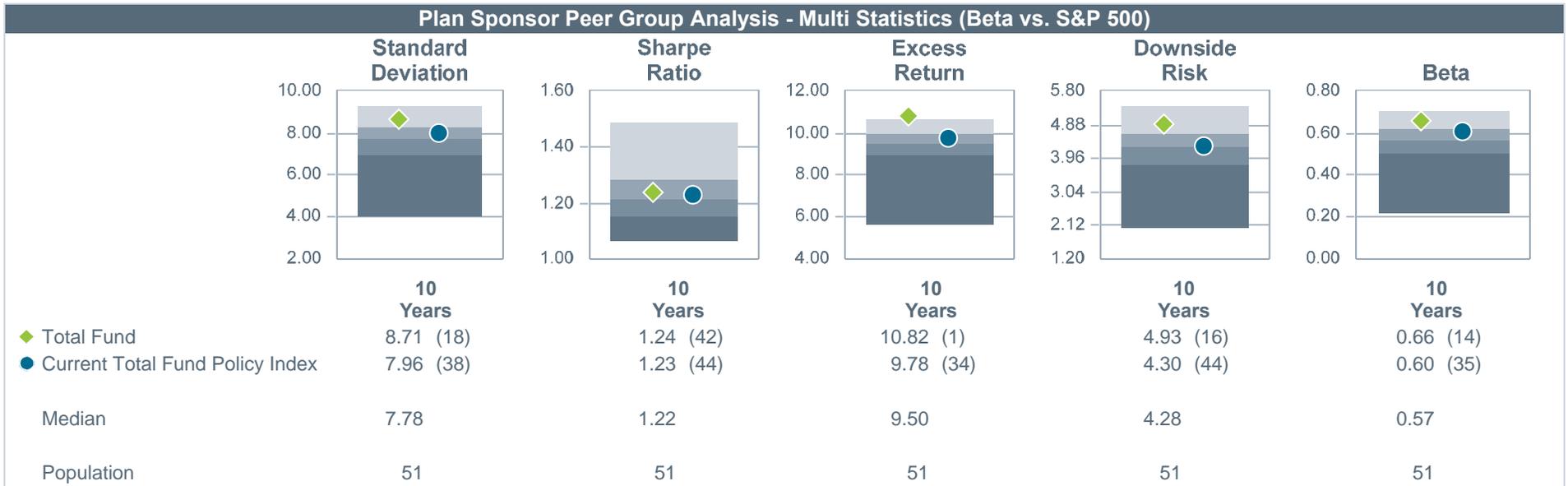
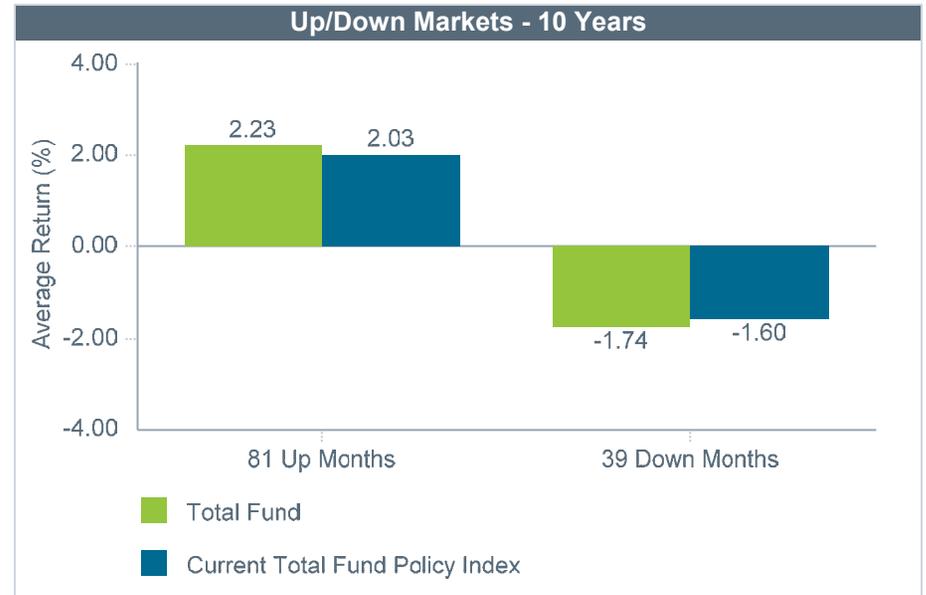
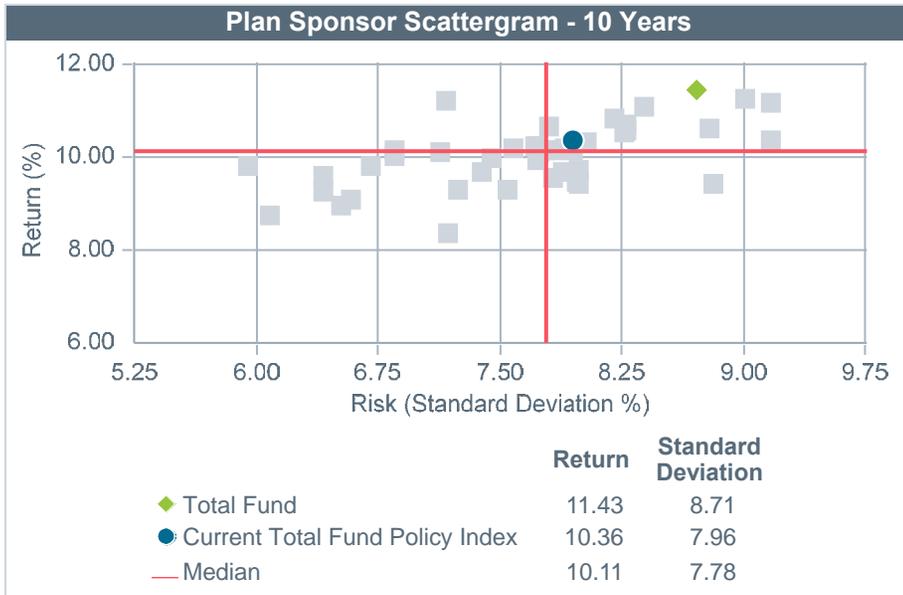




Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period will not appear. Please see the Addendum for custom index definitions.



Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



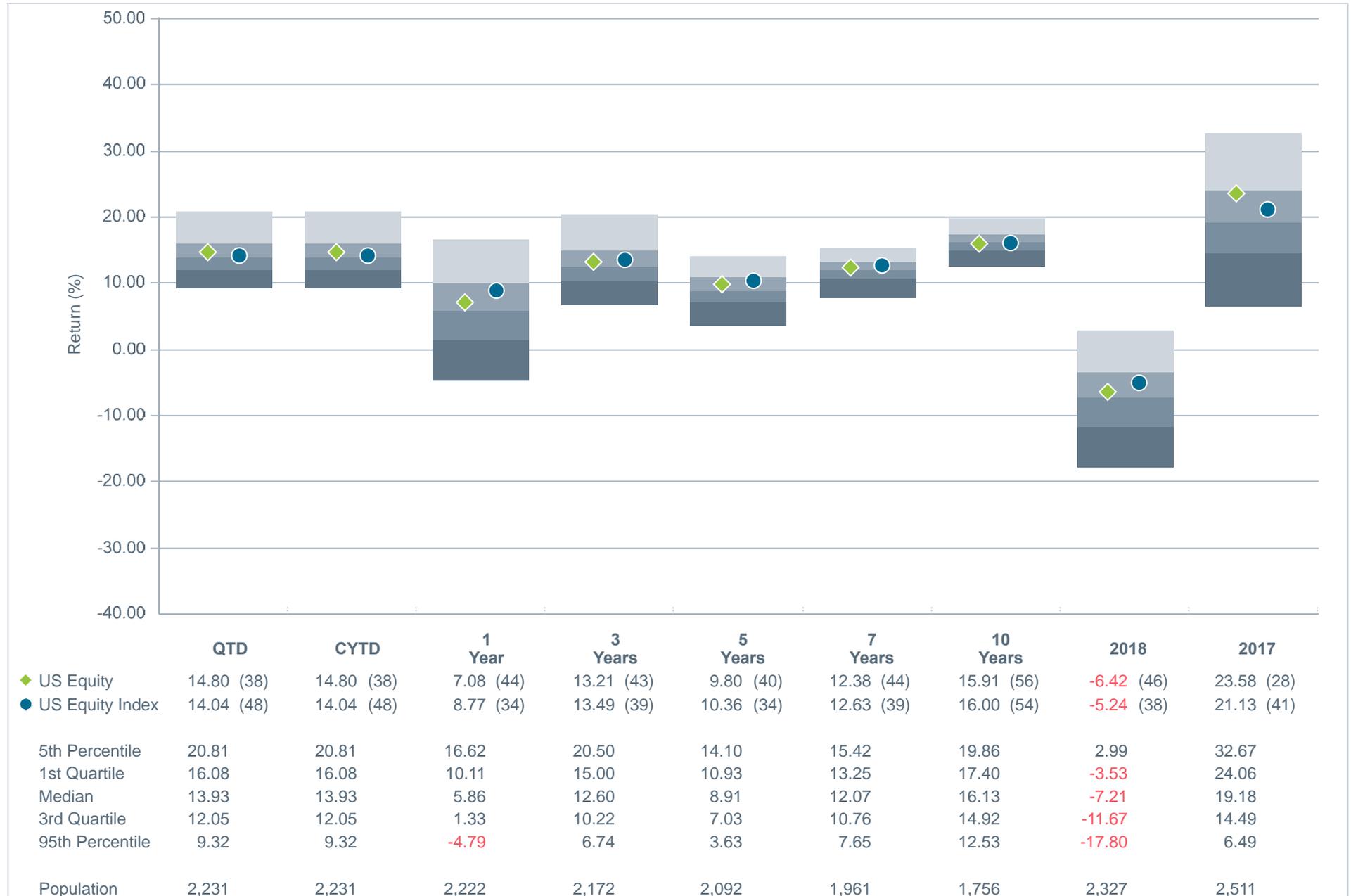
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Composite Profiles



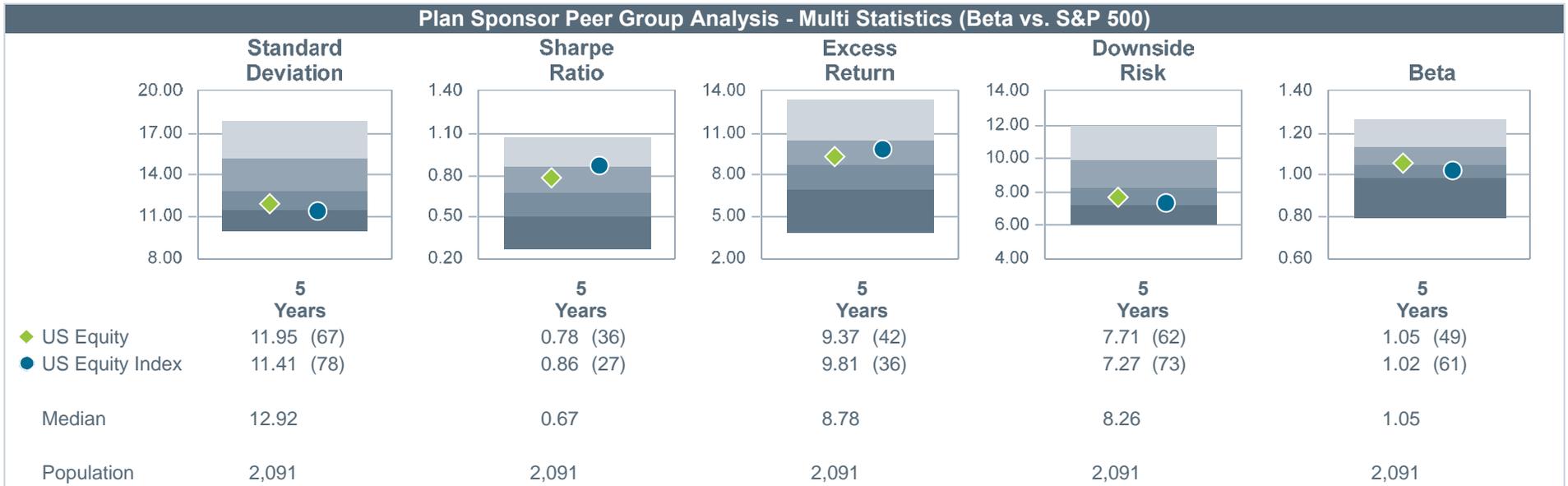
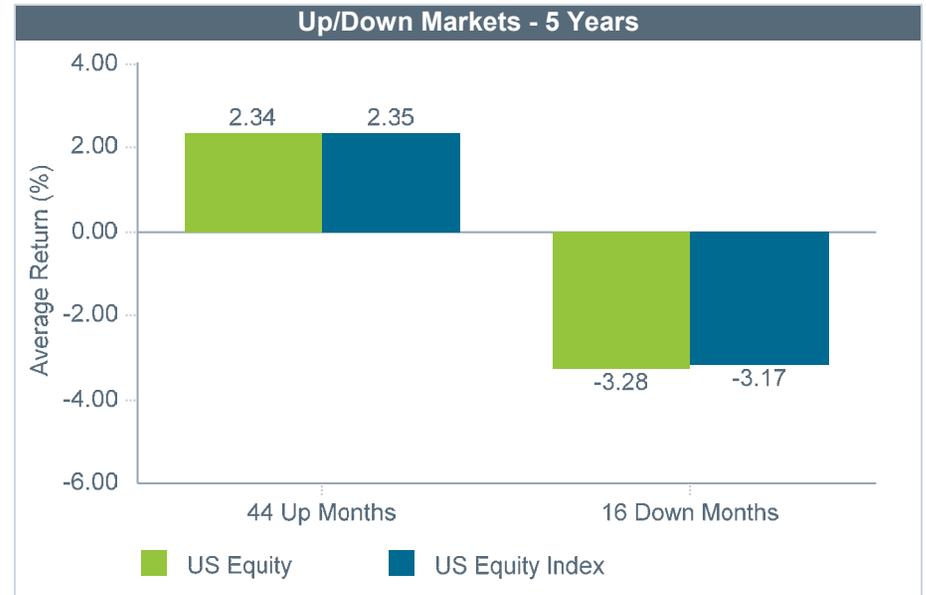
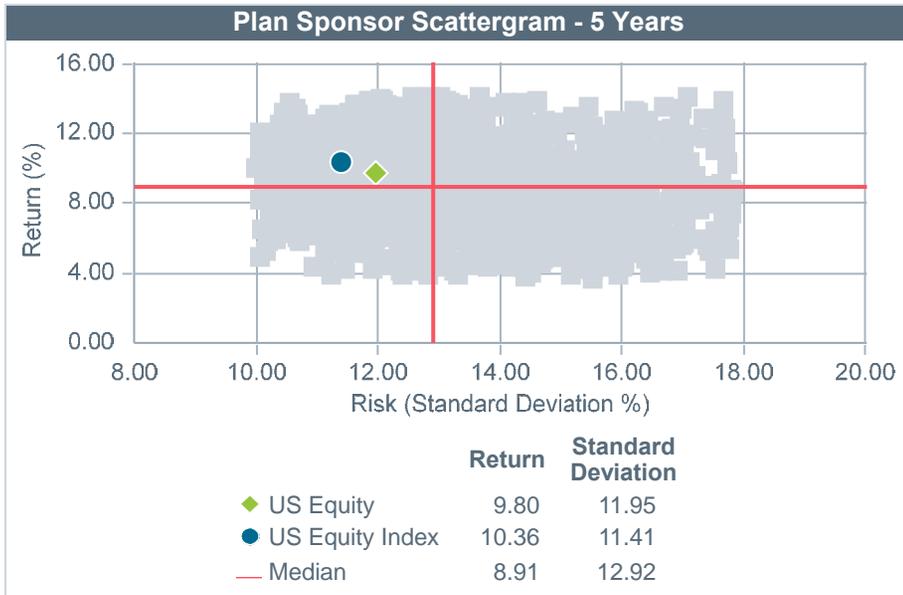
City of Jacksonville Employees' Retirement System
 US Equity vs. IM U.S. Equity (SA+CF)
 Peer Group Analysis

As of March 31, 2019



Performance shown is gross of fees. Parentheses contain percentile ranks.

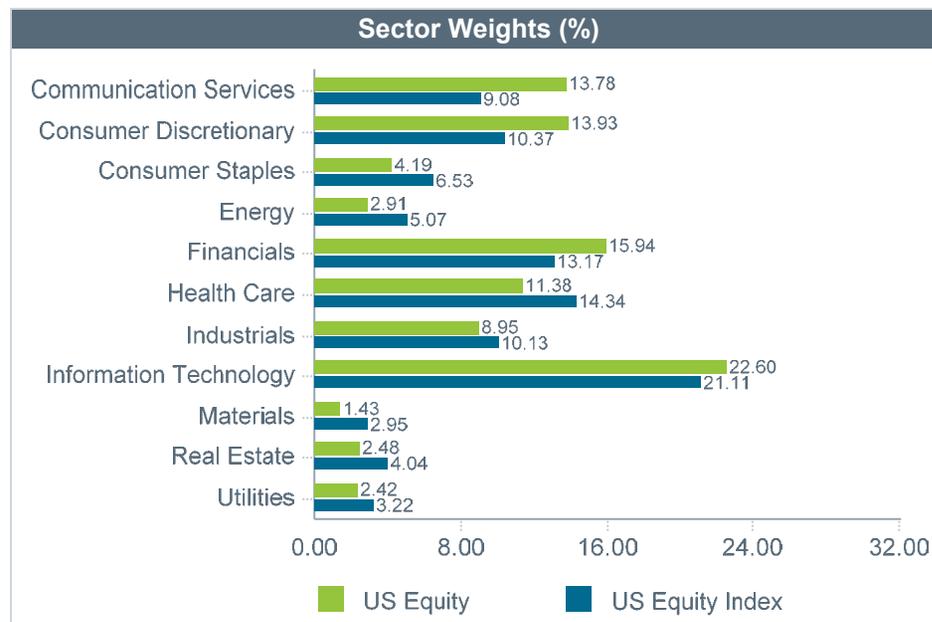
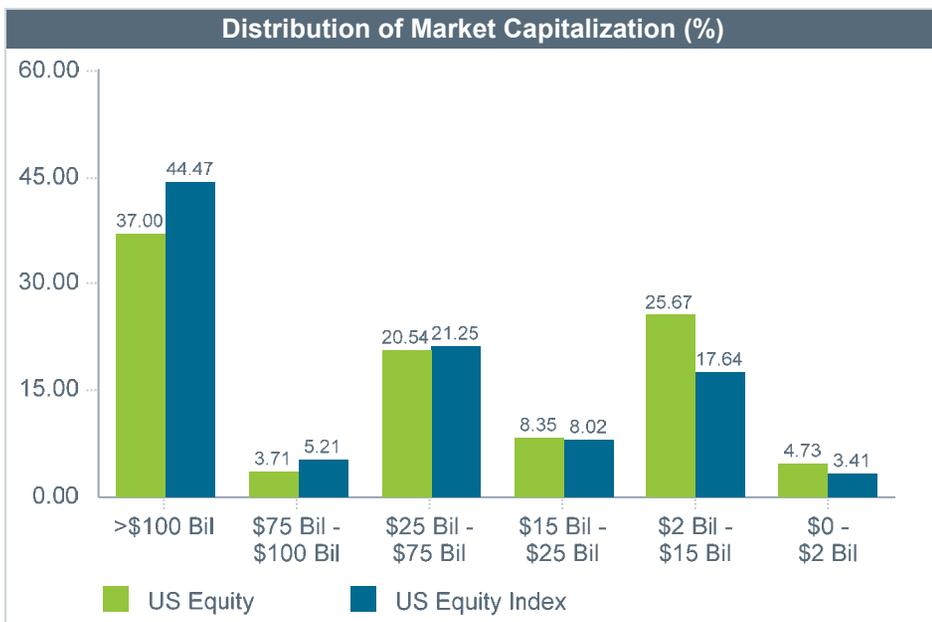




Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	4.11	3.15	0.96	16.62
Amazon.com Inc	3.81	2.58	1.23	18.56
Alphabet Inc	2.82	1.26	1.56	13.30
Facebook Inc	2.13	1.40	0.73	27.16
Berkshire Hathaway Inc	2.06	1.37	0.69	-1.61
Oracle Corp	2.02	0.46	1.56	19.43
Apple Inc	1.68	3.18	-1.50	20.94
Citigroup Inc	1.63	0.52	1.11	20.36
Visa Inc	1.44	0.97	0.47	18.59
Comcast Corp	1.41	0.63	0.78	17.42
% of Portfolio	23.11	15.52	7.59	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	189,733	191,476
Median Mkt. Cap (\$M)	11,287	1,646
Price/Earnings Ratio	20.43	19.83
Price/Book Ratio	3.42	3.29
5 Yr. EPS Growth Rate (%)	18.35	14.98
Current Yield (%)	1.36	1.92
Beta (5 Years, Monthly)	1.04	1.00
Number of Securities	885	2,977



Style Map (12 Months Rolling)

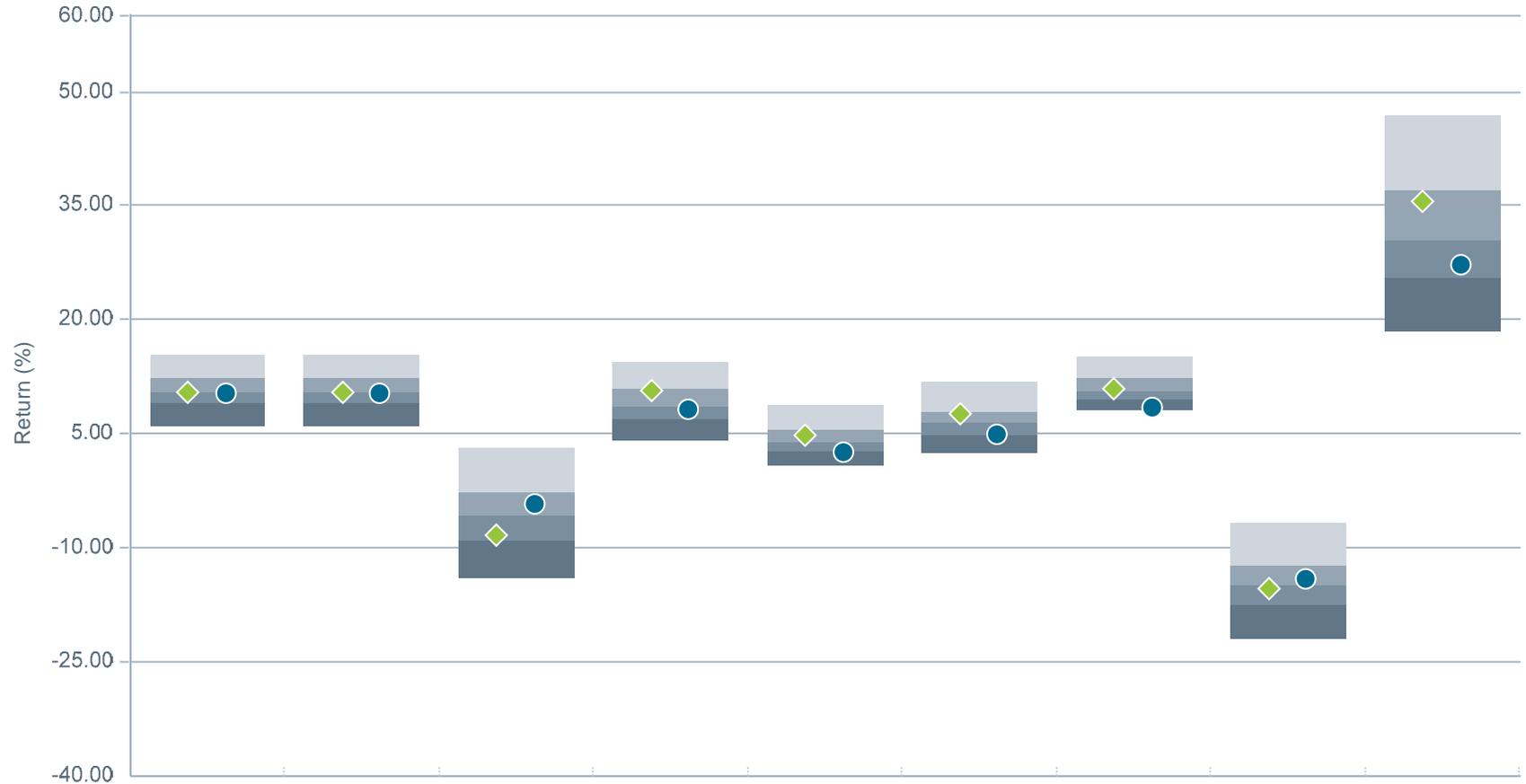


- ◆ US Equity
- Eagle Capital Large Cap Value (SA)
- ▲ INTECH Enhanced (SA)
- Mellon Large Cap Growth Index (CF)
- ▼ Loomis Sayles Large Cap Growth (CF)
- William Blair Small Cap Value (SA)
- Pinnacle Associates US SMID Cap Growth (SA)

Calculation is based on monthly periodicity. This is a return based calculation.

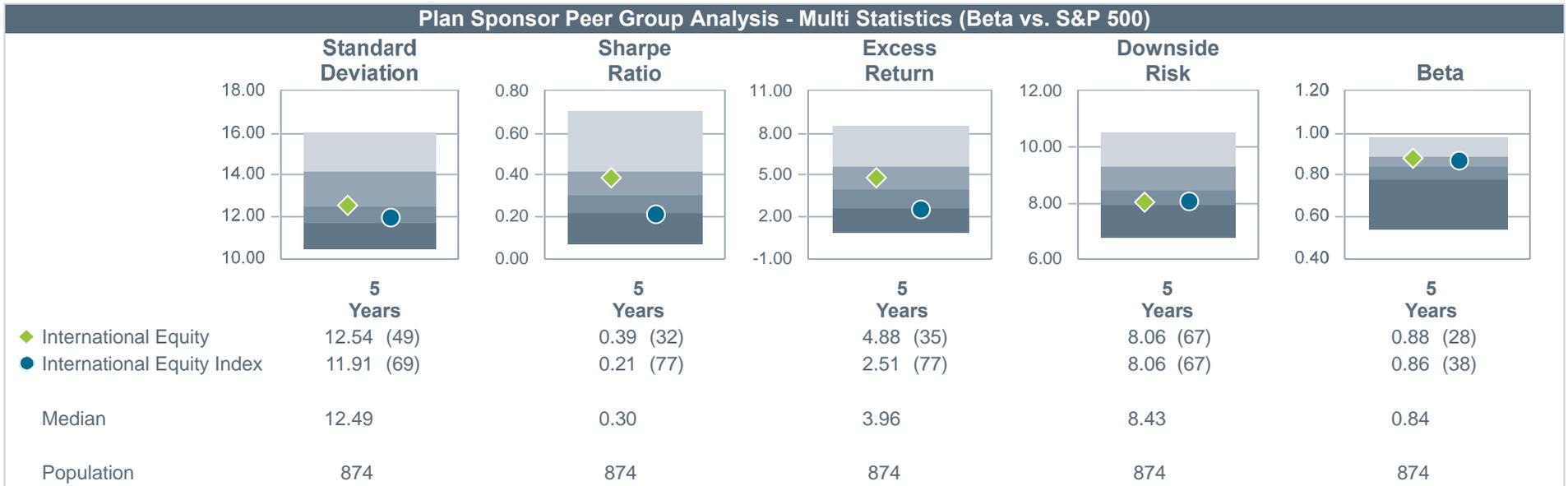
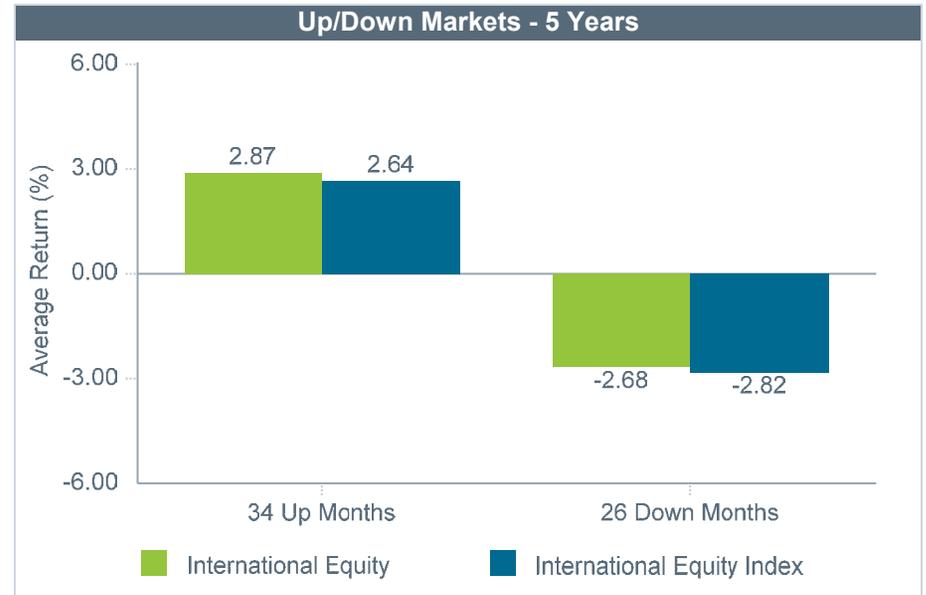
City of Jacksonville Employees' Retirement System
 International Equity vs. IM International Equity (SA+CF)
 Peer Group Analysis

As of March 31, 2019



	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017
◆ International Equity	10.47 (51)	10.47 (51)	-8.22 (70)	10.68 (27)	4.94 (33)	7.58 (32)	10.98 (45)	-15.42 (56)	35.68 (30)
● International Equity Index	10.31 (54)	10.31 (54)	-4.22 (37)	8.09 (57)	2.57 (77)	4.72 (77)	8.38 (94)	-14.20 (44)	27.19 (68)
5th Percentile	15.50	15.50	3.22	14.54	8.92	11.87	15.05	-6.76	46.74
1st Quartile	12.34	12.34	-2.68	10.86	5.55	7.96	12.36	-12.39	36.91
Median	10.49	10.49	-5.69	8.48	3.94	6.46	10.73	-14.86	30.50
3rd Quartile	8.99	8.99	-8.92	6.90	2.66	4.83	9.54	-17.50	25.59
95th Percentile	5.96	5.96	-13.89	4.22	0.75	2.44	8.11	-21.88	18.52
Population	1,012	1,012	1,002	965	874	770	643	1,054	1,115

Performance shown is gross of fees. Parentheses contain percentile ranks.



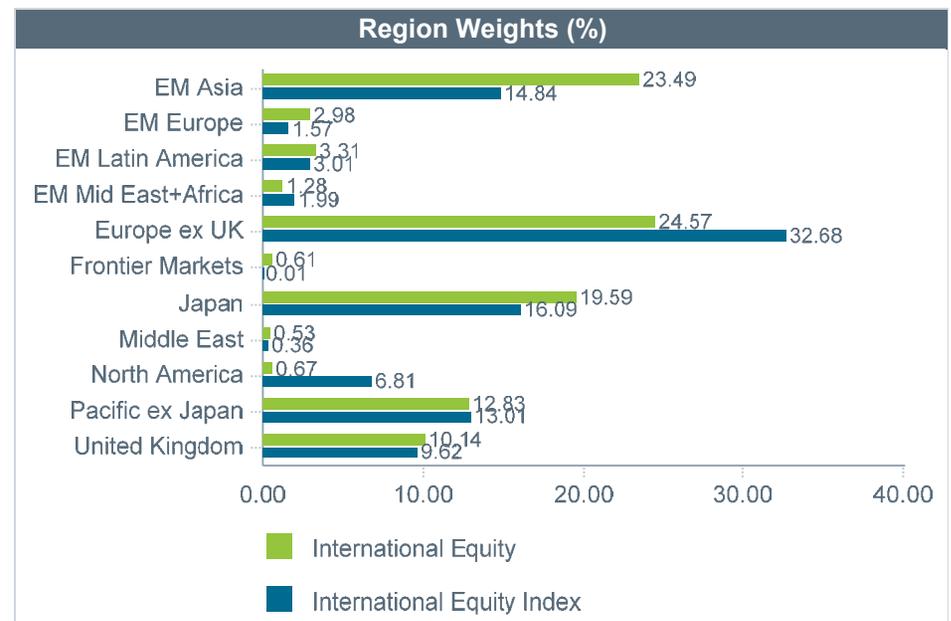
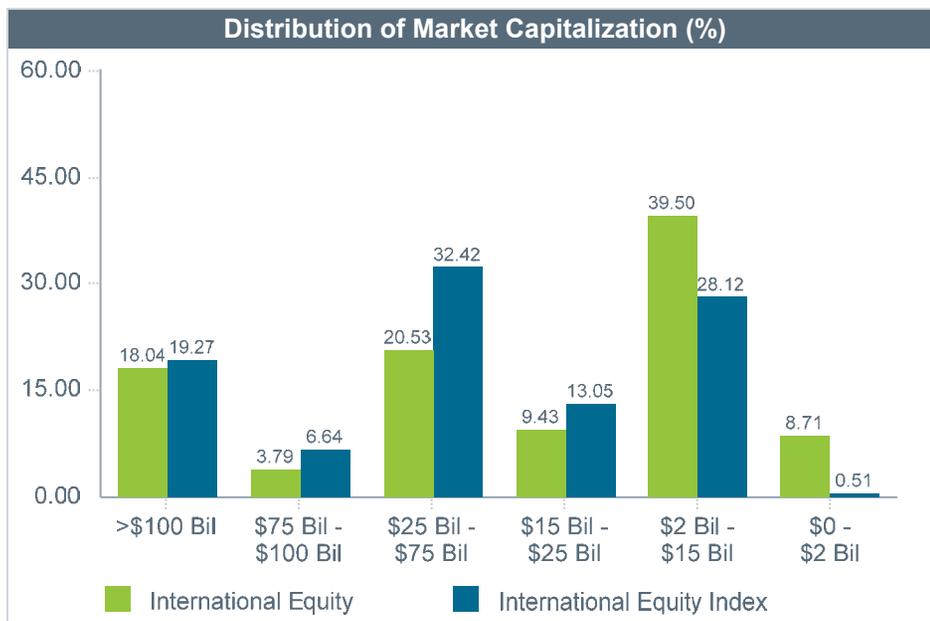
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

City of Jacksonville Employees' Retirement System
 International Equity vs. International Equity Index
 Portfolio Characteristics

As of March 31, 2019

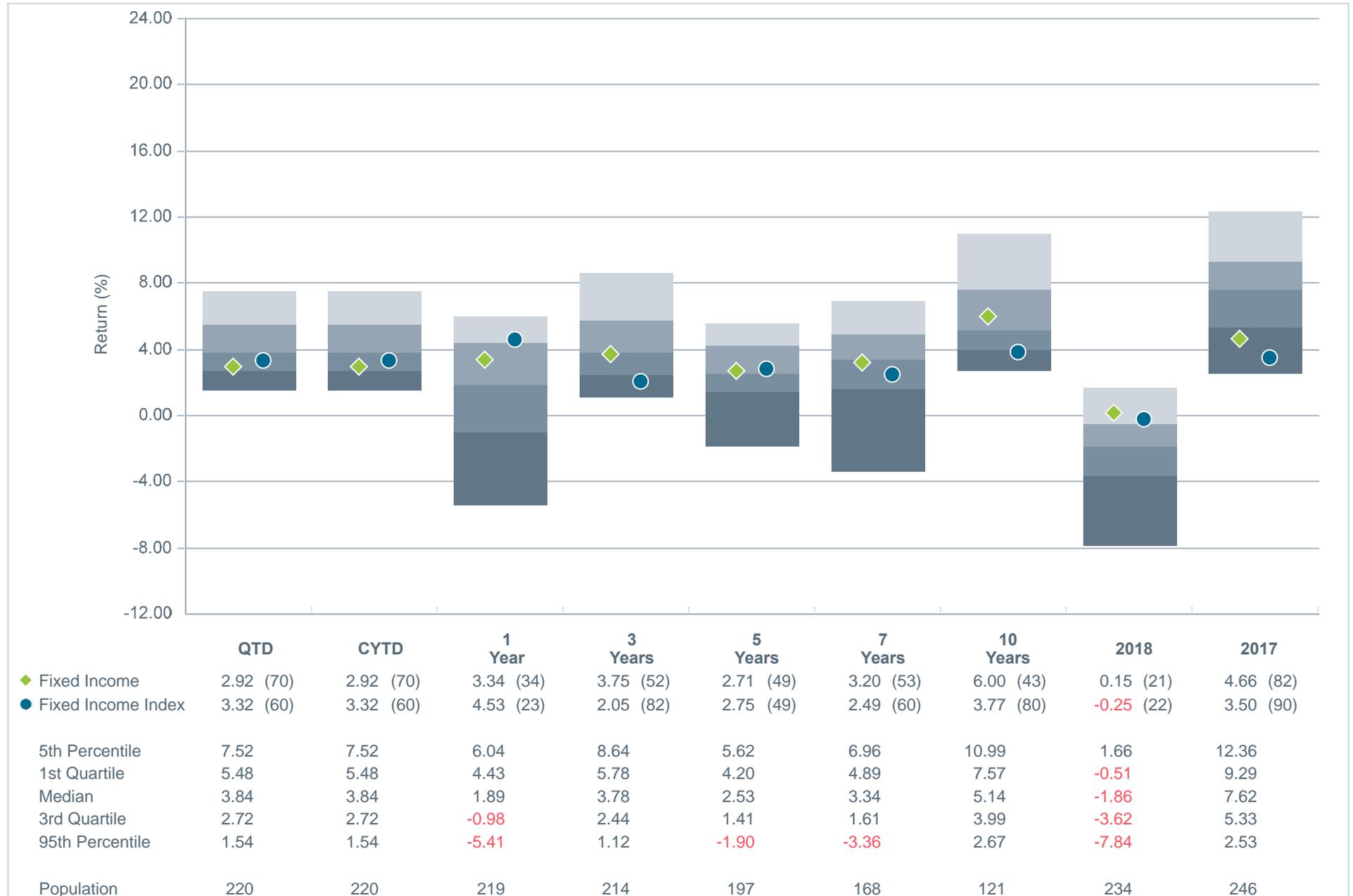
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Sanofi	1.80	0.49	1.31	2.02
Samsung Electronics Co Ltd	1.70	0.92	0.78	13.84
Alibaba Group Holding Ltd	1.65	1.17	0.48	33.11
ASML Holding NV	1.54	0.38	1.16	19.50
Honda Motor Co Ltd	1.47	0.22	1.25	3.40
Tencent Holdings LTD	1.45	1.29	0.16	14.70
Ferrari NV	1.42	0.08	1.34	35.00
Glaxosmithkline PLC	1.37	0.51	0.86	11.05
China Mobile Ltd	1.34	0.31	1.03	5.92
Credit Suisse Group	1.24	0.15	1.09	6.21
% of Portfolio	14.98	5.52	9.46	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	54,482	66,550
Median Mkt. Cap (\$M)	2,002	7,841
Price/Earnings Ratio	12.09	13.72
Price/Book Ratio	2.39	2.20
5 Yr. EPS Growth Rate (%)	11.40	10.02
Current Yield (%)	3.14	3.37
Beta (5 Years, Monthly)	1.03	1.00
Number of Securities	801	2,148



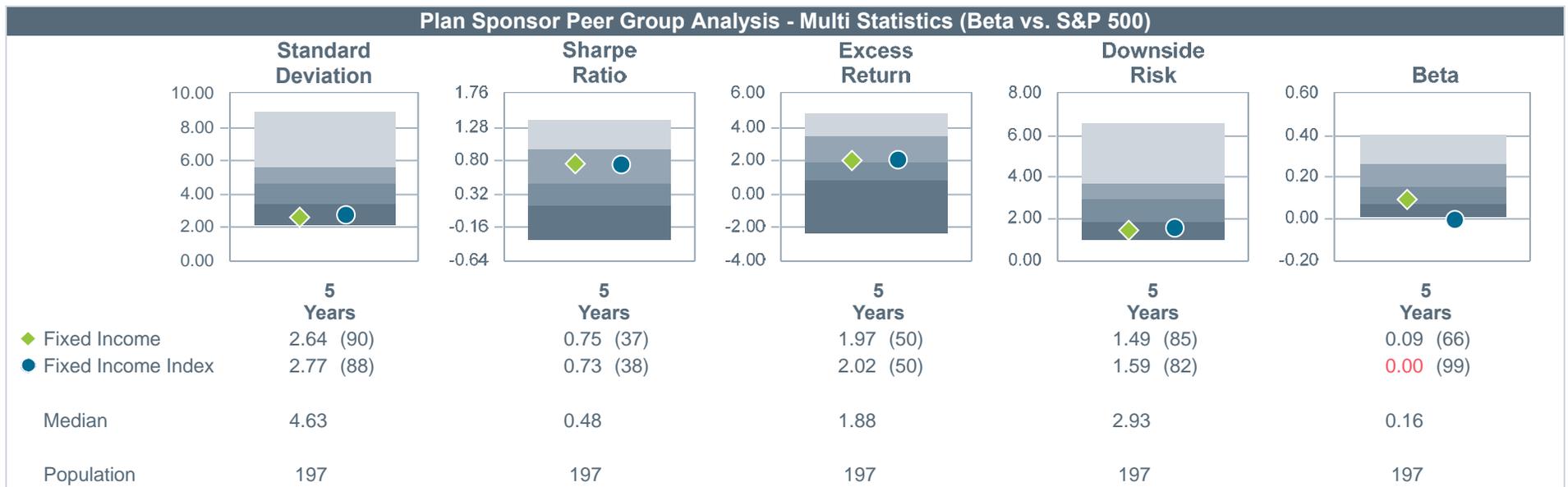
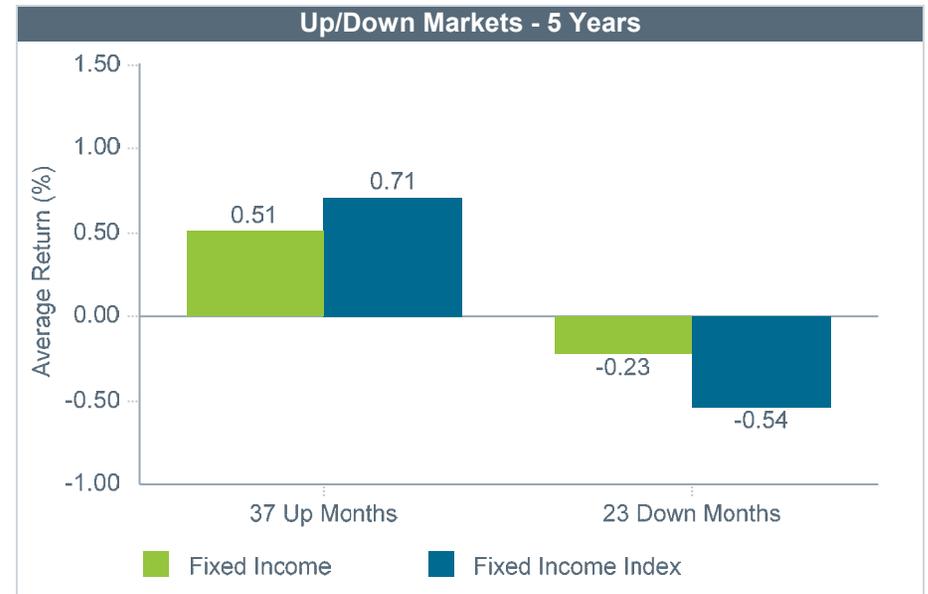
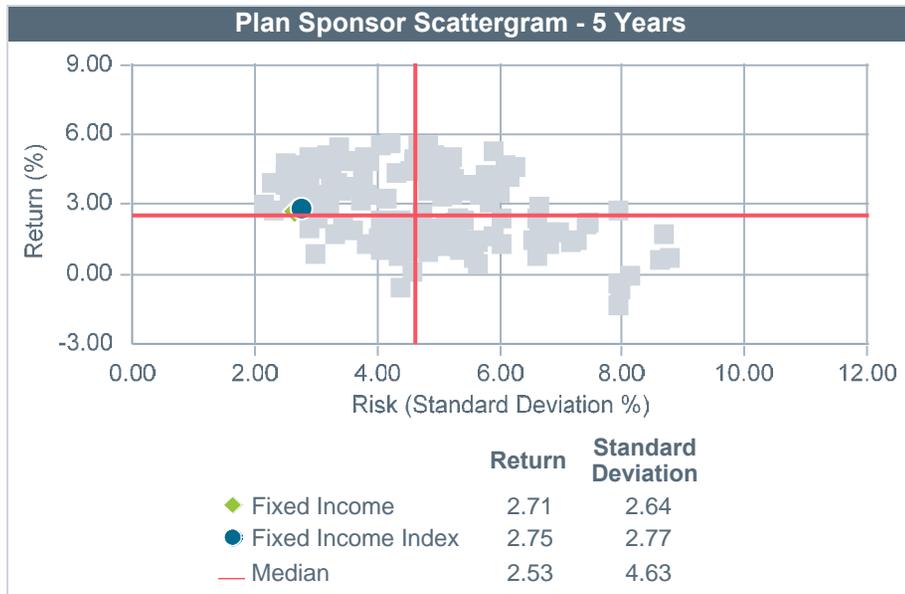
City of Jacksonville Employees' Retirement System
 Fixed Income vs. IM Global Fixed Income (SA+CF)
 Peer Group Analysis

As of March 31, 2019



Performance shown is gross of fees. Parentheses contain percentile ranks.



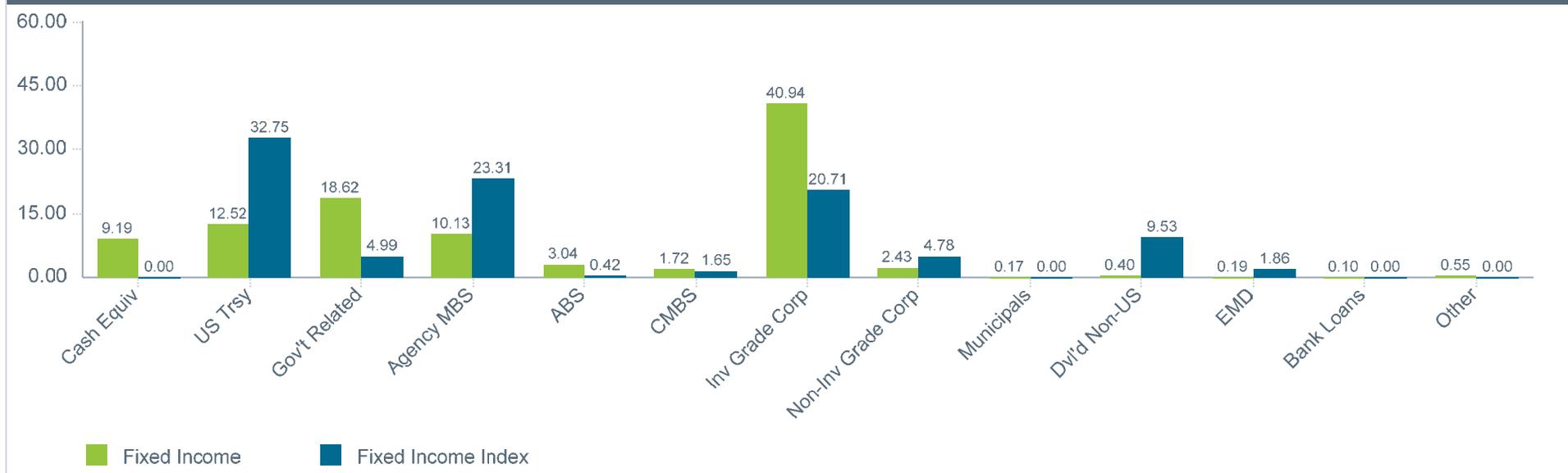


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	3.13	5.63
Avg. Maturity	5.10	7.91
Avg. Quality	A2	N/A
Yield To Maturity (%)	5.21	3.32
Coupon Rate (%)	3.90	3.55
Current Yield (%)	3.85	0.20

Sector Distribution (%)

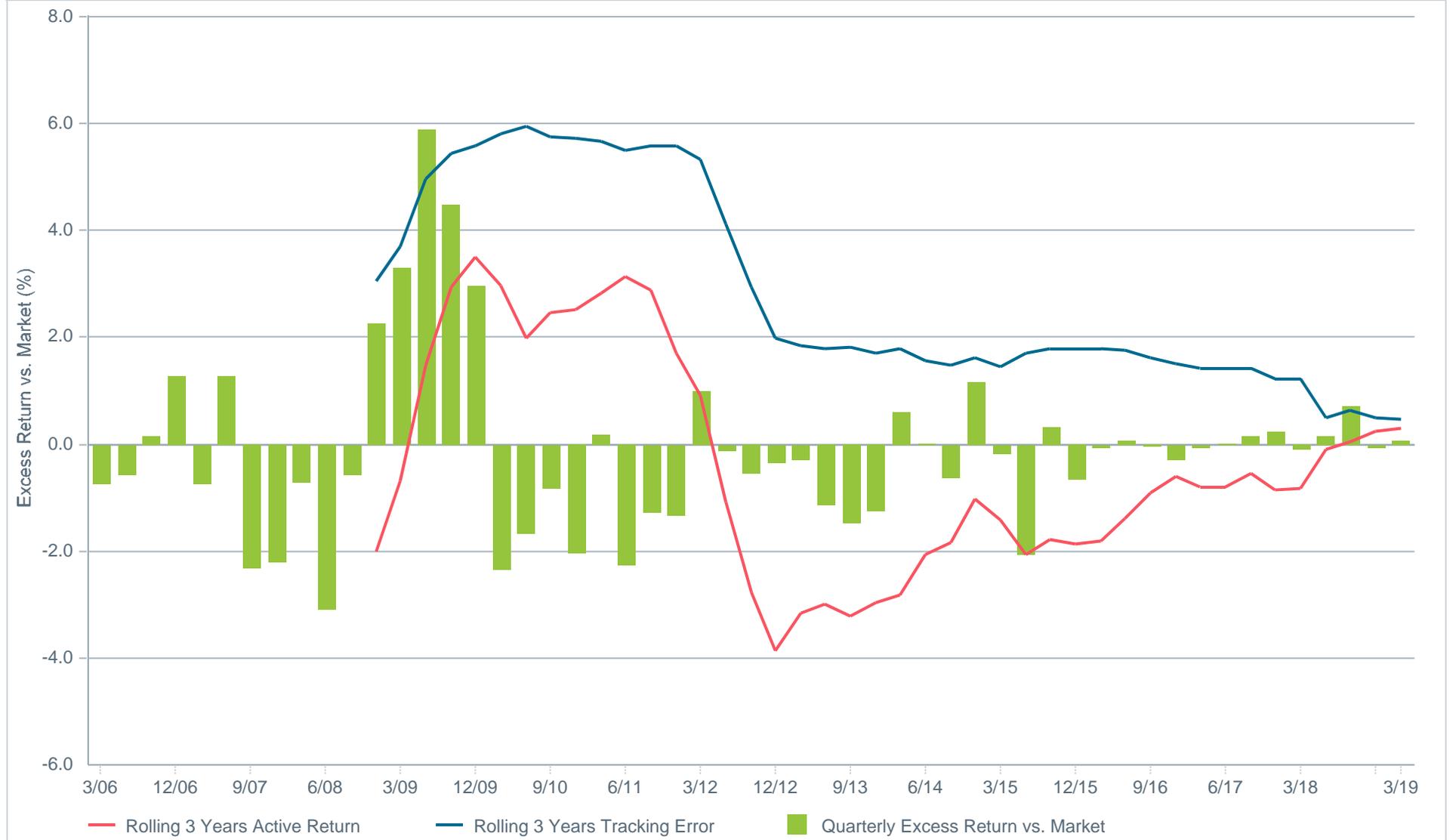


Cash equivalents are defined as any security with duration under one year. Allocation to "Other" consists of convertibles, derivatives, equity, and preferreds.

City of Jacksonville Employees' Retirement System
 Real Estate vs. NCREIF ODCE Index (AWA) (Gross)
 Comparative Performance & Rolling Return

As of March 31, 2019

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	Since Incep.	Inception Date
Real Estate	1.50	1.50	3.21	8.45	8.29	9.91	9.88	8.53	9.11	7.99	8.42	6.54	12/01/2005
NCREIF ODCE Index (AWA) (Gross)	1.42	1.42	3.20	7.52	7.97	10.18	10.77	8.74	8.35	7.62	8.77	7.26	
Difference	0.08	0.08	0.01	0.93	0.32	-0.27	-0.89	-0.21	0.76	0.37	-0.35	-0.72	



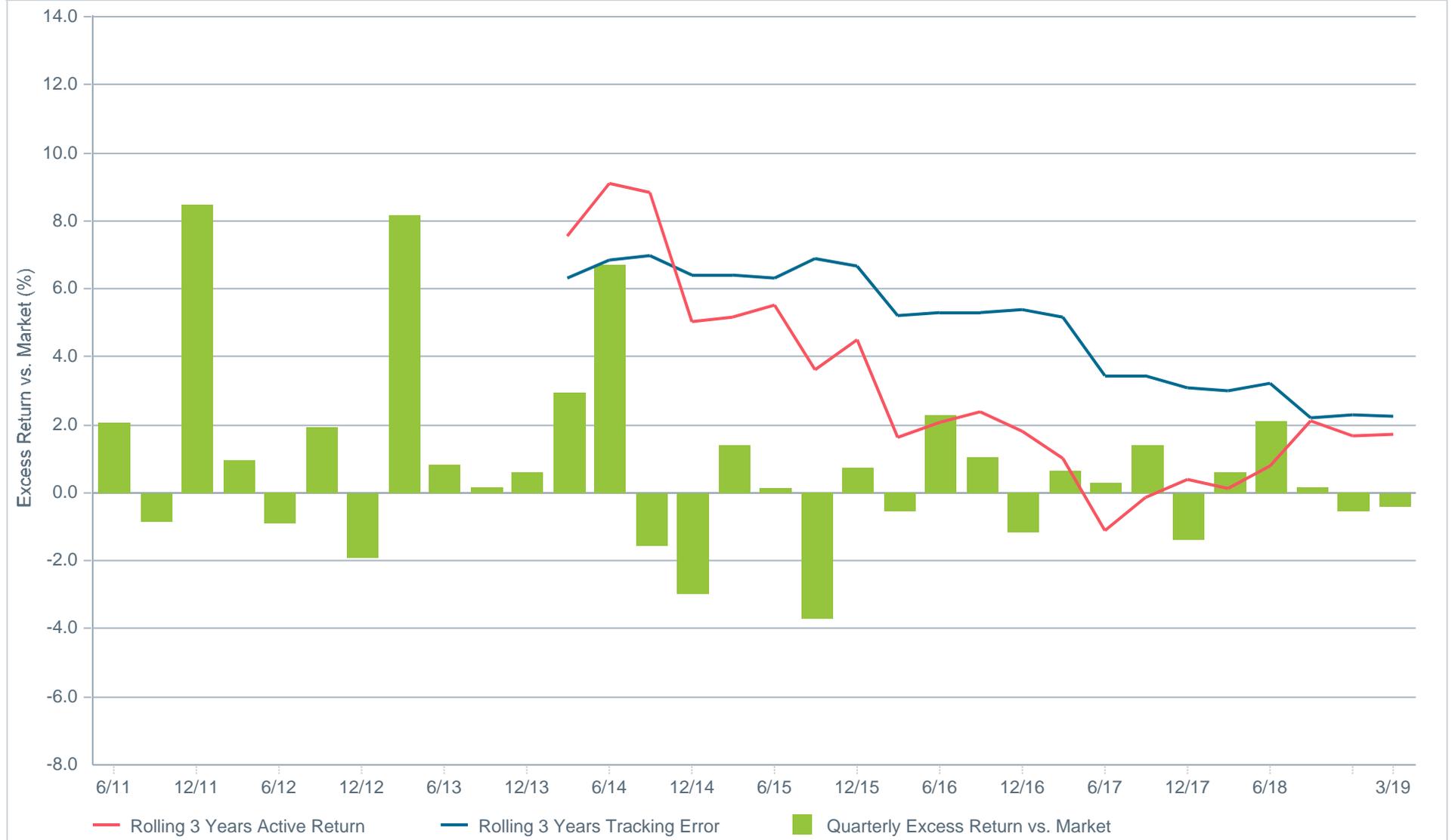
Performance shown is gross of fees. Calculation is based on quarterly periodicity.



City of Jacksonville Employees' Retirement System
 Diversifying Assets vs. Diversifying Assets Index
 Comparative Performance & Rolling Return

As of March 31, 2019

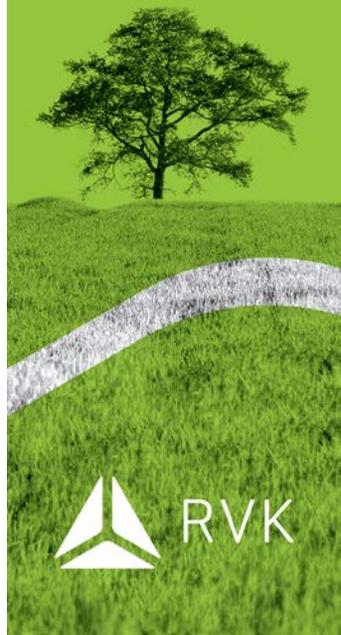
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	Since Incep.	Inception Date
Diversifying Assets	12.03	12.03	-1.92	14.16	8.32	1.69	6.53	N/A	-4.42	0.33	14.07	7.70	03/01/2011
Diversifying Assets Index	12.45	12.45	-0.94	12.90	6.64	0.99	4.41	7.87	-6.47	-0.66	12.53	4.53	
Difference	-0.42	-0.42	-0.98	1.26	1.68	0.70	2.12	N/A	2.05	0.99	1.54	3.17	



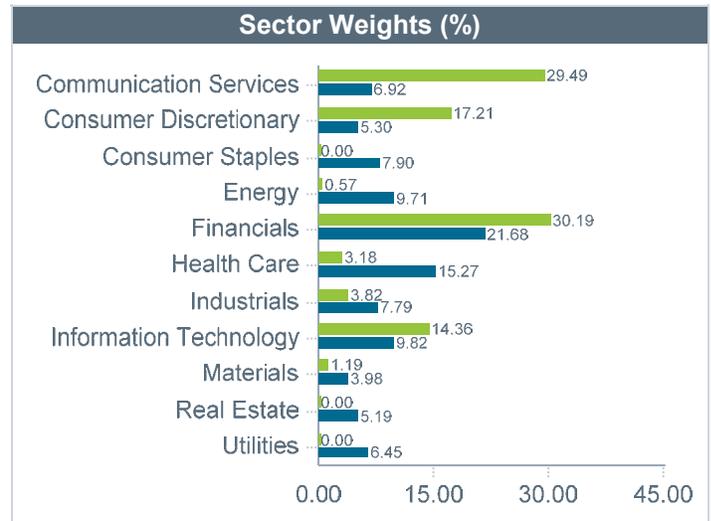
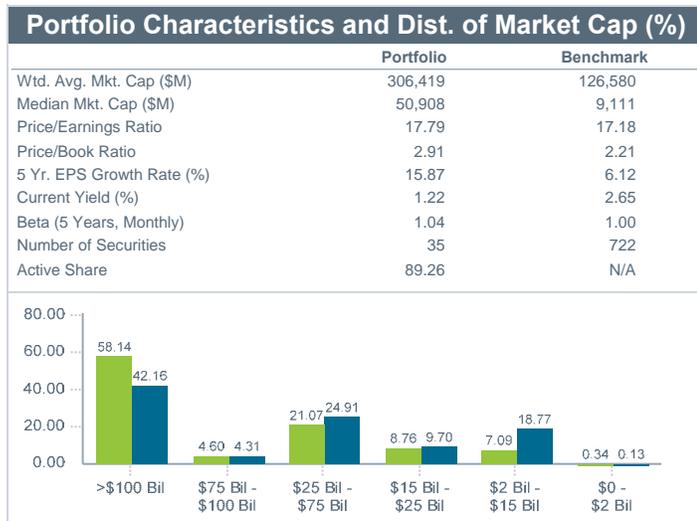
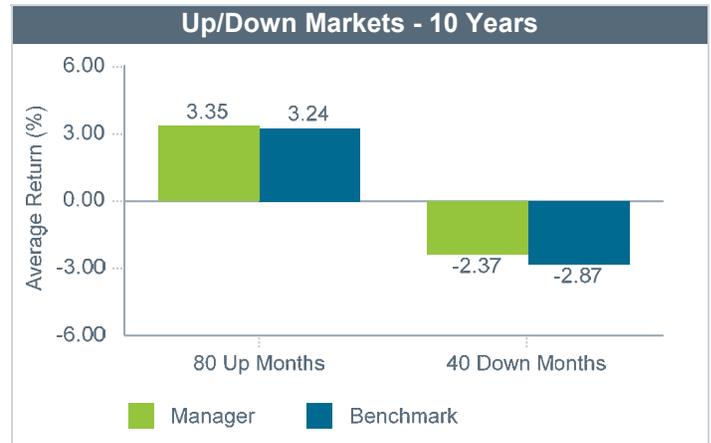
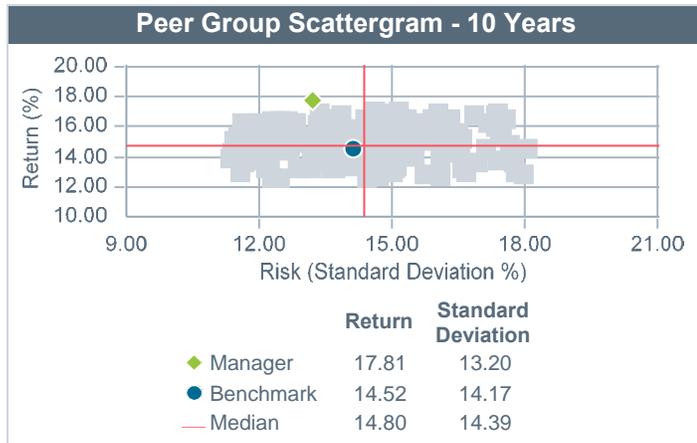
Performance shown is gross of fees. Calculation is based on quarterly periodicity.



Investment Manager Profiles

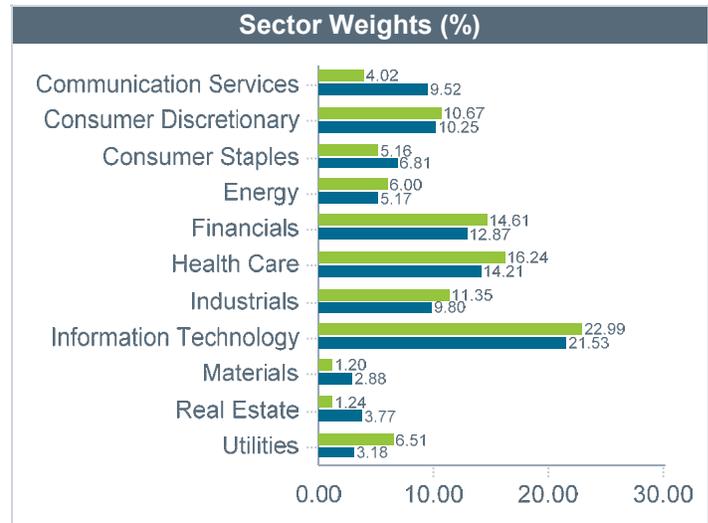
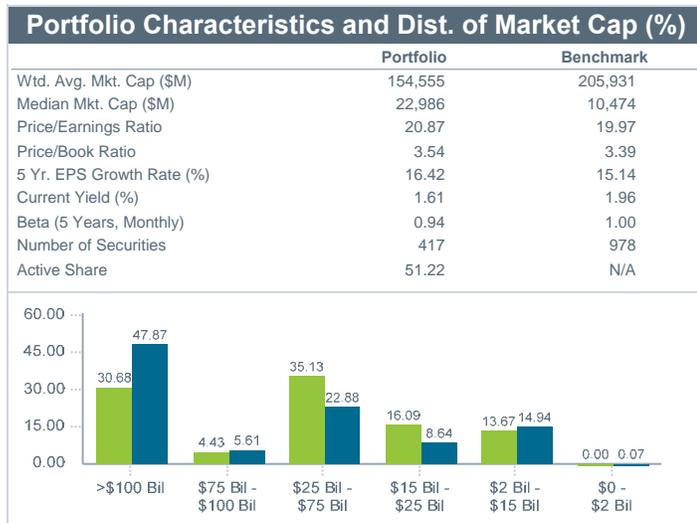
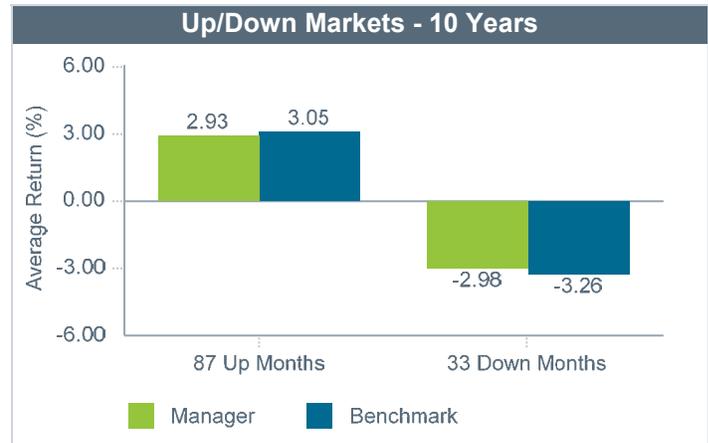
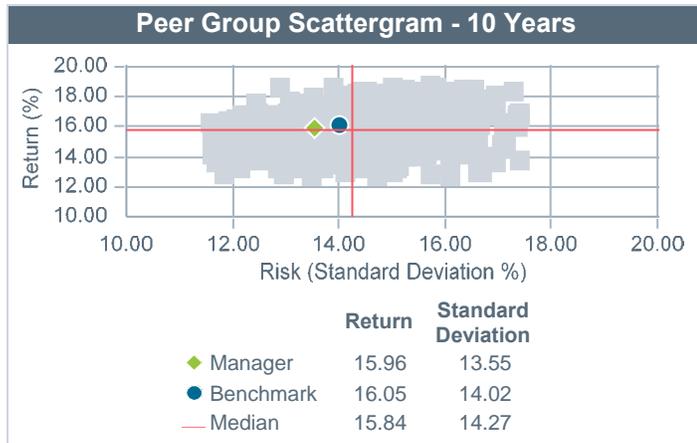


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	12.82	7.62	15.75	11.26	14.30	17.81	-3.90	24.19	11.46	2.34	12.90
Benchmark	11.93	5.67	10.45	7.72	11.14	14.52	-8.27	13.66	17.34	-3.83	13.45
Difference	0.89	1.95	5.30	3.54	3.16	3.29	4.37	10.53	-5.88	6.17	-0.55
Peer Group Median	11.76	4.23	11.10	8.03	11.45	14.80	-8.44	17.22	14.52	-2.25	12.19
Rank	26	25	2	5	2	2	15	7	73	11	42
Population	305	305	302	295	279	254	312	341	370	387	411



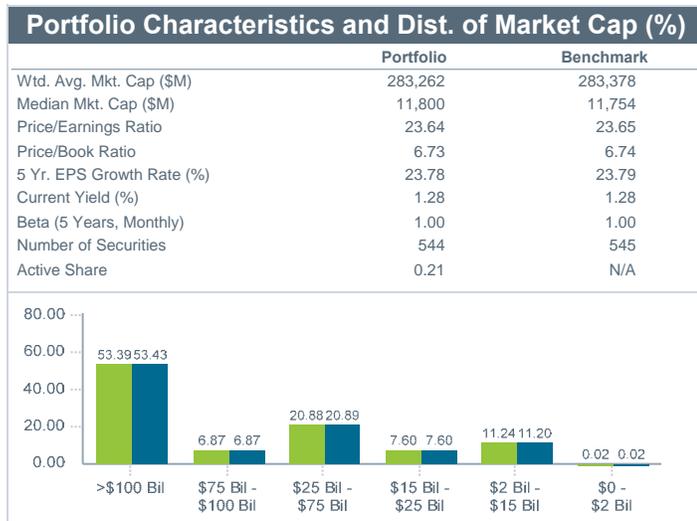
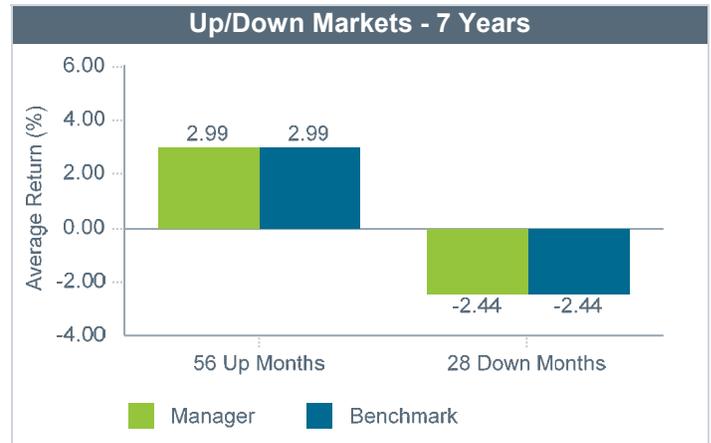
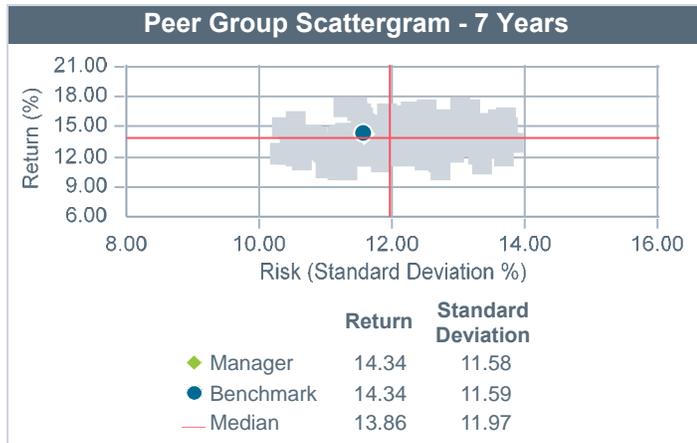
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	14.43	4.72	12.08	10.64	12.84	15.96	-7.29	23.52	8.24	3.16	15.56
Benchmark	14.00	9.30	13.52	10.63	12.79	16.05	-4.78	21.69	12.05	0.92	13.24
Difference	0.43	-4.58	-1.44	0.01	0.05	-0.09	-2.51	1.83	-3.81	2.24	2.32
Peer Group Median	13.29	7.99	12.91	10.32	12.62	15.84	-5.16	21.67	10.99	0.95	12.91
Rank	31	73	61	43	41	46	70	35	69	31	15
Population	937	936	916	890	839	771	973	1,064	1,151	1,225	1,283



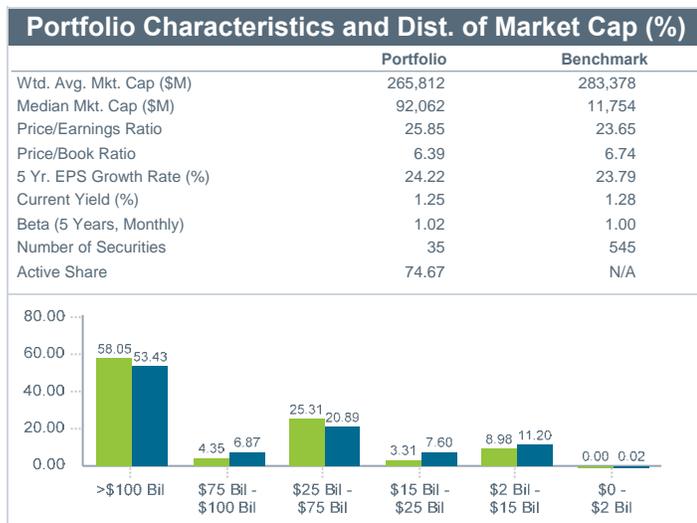
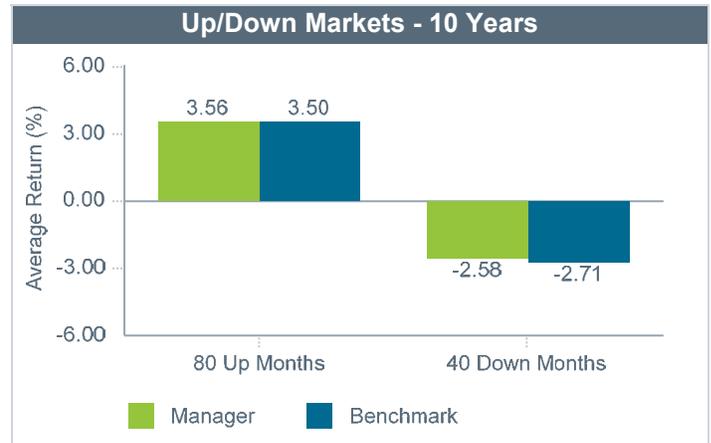
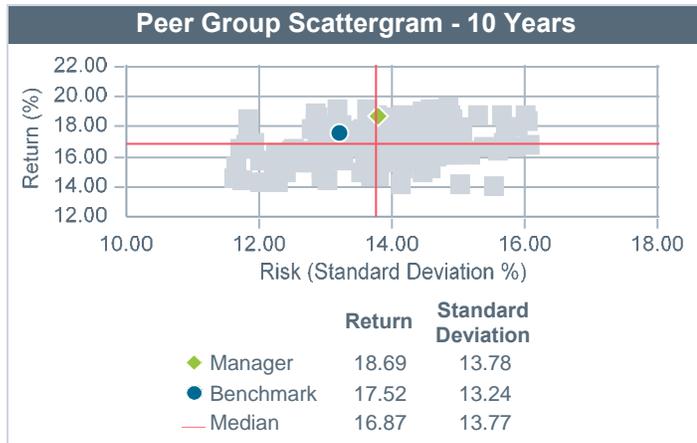
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	16.10	12.74	16.53	13.49	14.34	N/A	-1.52	30.20	7.07	5.65	13.06
Benchmark	16.10	12.75	16.53	13.50	14.34	17.52	-1.51	30.21	7.08	5.67	13.05
Difference	0.00	-0.01	0.00	-0.01	0.00	N/A	-0.01	-0.01	-0.01	-0.02	0.01
Peer Group Median	15.92	12.46	16.34	12.80	13.86	16.87	-1.17	28.21	4.65	5.07	12.02
Rank	46	48	46	39	39	N/A	54	38	26	46	39
Population	248	248	237	231	218	206	259	283	308	337	348



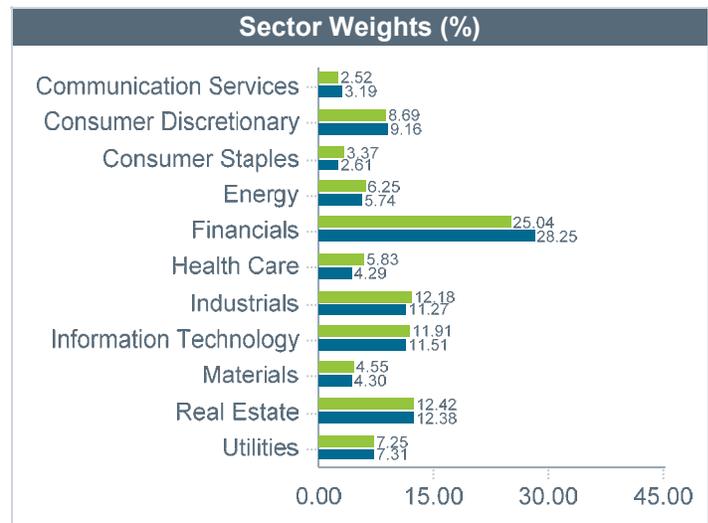
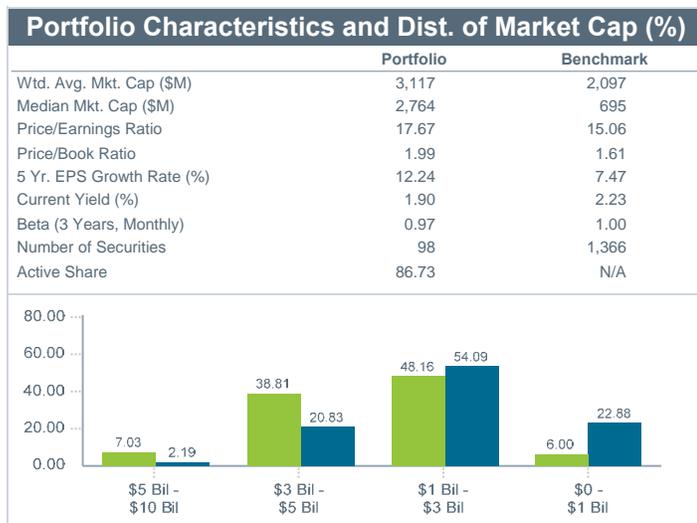
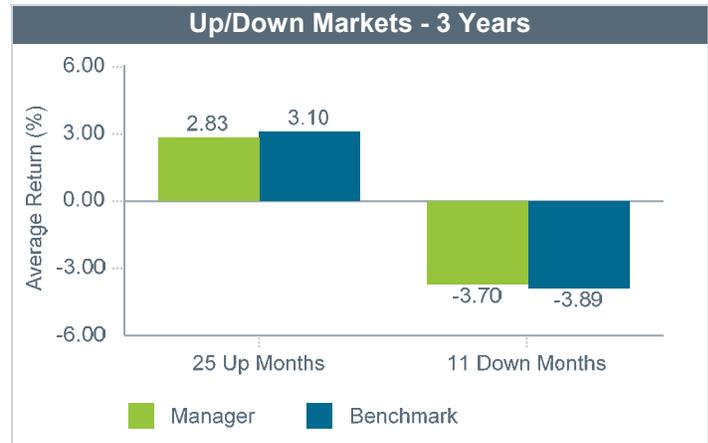
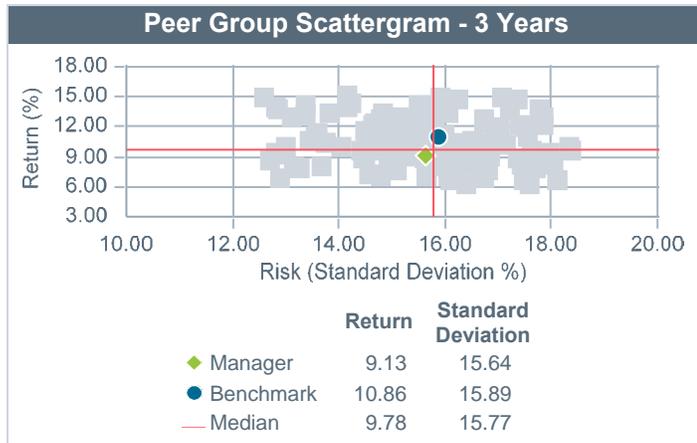
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	16.19	13.28	17.91	15.08	16.74	18.69	-1.72	34.03	6.54	10.99	11.75
Benchmark	16.10	12.75	16.53	13.50	14.34	17.52	-1.51	30.21	7.08	5.67	13.05
Difference	0.09	0.53	1.38	1.58	2.40	1.17	-0.21	3.82	-0.54	5.32	-1.30
Peer Group Median	15.92	12.46	16.34	12.80	13.86	16.87	-1.17	28.21	4.65	5.07	12.02
Rank	45	41	28	14	7	13	56	15	33	11	55
Population	248	248	237	231	218	206	259	283	308	337	348



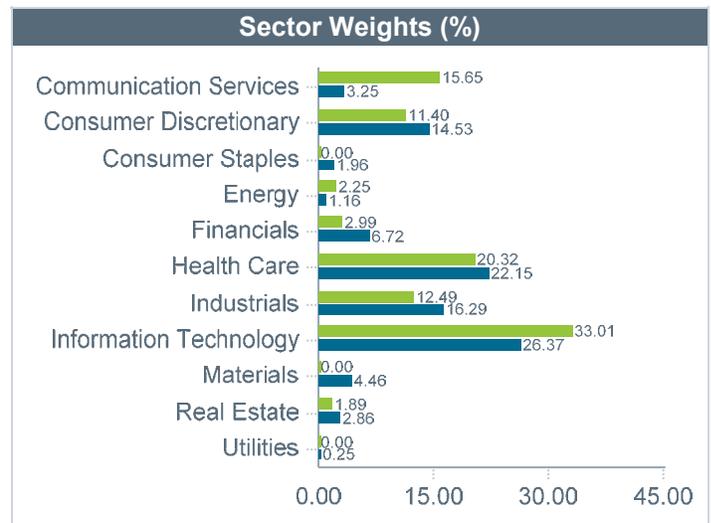
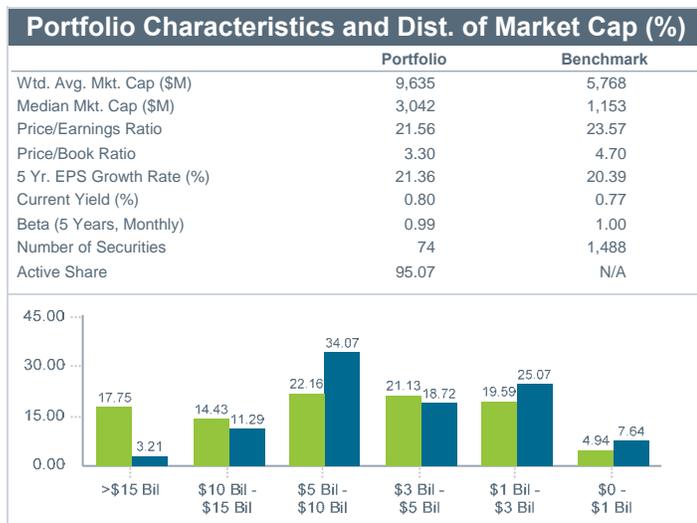
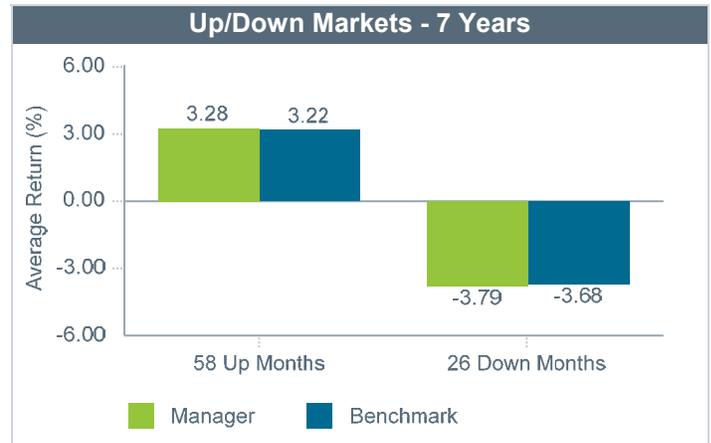
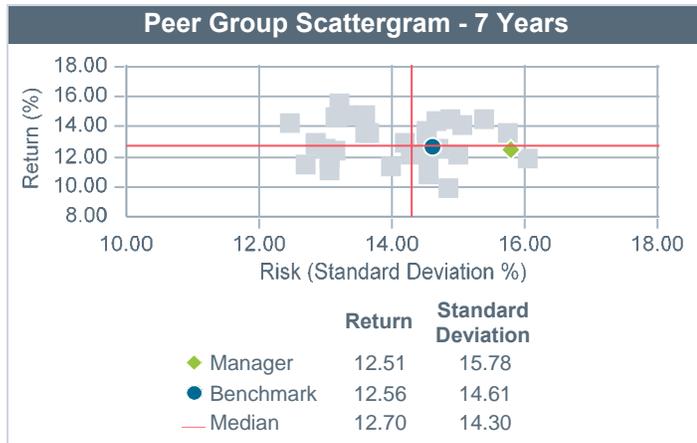
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	13.51	0.73	9.13	N/A	N/A	N/A	-14.72	8.97	27.58	-4.33	N/A
Benchmark	11.93	0.17	10.86	5.59	9.61	14.12	-12.86	7.84	31.74	-7.47	4.22
Difference	1.58	0.56	-1.73	N/A	N/A	N/A	-1.86	1.13	-4.16	3.14	N/A
Peer Group Median	12.95	-1.63	9.78	6.24	10.70	16.21	-14.39	11.60	26.17	-4.28	5.66
Rank	41	28	64	N/A	N/A	N/A	53	68	43	52	N/A
Population	194	193	190	185	176	161	208	226	233	243	254



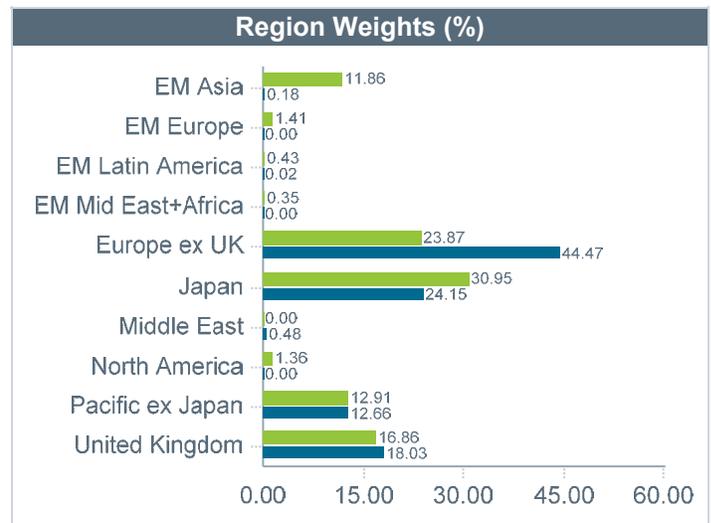
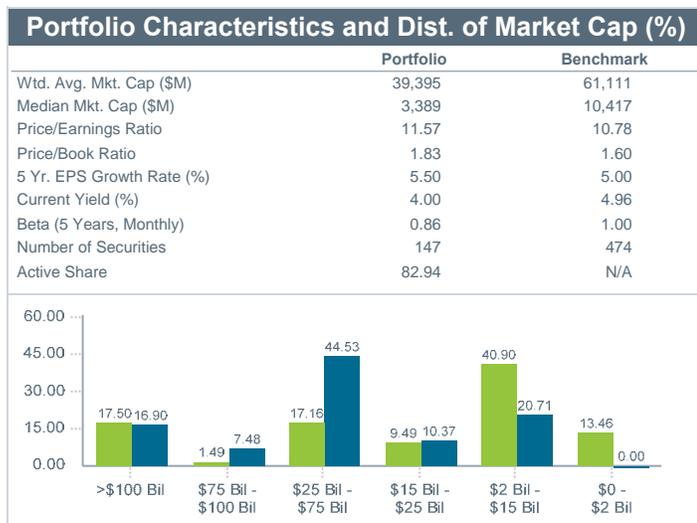
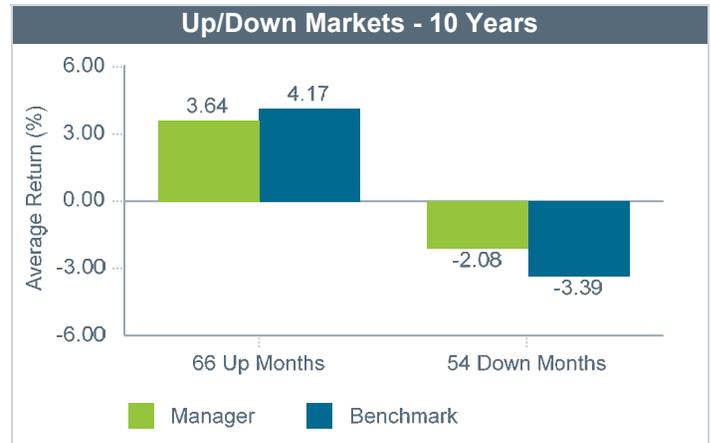
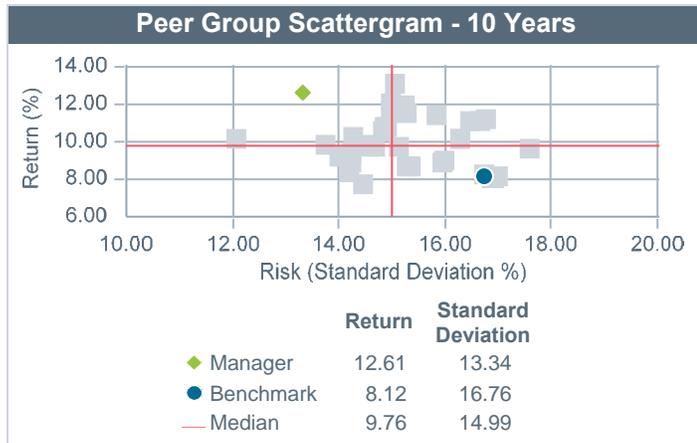
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	18.80	6.35	14.23	8.48	12.51	N/A	-10.36	25.99	5.26	0.62	8.59
Benchmark	18.99	7.54	15.60	9.72	12.56	17.50	-7.47	24.46	9.73	-0.19	7.05
Difference	-0.19	-1.19	-1.37	-1.24	-0.05	N/A	-2.89	1.53	-4.47	0.81	1.54
Peer Group Median	17.89	10.29	16.21	10.02	12.70	17.75	-4.53	24.77	8.56	0.11	5.59
Rank	34	73	75	76	52	N/A	89	44	77	39	24
Population	57	56	52	45	39	35	60	62	69	70	73



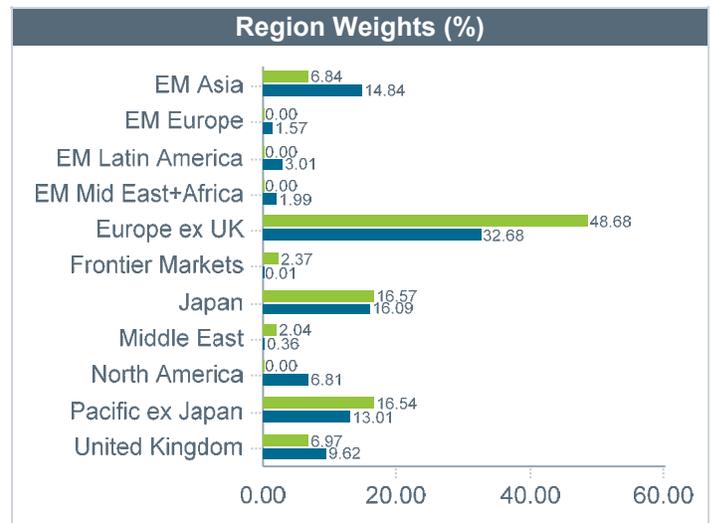
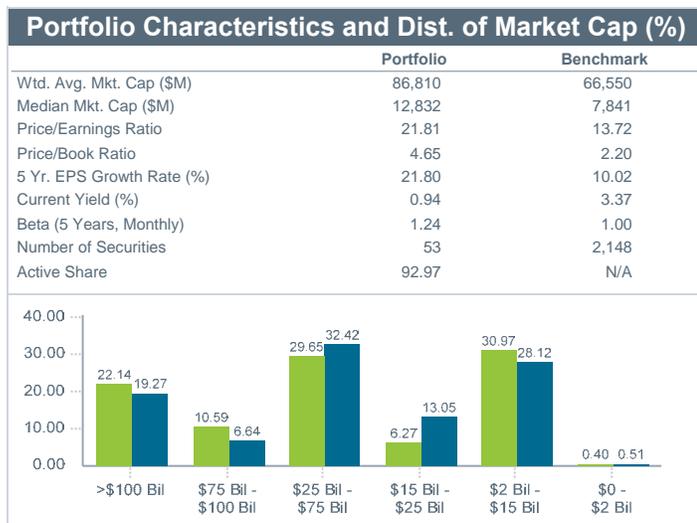
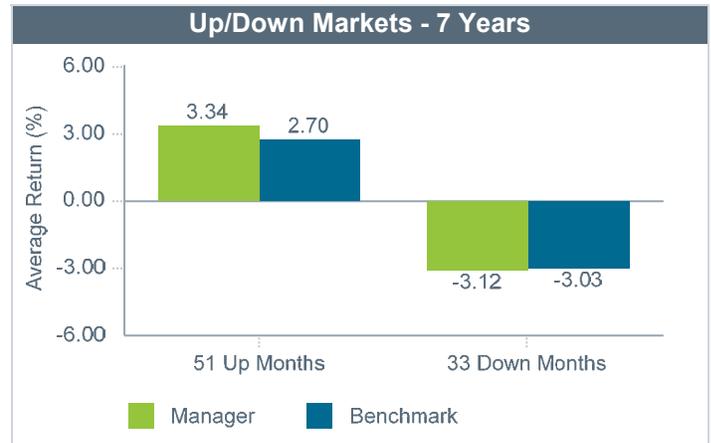
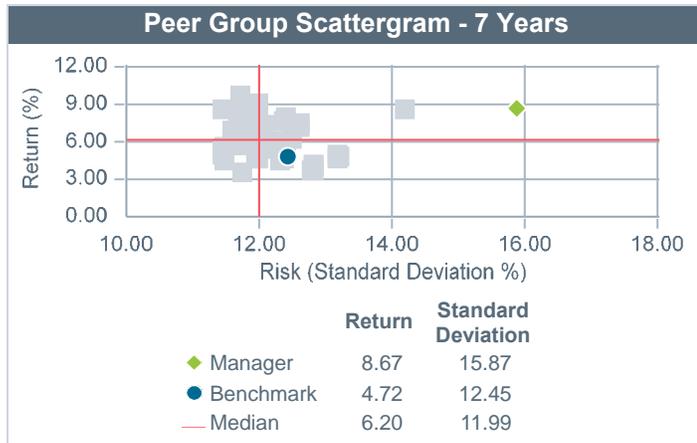
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	7.02	-6.89	8.34	4.80	9.10	12.61	-13.74	28.10	8.27	2.35	-0.92
Benchmark	7.92	-6.13	6.90	0.67	4.71	8.12	-14.78	21.44	5.02	-5.68	-5.39
Difference	-0.90	-0.76	1.44	4.13	4.39	4.49	1.04	6.66	3.25	8.03	4.47
Peer Group Median	9.33	-5.57	7.04	2.54	6.18	9.76	-15.76	24.17	3.15	-1.05	-4.30
Rank	100	57	16	13	11	9	41	26	9	26	14
Population	55	55	55	54	52	50	59	61	65	76	77



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

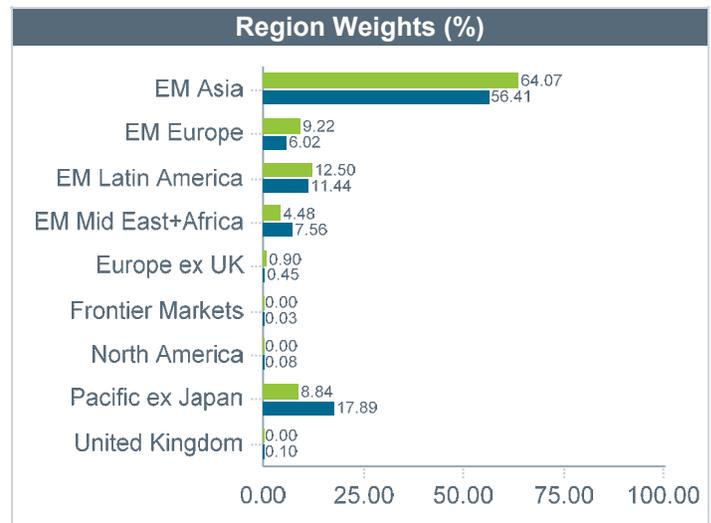
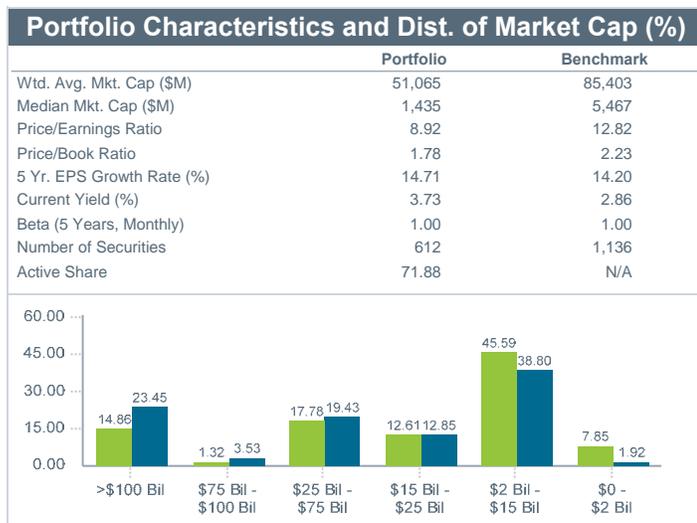
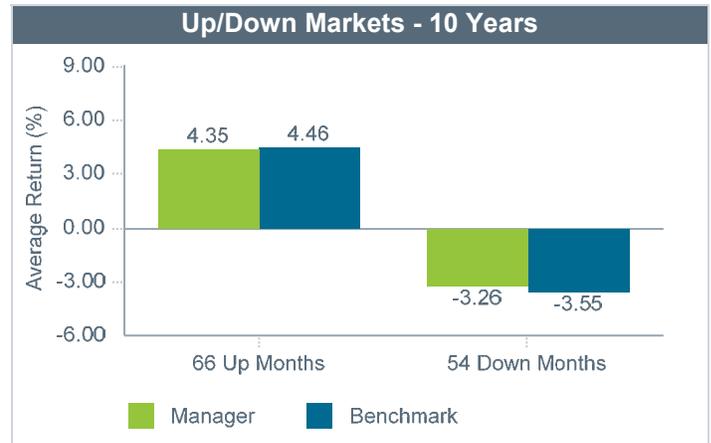
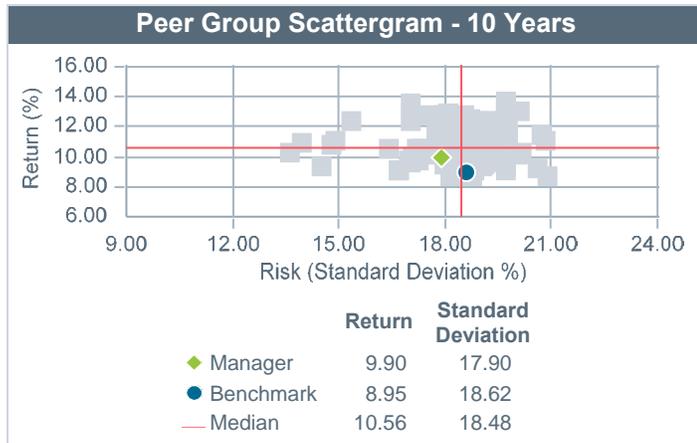
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	19.50	-6.53	14.90	5.94	8.67	N/A	-17.23	46.37	1.43	-2.99	-6.88
Benchmark	10.31	-4.22	8.09	2.57	4.72	8.85	-14.20	27.19	4.50	-5.66	-3.87
Difference	9.19	-2.31	6.81	3.37	3.95	N/A	-3.03	19.18	-3.07	2.67	-3.01
Peer Group Median	13.19	-4.66	8.89	3.91	6.20	9.86	-14.32	32.37	-0.80	0.27	-3.22
Rank	3	81	6	20	12	N/A	79	5	17	100	85
Population	174	174	164	130	113	100	176	188	165	143	146



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

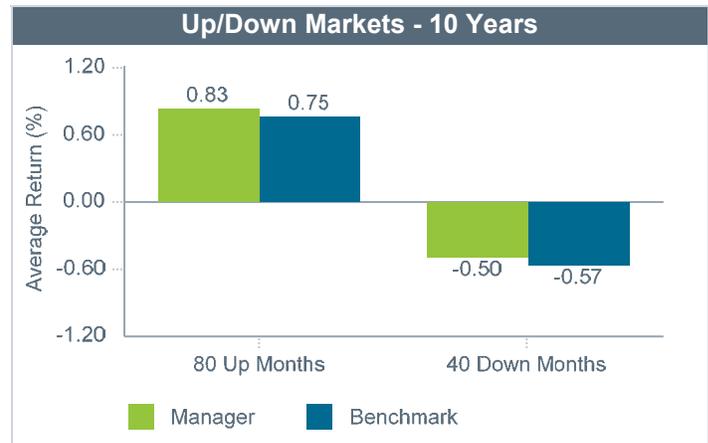
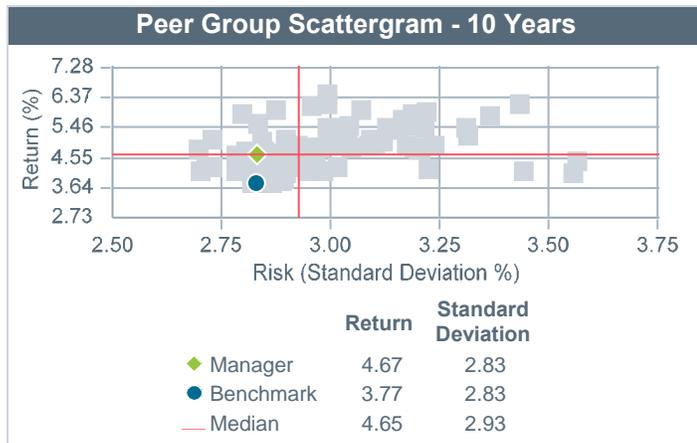


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	9.01	-13.16	10.10	3.64	3.31	9.90	-18.30	38.94	14.08	-17.37	2.40
Benchmark	9.93	-7.41	10.68	3.68	2.69	8.95	-14.58	37.28	11.19	-14.92	-2.19
Difference	-0.92	-5.75	-0.58	-0.04	0.62	0.95	-3.72	1.66	2.89	-2.45	4.59
Peer Group Median	10.09	-7.94	10.45	4.28	4.31	10.56	-15.23	36.84	10.12	-12.62	-0.09
Rank	68	92	54	68	73	67	80	37	22	90	31
Population	287	281	272	242	189	134	295	314	328	337	330



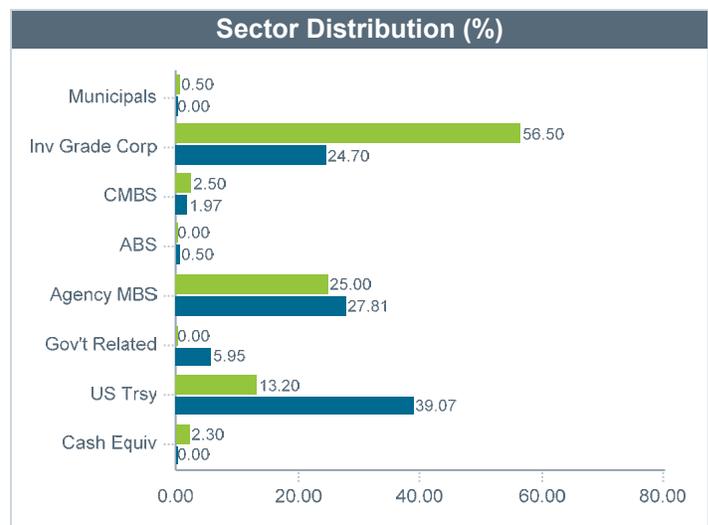
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	3.04	4.80	2.41	3.16	2.97	4.67	0.26	3.84	3.08	1.21	6.63
Benchmark	2.94	4.48	2.03	2.74	2.48	3.77	0.01	3.54	2.65	0.55	5.97
Difference	0.10	0.32	0.38	0.42	0.49	0.90	0.25	0.30	0.43	0.66	0.66
Peer Group Median	3.23	4.70	2.54	3.10	2.94	4.65	0.07	4.06	3.11	0.82	6.16
Rank	65	37	59	47	46	49	31	61	54	17	30
Population	140	139	137	134	129	123	146	153	162	167	181



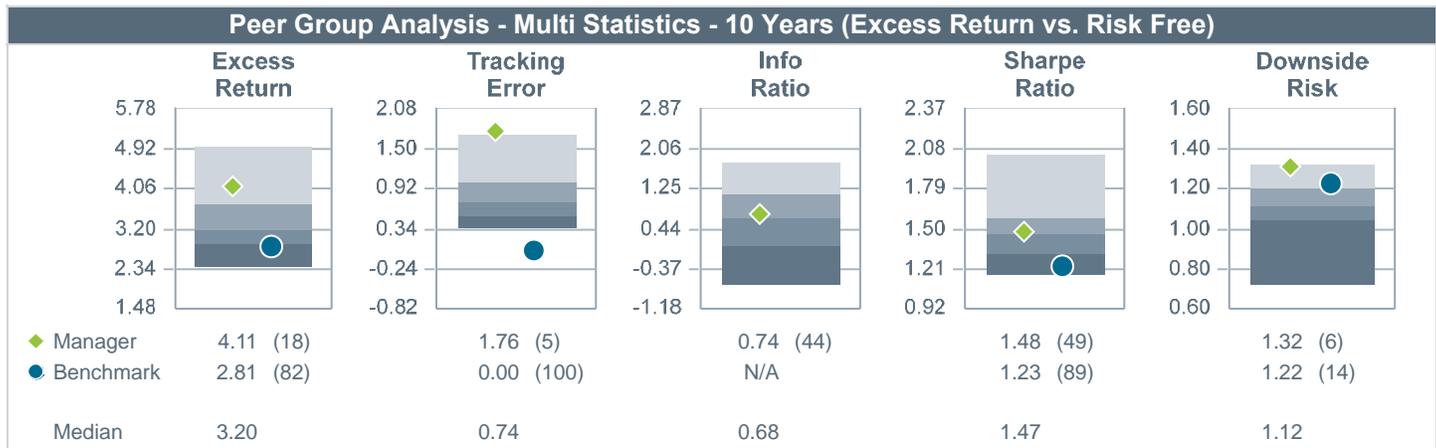
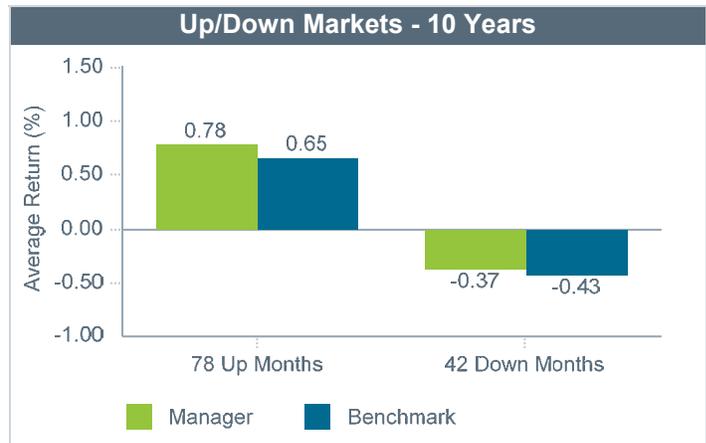
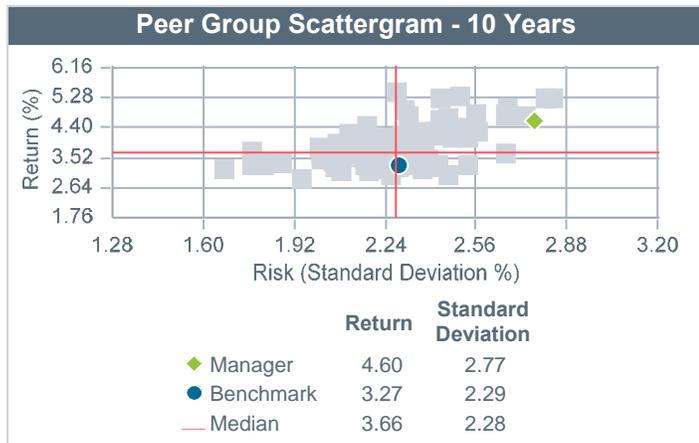
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	5.61	5.82
Spread Duration	3.99	6.00
Avg. Maturity	7.66	8.07
Avg. Quality	Aa2	Aa1/Aa2
Yield To Maturity (%)	3.03	2.94
Coupon Rate (%)	4.01	3.23
Current Yield (%)	3.75	N/A
Holdings Count	189	10,374



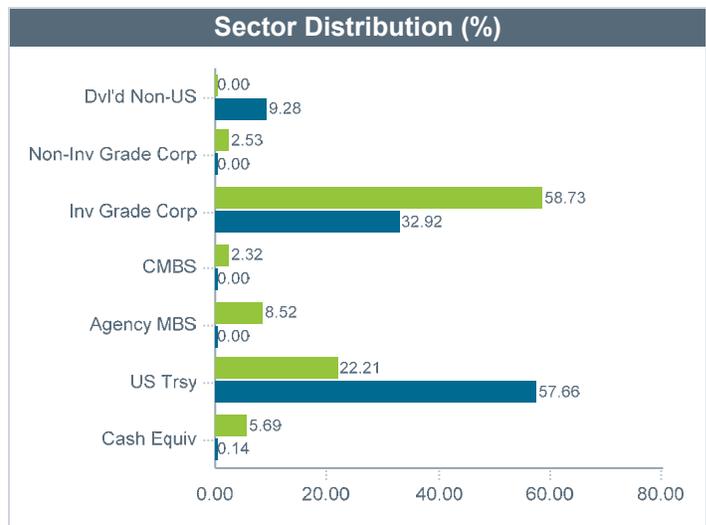
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	3.31	4.34	2.95	2.51	2.76	4.60	-0.10	3.38	4.66	-0.91	4.05
Benchmark	2.35	4.26	1.71	2.19	2.07	3.27	0.89	2.17	2.15	1.17	3.34
Difference	0.96	0.08	1.24	0.32	0.69	1.33	-0.99	1.21	2.51	-2.08	0.71
Peer Group Median	2.45	4.36	2.04	2.43	2.36	3.66	0.96	2.55	2.39	1.31	3.56
Rank	3	55	9	39	20	18	99	17	5	100	33
Population	152	152	150	144	139	126	158	167	178	177	179



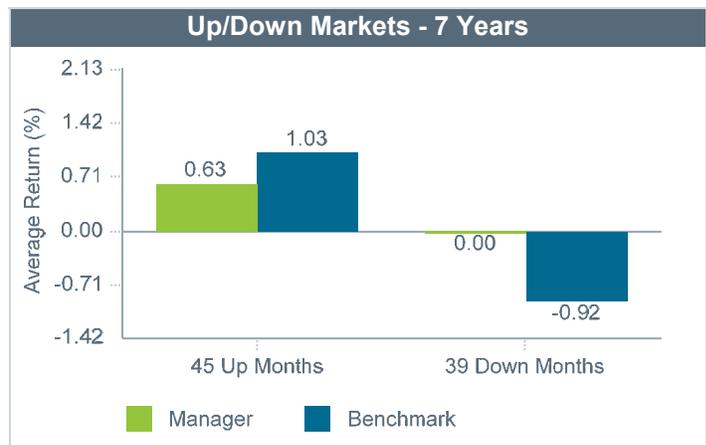
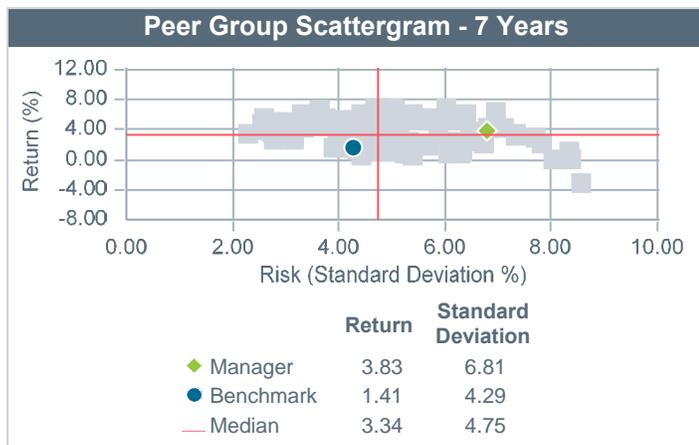
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	3.43	3.85
Spread Duration	N/A	3.85
Avg. Maturity	4.05	4.26
Avg. Quality	A1	Aa2
Yield To Maturity (%)	3.39	2.69
Coupon Rate (%)	3.41	2.84
Current Yield (%)	3.30	2.88
Holdings Count	143	6,539



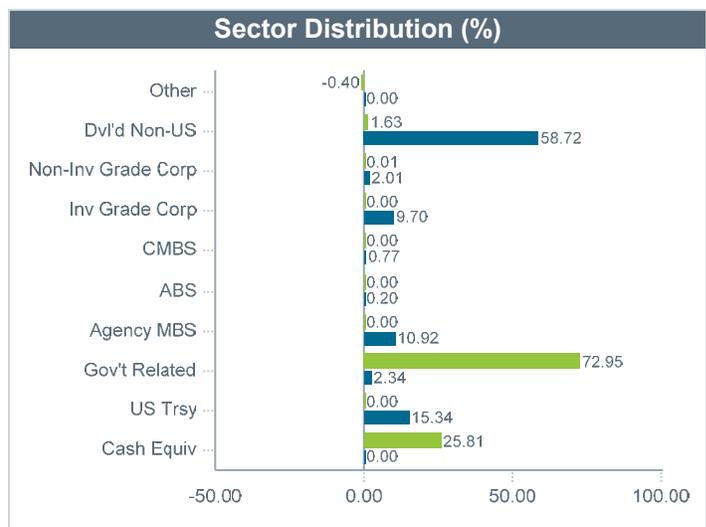
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	1.71	0.08	4.89	2.35	3.83	N/A	0.52	5.06	8.01	-3.43	0.81
Benchmark	2.39	-0.29	1.85	1.20	1.41	3.33	-1.36	7.69	2.84	-3.29	0.48
Difference	-0.68	0.37	3.04	1.15	2.42	N/A	1.88	-2.63	5.17	-0.14	0.33
Peer Group Median	3.84	1.89	3.78	2.53	3.34	5.14	-1.86	7.62	5.77	-2.30	2.61
Rank	94	63	40	54	44	N/A	17	78	37	65	74
Population	220	219	214	197	168	121	234	246	262	273	272



Portfolio Characteristics

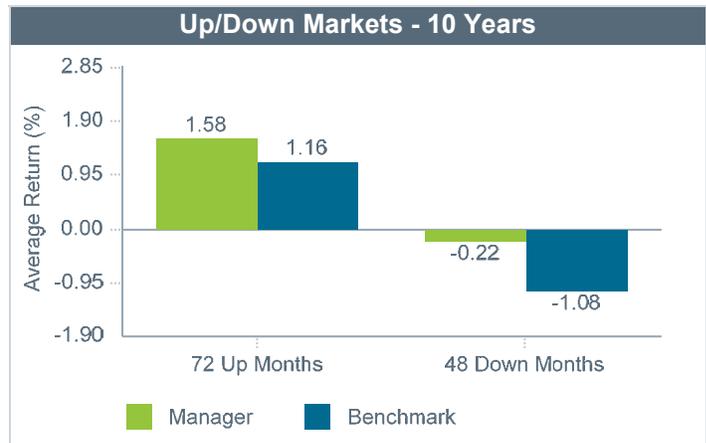
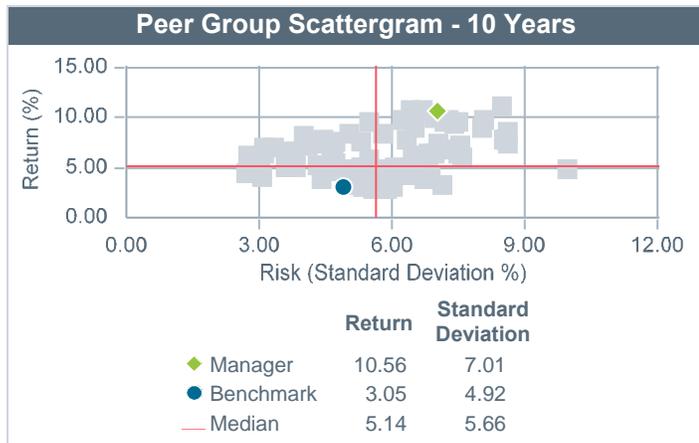
	Portfolio	Benchmark
Effective Duration	-1.74	6.88
Spread Duration	-1.70	N/A
Avg. Maturity	1.73	8.72
Avg. Quality	A3	N/A
Yield To Maturity (%)	9.90	2.02
Coupon Rate (%)	4.01	2.87
Current Yield (%)	4.01	0.11
Holdings Count	168	26,839



Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of derivatives and equity.

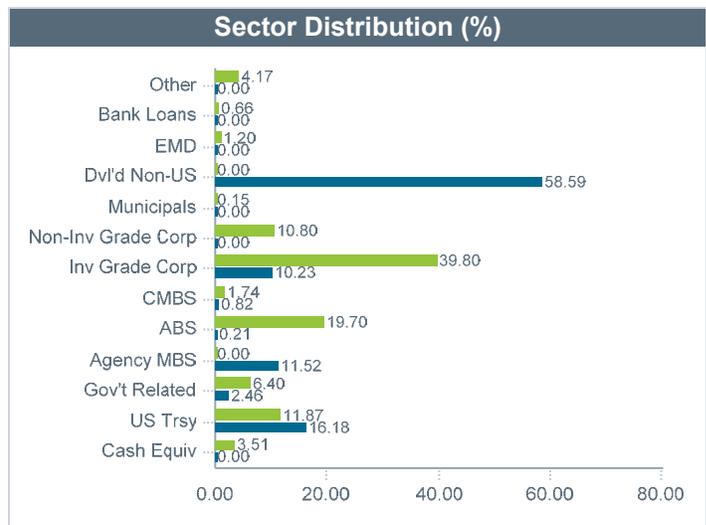


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	3.91	4.15	6.80	4.50	5.97	10.56	0.09	8.74	10.44	-4.09	7.53
Benchmark	2.20	-0.38	1.49	1.04	1.19	3.05	-1.19	7.39	2.09	-3.15	0.59
Difference	1.71	4.53	5.31	3.46	4.78	7.51	1.28	1.35	8.35	-0.94	6.94
Peer Group Median	3.84	1.89	3.78	2.53	3.34	5.14	-1.86	7.62	5.77	-2.30	2.61
Rank	49	27	20	20	15	8	21	29	25	76	14
Population	220	219	214	197	168	121	234	246	262	273	272



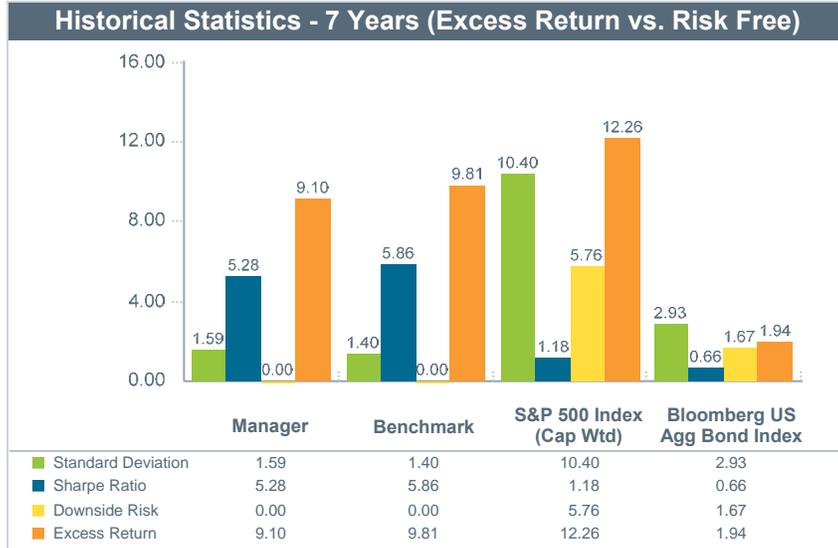
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	4.79	7.03
Spread Duration	3.69	N/A
Avg. Maturity	6.49	8.85
Avg. Quality	Baa1	N/A
Yield To Maturity (%)	4.45	1.77
Coupon Rate (%)	4.10	2.69
Current Yield (%)	4.42	0.02
Holdings Count	539	23,415



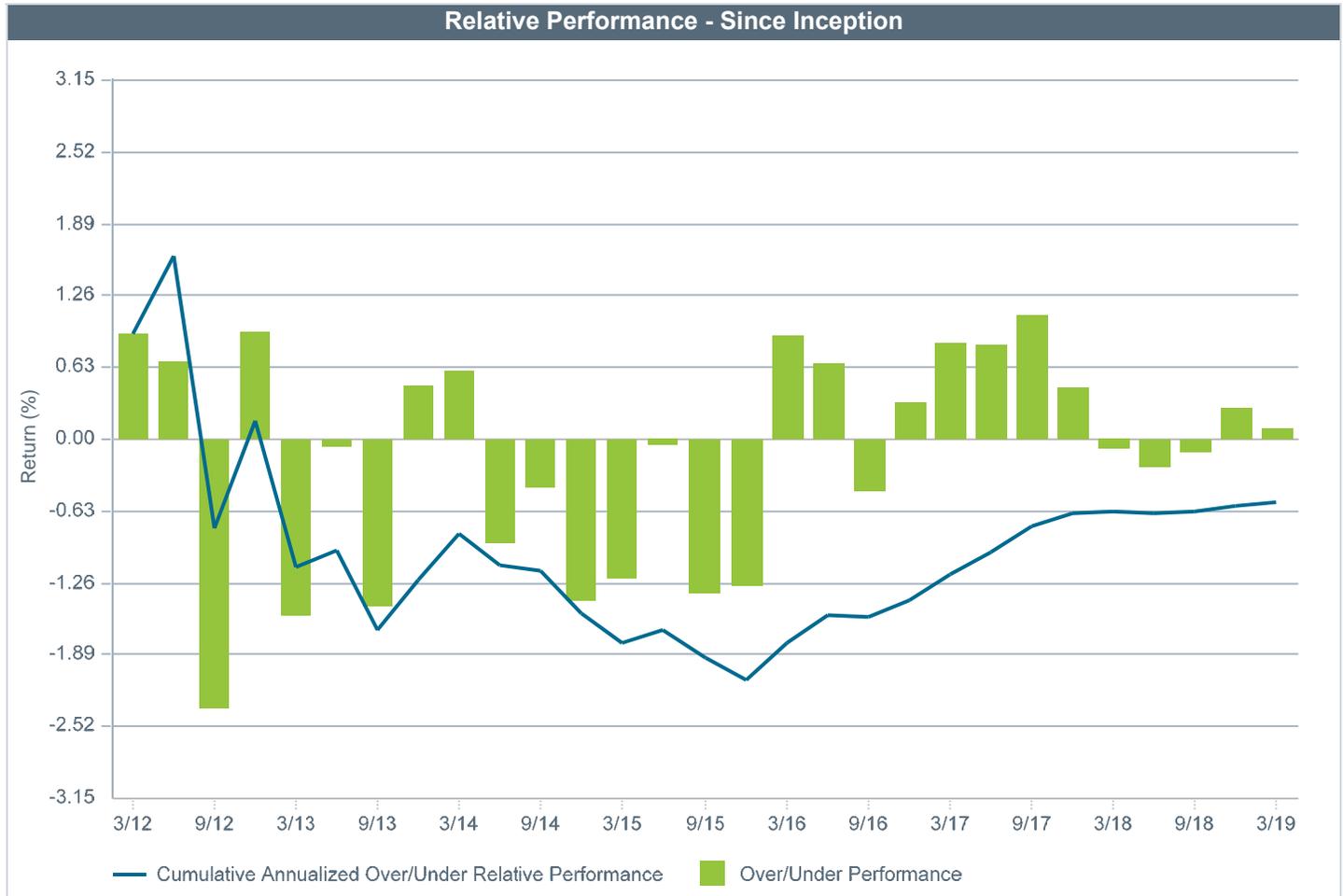
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of preferred equity and convertibles.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	1.53	7.56	9.30	9.72	10.00	N/A	8.18	11.11	10.34	10.60	10.11
Benchmark	1.42	7.52	7.97	10.18	10.77	8.74	8.35	7.62	8.77	15.02	12.50
Difference	0.11	0.04	1.33	-0.46	-0.77	N/A	-0.17	3.49	1.57	-4.42	-2.39



Actual Correlation - 7 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.21
S&P 500 Index (Cap Wtd)	-0.25
Russell 2000 Index	-0.26
MSCI EAFE Index (USD) (Net)	-0.22
MSCI Emg Mkts Index (USD) (Net)	-0.15
Bloomberg US Agg Bond Index	-0.22
Bloomberg US Trsy US TIPS Index	-0.28
Wilshire US REIT Index	-0.28
HFRI FOF Comp Index	-0.25
Bloomberg Cmnty Index (TR)	-0.09
ICE BofAML 3 Mo US T-Bill Index	-0.27
Cons Price Index (Unadjusted)	-0.12
NCREIF ODCE Index (AWA) (Gross)	0.21



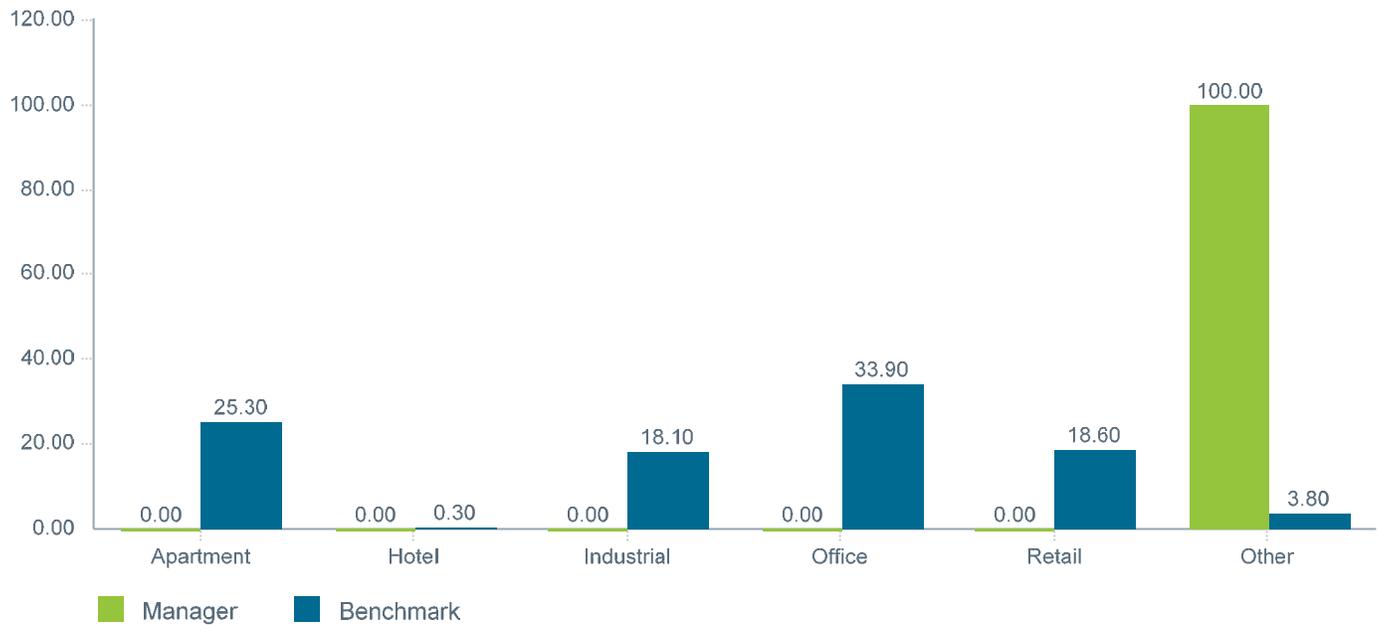
Investment Strategy

The Fund's strategy is on primarily stabilized income-producing investments in niche sectors; Education, Health, and Storage. Within these sectors the fund invests in student housing, seniors housing, medical office buildings, life science buildings, and self-storage. The majority of the return from the Fund is expected to be realized from current income, with a modest portion of the return to be derived from asset appreciation. Harrison Street believes that the primary property types it targets will provide better risk/return profiles than properties in traditional core portfolios across all economic cycles.

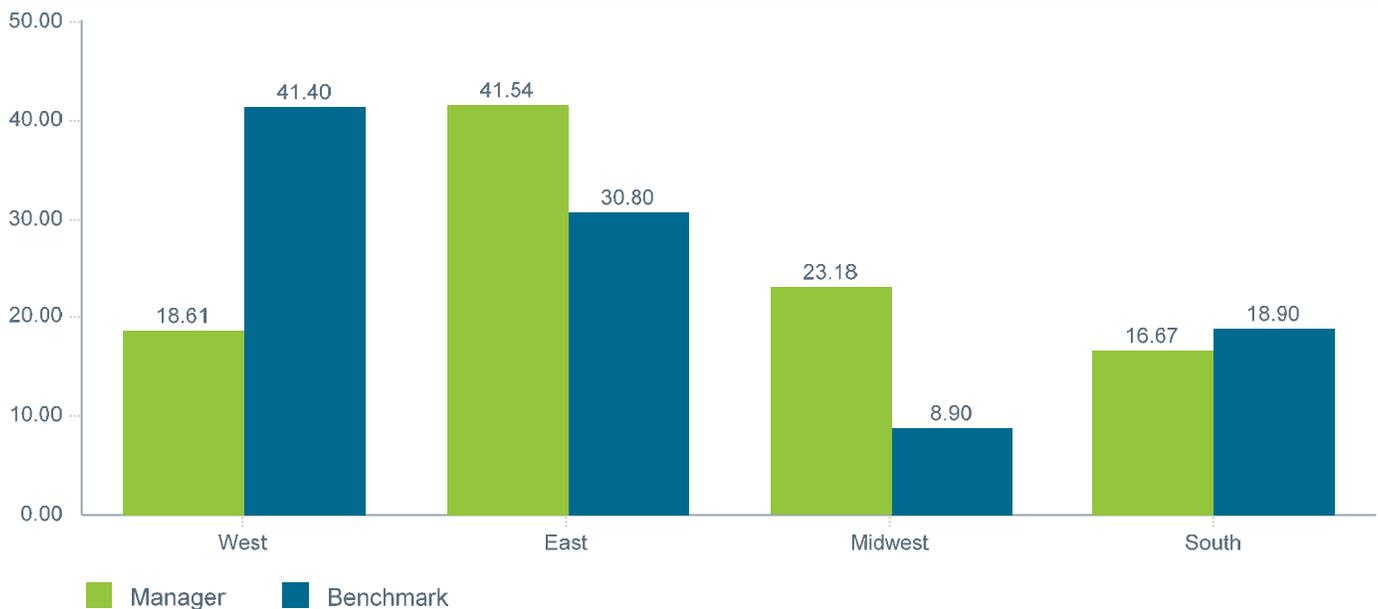
Investment Profile

Fund Inception	2011
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	6,787
Fund Leverage %	25.10
Portfolio Occupancy %	90.60
Cash Reserve %	1.87
Number of Investments	260
Number of Limited Partners	142

Property Type Allocation (%)



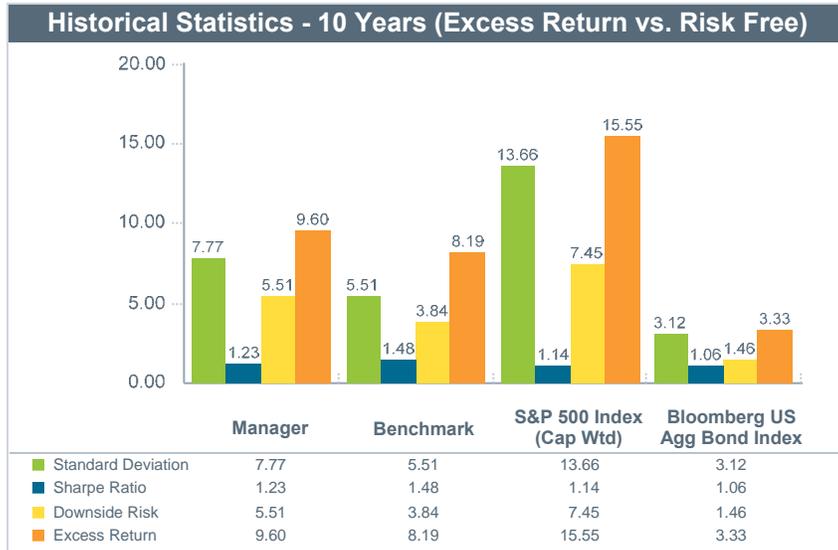
Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of student housing, senior housing, medical office buildings, self-storage, marinas, boat storage, and life science buildings. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

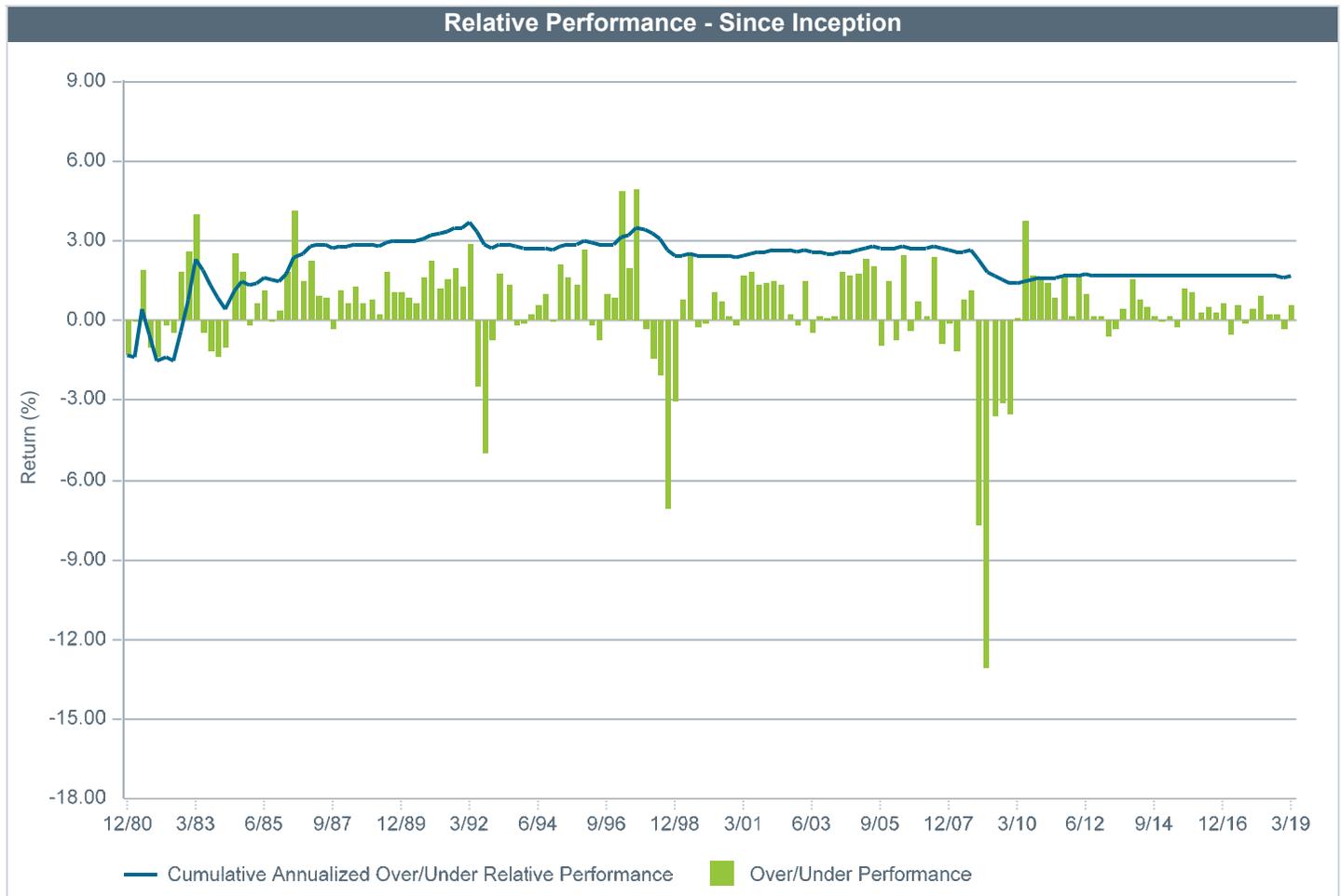


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	1.99	8.26	9.23	11.66	12.35	10.07	9.48	8.06	10.70	17.53	14.22
Benchmark	1.42	7.52	7.97	10.18	10.77	8.74	8.35	7.62	8.77	15.02	12.50
Difference	0.57	0.74	1.26	1.48	1.58	1.33	1.13	0.44	1.93	2.51	1.72



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.98
S&P 500 Index (Cap Wtd)	-0.39
Russell 2000 Index	-0.37
MSCI EAFE Index (USD) (Net)	-0.49
MSCI Emg Mkts Index (USD) (Net)	-0.57
Bloomberg US Agg Bond Index	-0.13
Bloomberg US Trsy US TIPS Index	-0.04
Wilshire US REIT Index	-0.61
HFRI FOF Comp Index	-0.36
Bloomberg Cmnty Index (TR)	-0.27
ICE BofAML 3 Mo US T-Bill Index	-0.08
Cons Price Index (Unadjusted)	-0.07



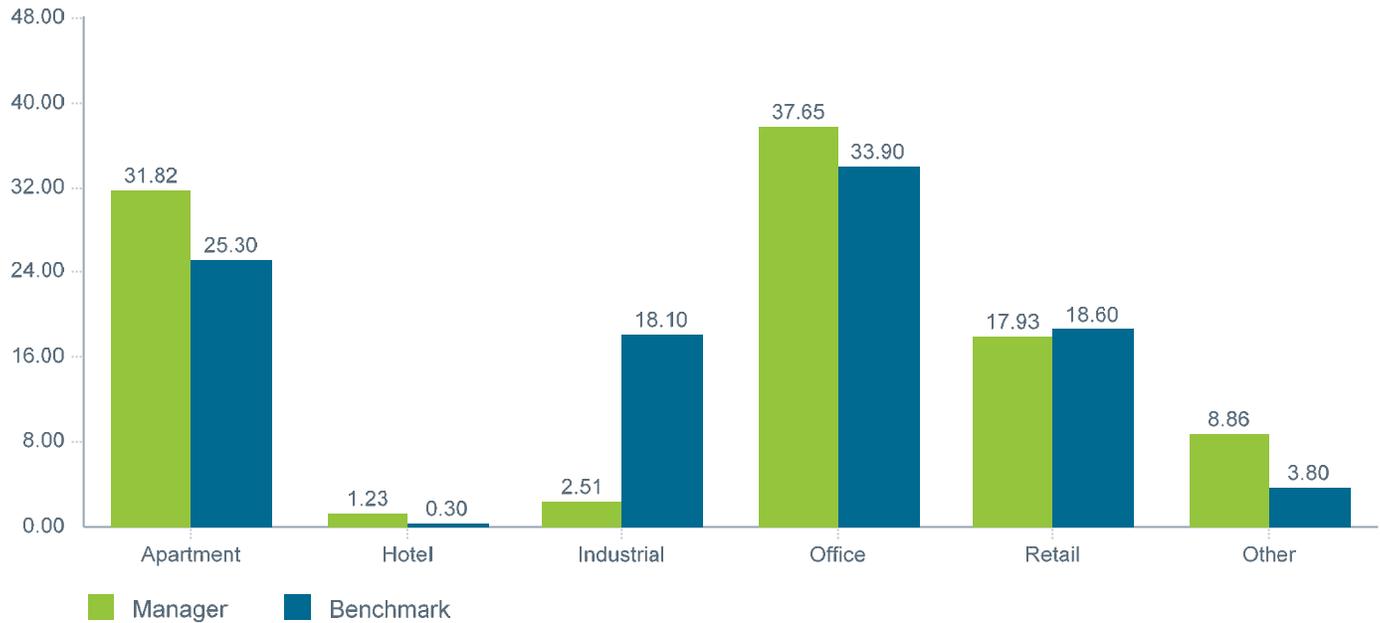
Investment Strategy

The Fund pursues a diversified core-plus real estate strategy that seeks to outperform the NCREIF ODCE Index by 100 basis points over a complete market cycle by structuring investments to enhance risk-adjusted returns. Investments may be made through direct property ownership or indirectly through such vehicles as joint ventures, general or limited partnerships, limited liability companies, mortgage loans and other loan types, including mezzanine debt, and debt secured by an interest in the borrowing entity or interests in companies or entities that directly or indirectly hold real estate or real estate interests. It operates with a leverage limit of 40% and may invest up to 35% of its gross assets in higher-risk, non-core real estate investment opportunities.

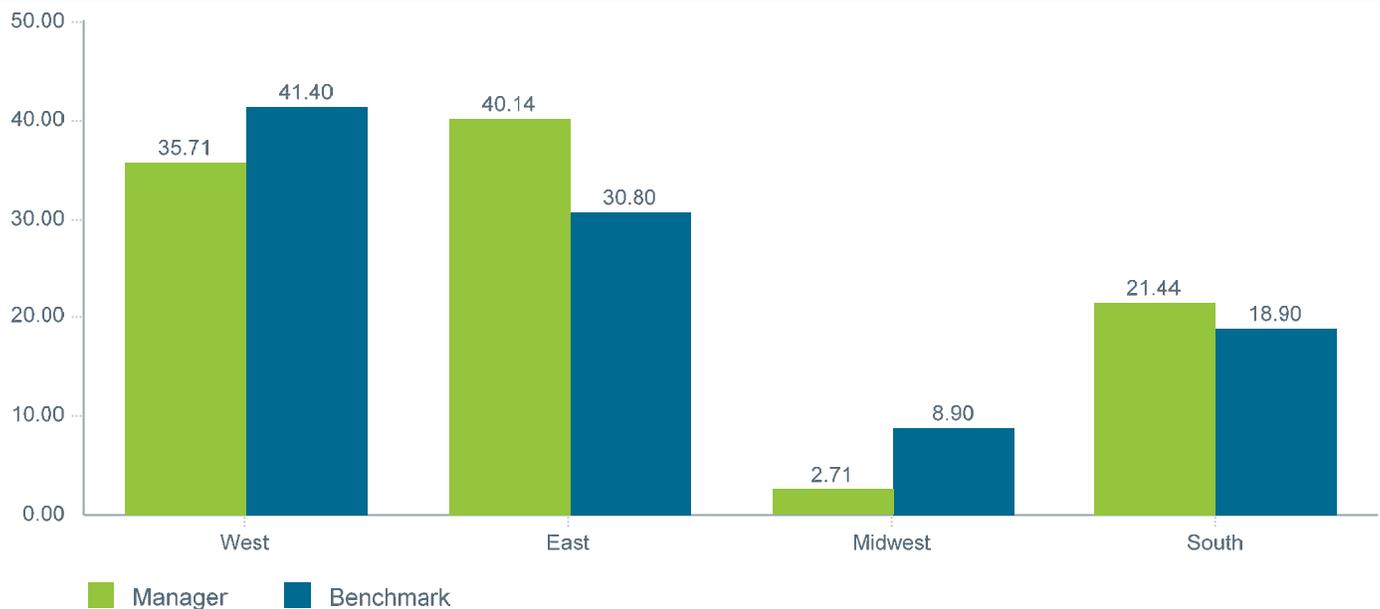
Investment Profile

Fund Inception	1980
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	13,821
Fund Leverage %	35.30
Portfolio Occupancy %	87.26
Cash Reserve %	0.72
Number of Investments	165
Number of Limited Partners	96

Property Type Allocation (%)



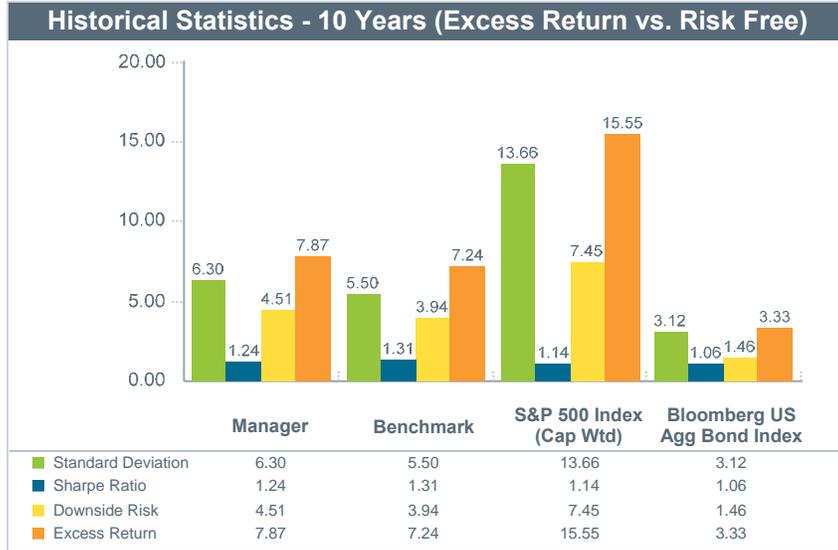
Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage and land. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

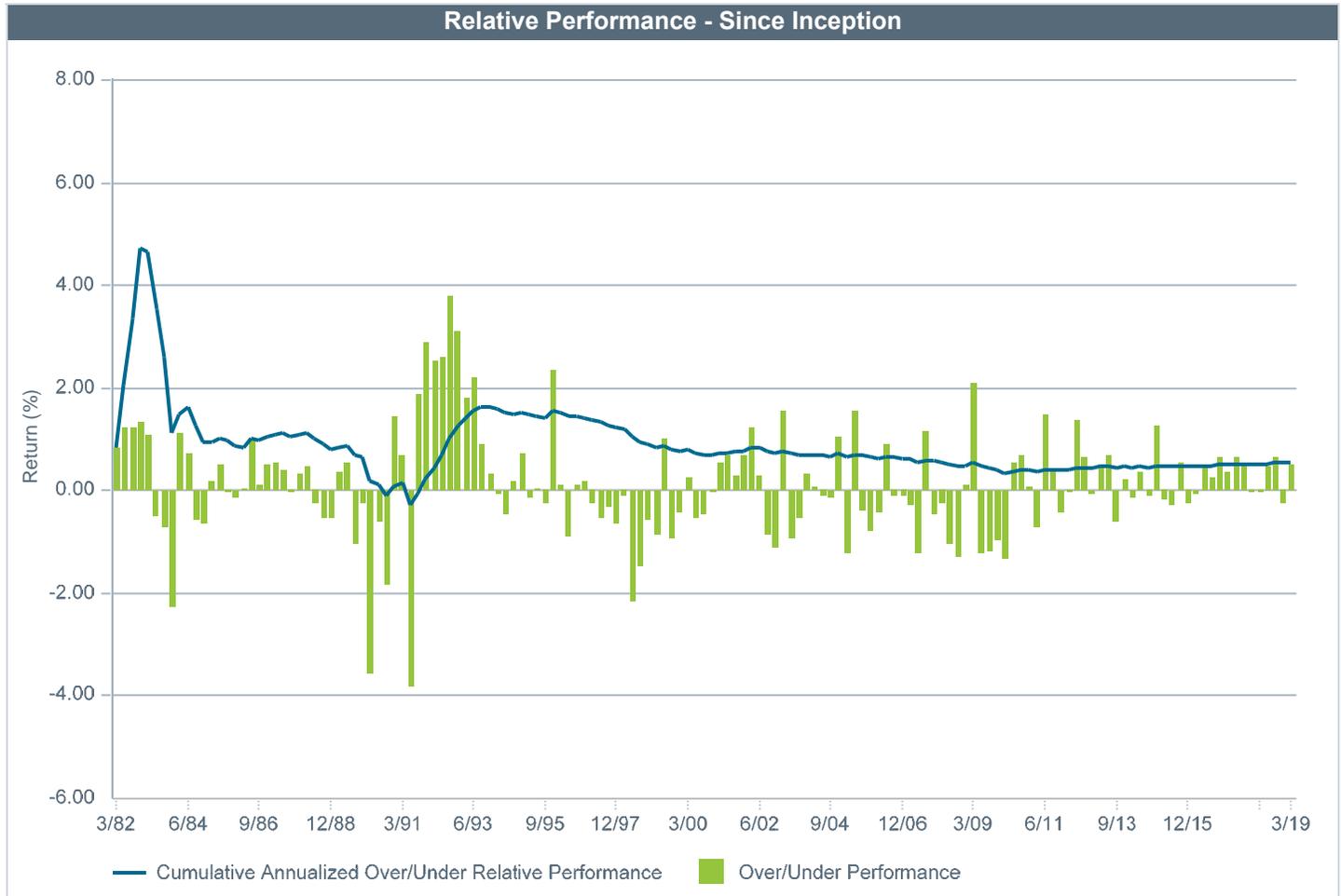


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	1.71	8.06	8.53	10.41	11.05	8.34	8.32	8.29	9.21	13.81	13.04
Benchmark	1.20	6.55	7.00	9.18	9.75	7.73	7.36	6.66	7.79	13.95	11.46
Difference	0.51	1.51	1.53	1.23	1.30	0.61	0.96	1.63	1.42	-0.14	1.58



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.98
S&P 500 Index (Cap Wtd)	-0.38
Russell 2000 Index	-0.37
MSCI EAFE Index (USD) (Net)	-0.49
MSCI Emg Mkts Index (USD) (Net)	-0.60
Bloomberg US Agg Bond Index	-0.17
Bloomberg US Trsy US TIPS Index	-0.09
Wilshire US REIT Index	-0.62
HFRI FOF Comp Index	-0.35
Bloomberg Comdty Index (TR)	-0.30
ICE BofAML 3 Mo US T-Bill Index	-0.06
Cons Price Index (Unadjusted)	-0.11
NCREIF ODCE Index (AWA) (Gross)	0.98
NCREIF ODCE Index (AWA) (Gross)	0.98



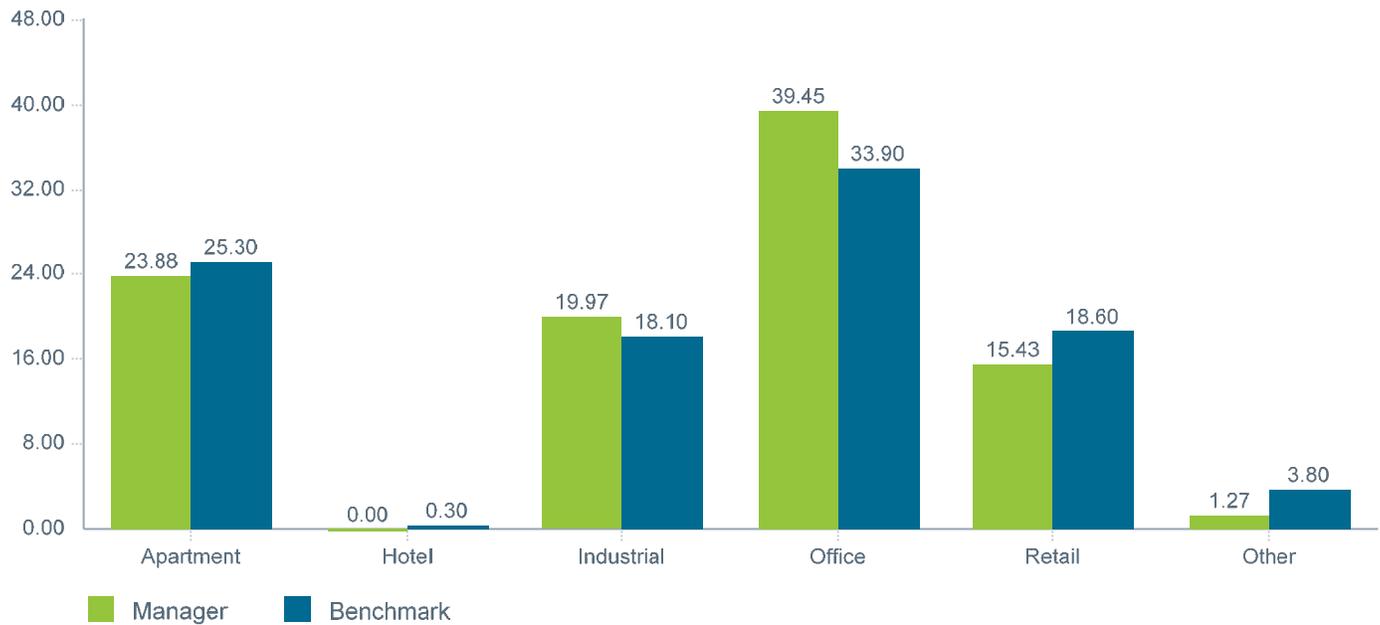
Investment Strategy

The Principal U.S. Property Account is a core real estate account designed to have a low to moderate risk profile consistent with other open-end real estate funds comprising the NFI-ODCE. This risk profile has two components: 1) a low to moderate real estate property risk profile; and 2) a low to moderate risk portfolio level operating profile. Low to moderate real estate property risk is accomplished by investing primarily in well-leased properties on an unleveraged basis. Low to moderate portfolio level risk is accomplished by operating with limited portfolio level obligations and a well-diversified portfolio. The Account invests in the traditional real estate property types; multifamily, office, industrial, and retail.

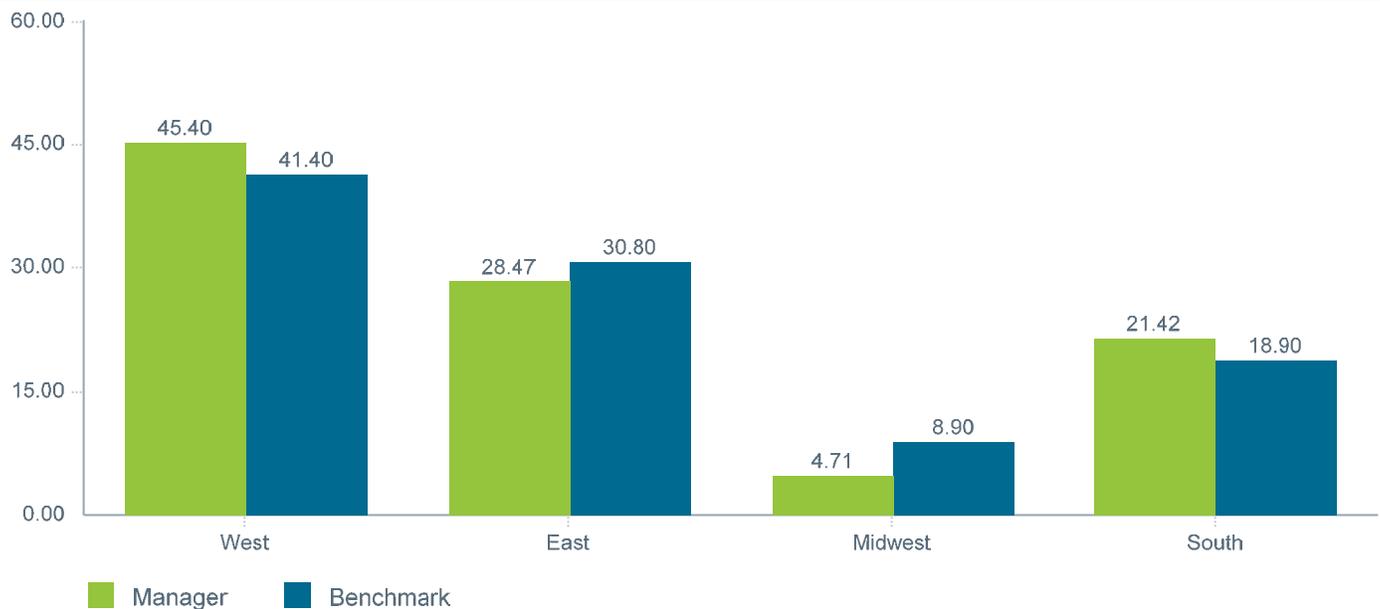
Investment Profile

Fund Inception	1982
Legal Structure	Insurance SA
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	10,201
Fund Leverage %	18.25
Portfolio Occupancy %	92.57
Cash Reserve %	2.45
Number of Investments	136
Number of Limited Partners	6,468

Property Type Allocation (%)



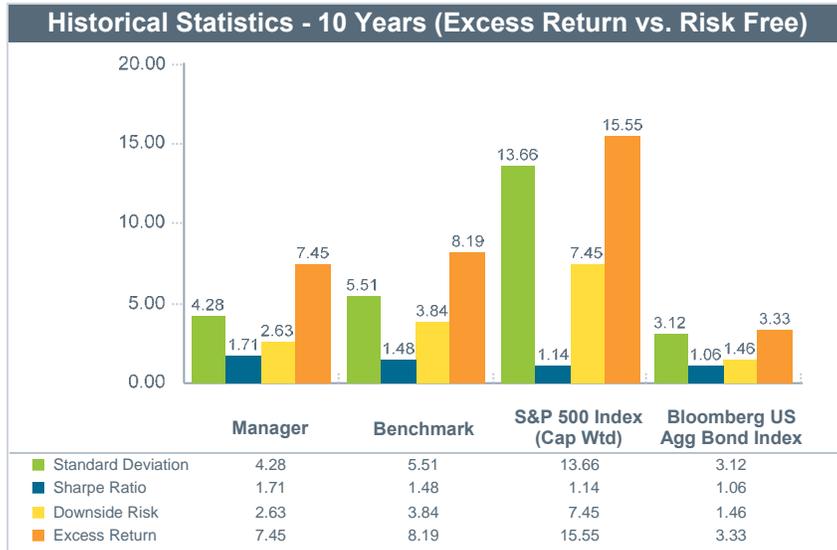
Geographic Allocation (%)



Performance shown is net of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of land. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.

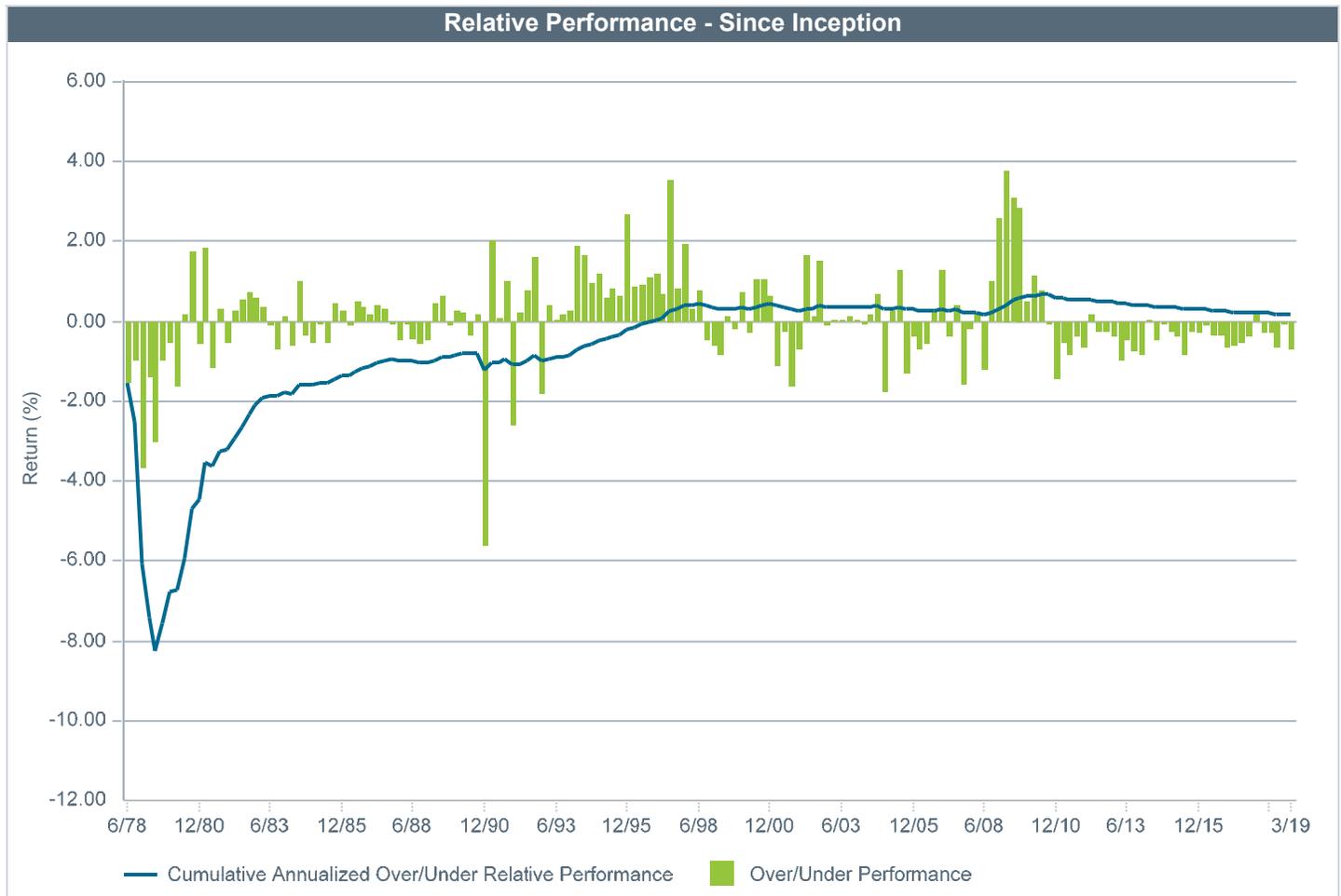


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	0.69	5.73	6.34	8.59	9.01	8.01	6.99	6.30	7.21	12.94	11.69
Benchmark	1.42	7.52	7.97	10.18	10.77	8.74	8.35	7.62	8.77	15.02	12.50
Difference	-0.73	-1.79	-1.63	-1.59	-1.76	-0.73	-1.36	-1.32	-1.56	-2.08	-0.81



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.97
S&P 500 Index (Cap Wtd)	-0.42
Russell 2000 Index	-0.39
MSCI EAFE Index (USD) (Net)	-0.49
MSCI Emg Mkts Index (USD) (Net)	-0.57
Bloomberg US Agg Bond Index	-0.10
Bloomberg US Trsy US TIPS Index	-0.06
Wilshire US REIT Index	-0.59
HFRI FOF Comp Index	-0.38
Bloomberg Cmdb Index (TR)	-0.32
ICE BofAML 3 Mo US T-Bill Index	-0.15
Cons Price Index (Unadjusted)	-0.11



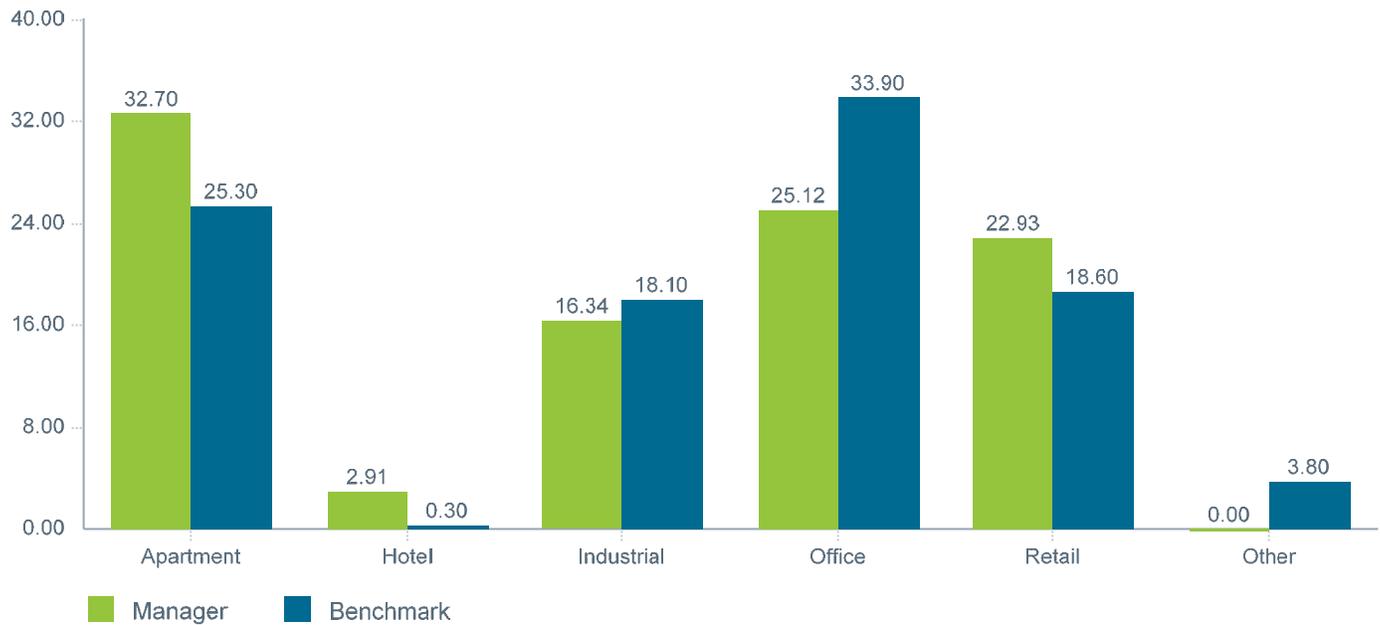
Investment Strategy

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

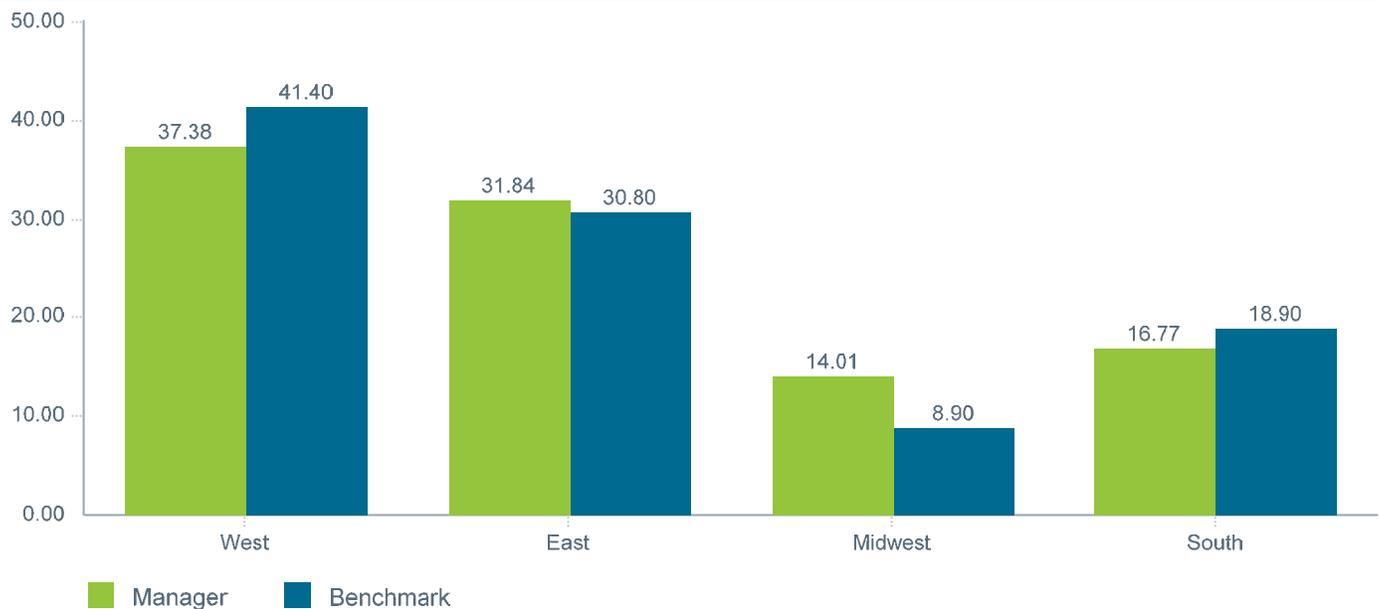
Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	32,609
Fund Leverage %	17.50
Portfolio Occupancy %	93.30
Cash Reserve %	5.60
Number of Investments	202
Number of Limited Partners	437

Property Type Allocation (%)



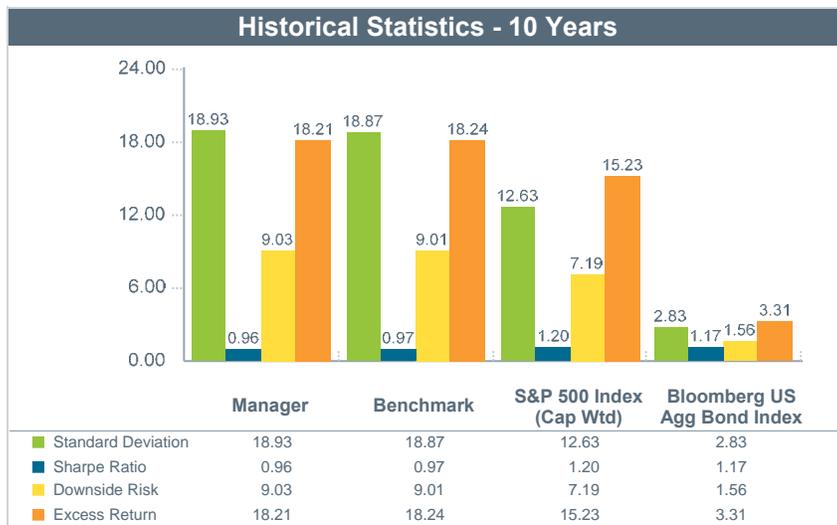
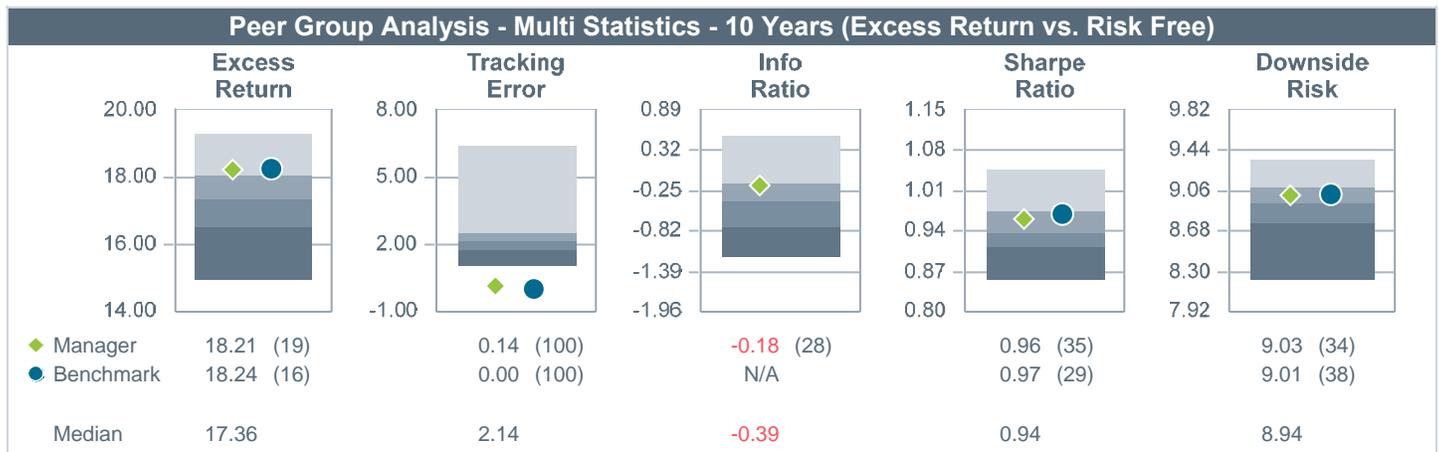
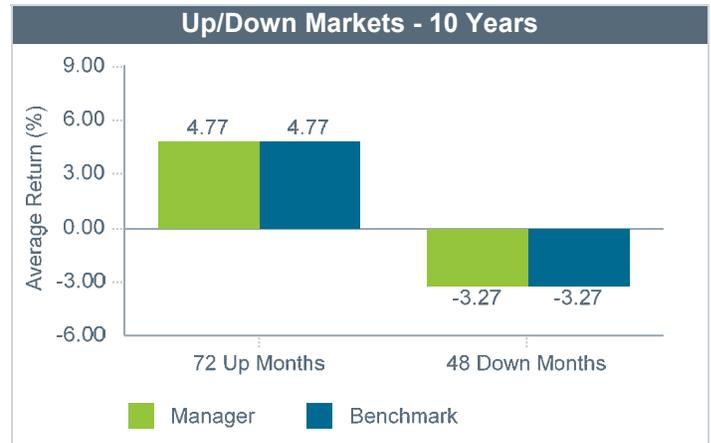
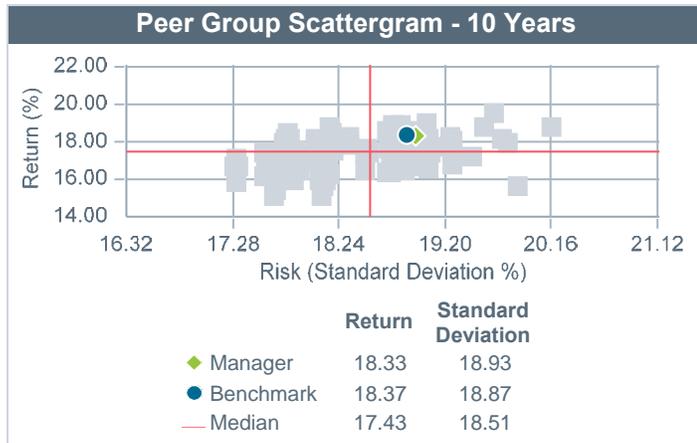
Geographic Allocation (%)



Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.



Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	17.29	20.06	5.74	8.79	8.97	18.33	-5.95	4.95	8.53	2.37	30.29
Benchmark	17.28	20.08	5.82	8.89	9.06	18.37	-5.86	5.07	8.60	2.52	30.38
Difference	0.01	-0.02	-0.08	-0.10	-0.09	-0.04	-0.09	-0.12	-0.07	-0.15	-0.09
Peer Group Median	16.36	17.31	5.30	8.23	8.24	17.43	-5.67	5.14	6.18	2.94	29.43
Rank	15	9	42	34	23	20	55	55	18	65	33
Population	265	248	226	199	170	136	248	248	235	222	253



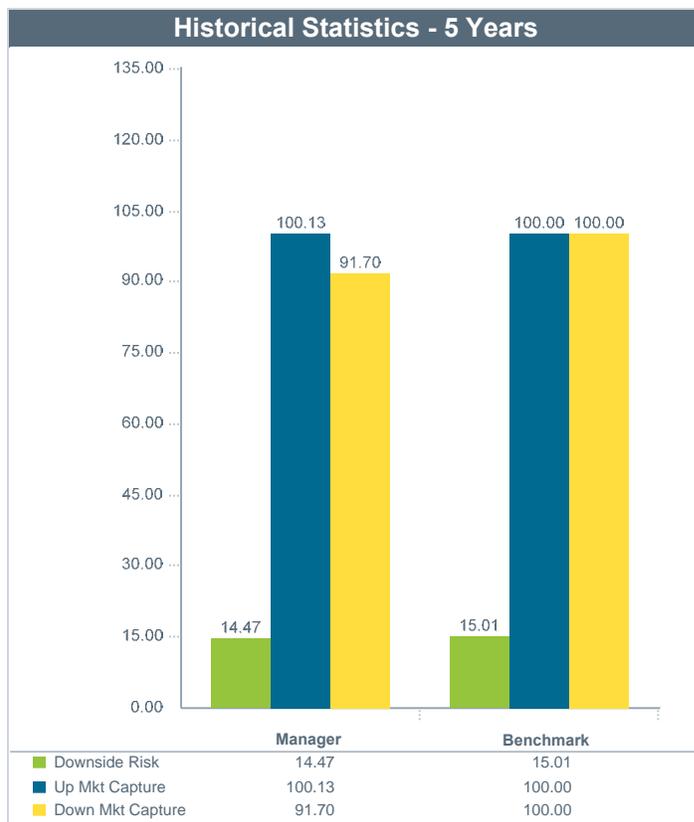
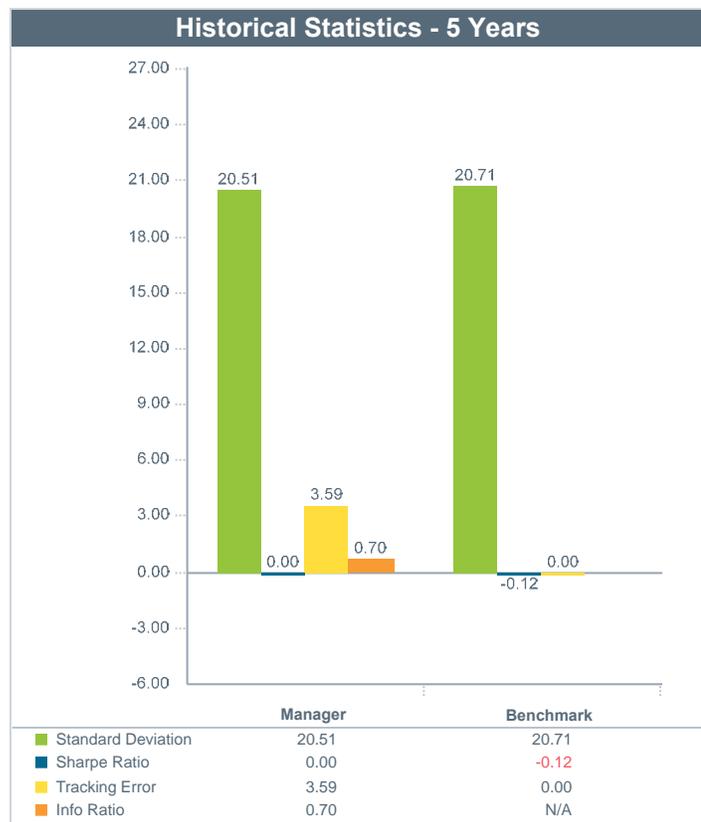
Actual Correlation - 10 Years

Index	Actual Correlation
Vanguard Spl Real Estate Index	1.00
S&P 500 Index (Cap Wtd)	0.66
Russell 2000 Index	0.66
MSCI EAFE Index (USD) (Net)	0.61
MSCI Emg Mkts Index (USD) (Net)	0.58
Bloomberg US Agg Bond Index	0.28
Bloomberg US Trsy US TIPS Index	0.22
Wilshire US REIT Index	1.00
HFRI FOF Comp Index	0.46
Bloomberg Cmnty Index (TR)	0.29
ICE BofAML 3 Mo US T-Bill Index	-0.01
Cons Price Index (Unadjusted)	-0.05

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Performance shown is calculated using Net Asset Values (NAV). Parentheses contain percentile ranks. Benchmark consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/2009; MSCI US REIT Index (USD) (Gross) through 02/01/2018; MSCI US IM Real Estate 25/50 Transition Index through 07/24/2018; and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.

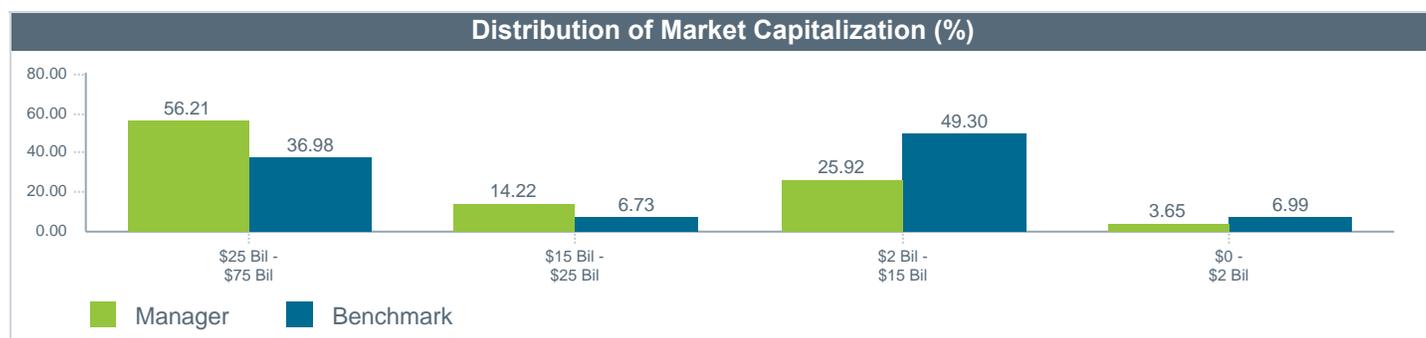


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	20.95	15.97	8.57	-1.36	5.46	N/A	-13.00	-4.80	20.17	-30.26	17.74
Benchmark	18.75	17.50	8.84	-3.86	1.74	11.01	-11.67	-5.58	21.95	-35.07	7.66
Difference	2.20	-1.53	-0.27	2.50	3.72	N/A	-1.33	0.78	-1.78	4.81	10.08



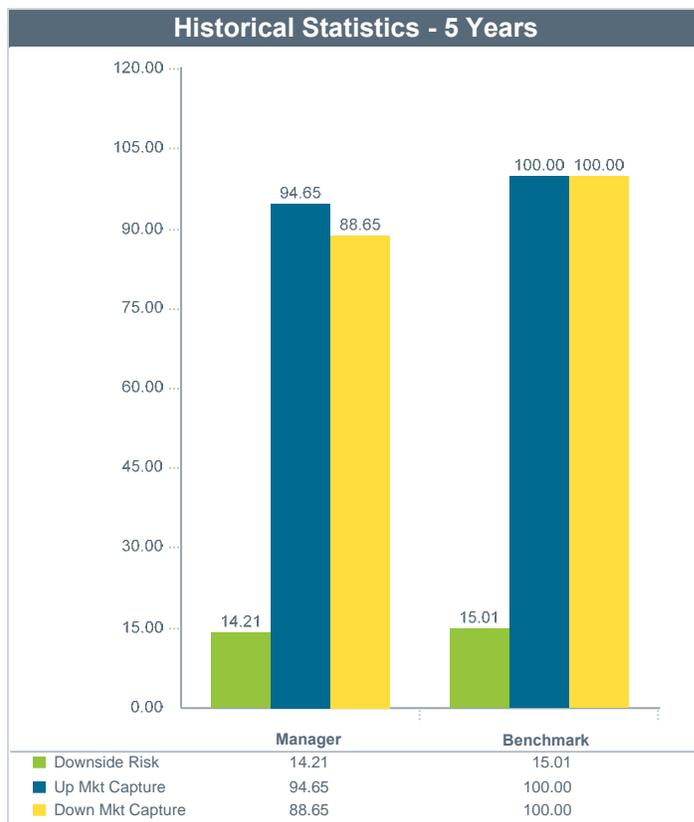
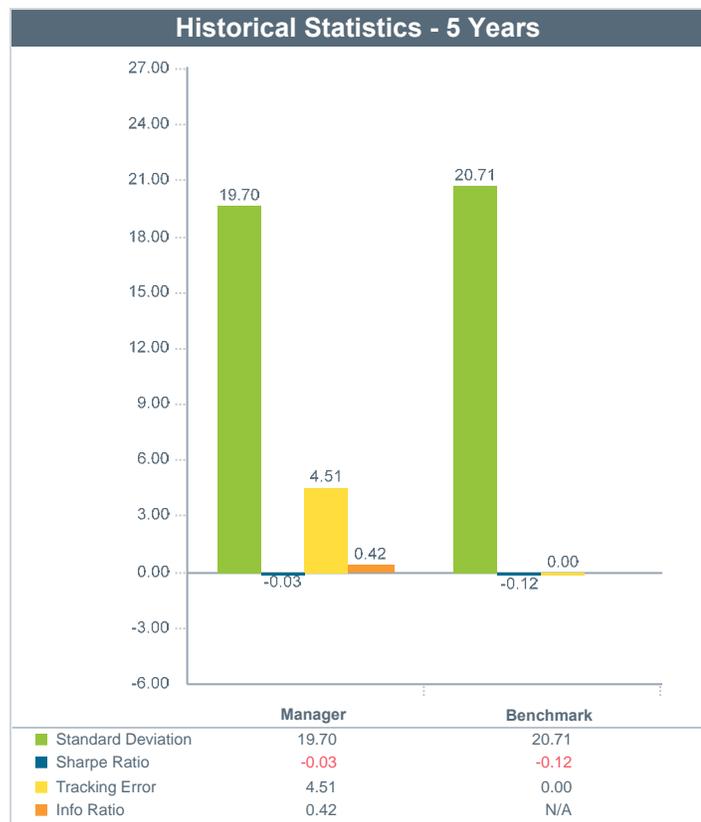
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	30,559	23,146
Median Mkt. Cap (\$M)	7,820	2,850
Price/Earnings Ratio	14.62	13.30
Price/Book Ratio	2.19	2.61
5 Yr. EPS Growth Rate (%)	16.94	20.44
Current Yield (%)	6.64	7.53
Beta (5 Years, Monthly)	0.98	1.00
Number of Securities	30	42



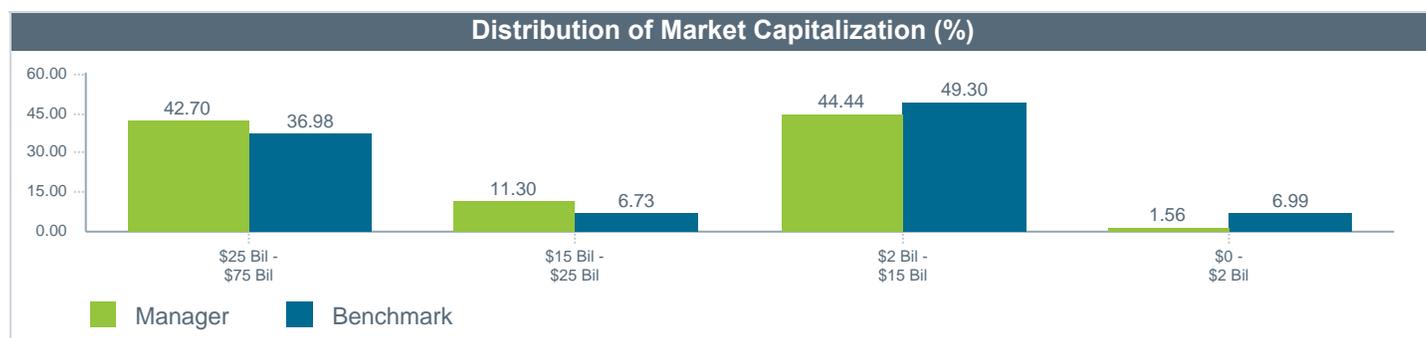
Performance shown is gross of fees and client specific. Calculations are based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	18.36	14.35	7.52	-1.83	5.27	N/A	-12.73	-2.70	15.99	-26.79	16.14
Benchmark	18.75	17.50	8.84	-3.86	1.74	11.01	-11.67	-5.58	21.95	-35.07	7.66
Difference	-0.39	-3.15	-1.32	2.03	3.53	N/A	-1.06	2.88	-5.96	8.28	8.48



Portfolio Characteristics

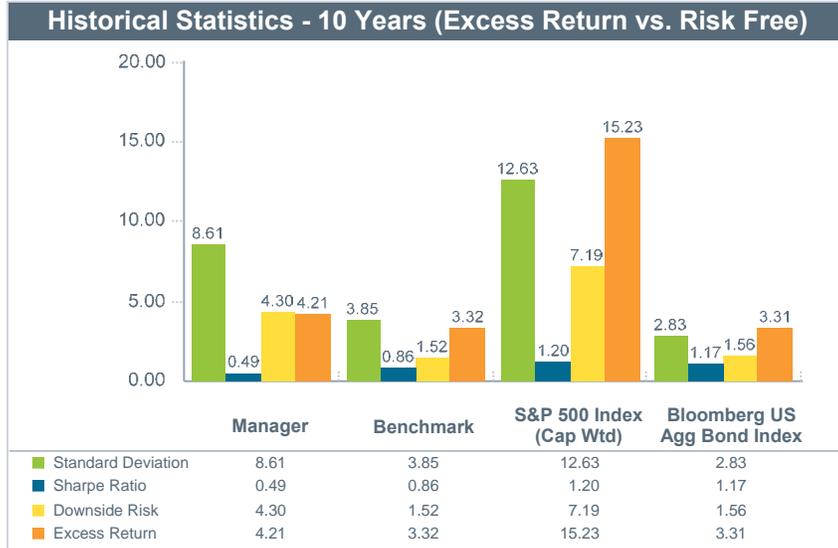
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	23,454	23,146
Median Mkt. Cap (\$M)	9,219	2,850
Price/Earnings Ratio	14.12	13.30
Price/Book Ratio	2.59	2.61
5 Yr. EPS Growth Rate (%)	22.16	20.44
Current Yield (%)	6.86	7.53
Beta (5 Years, Monthly)	0.93	1.00
Number of Securities	22	42



Performance shown is gross of fees and client specific. Calculations are based on monthly periodicity.

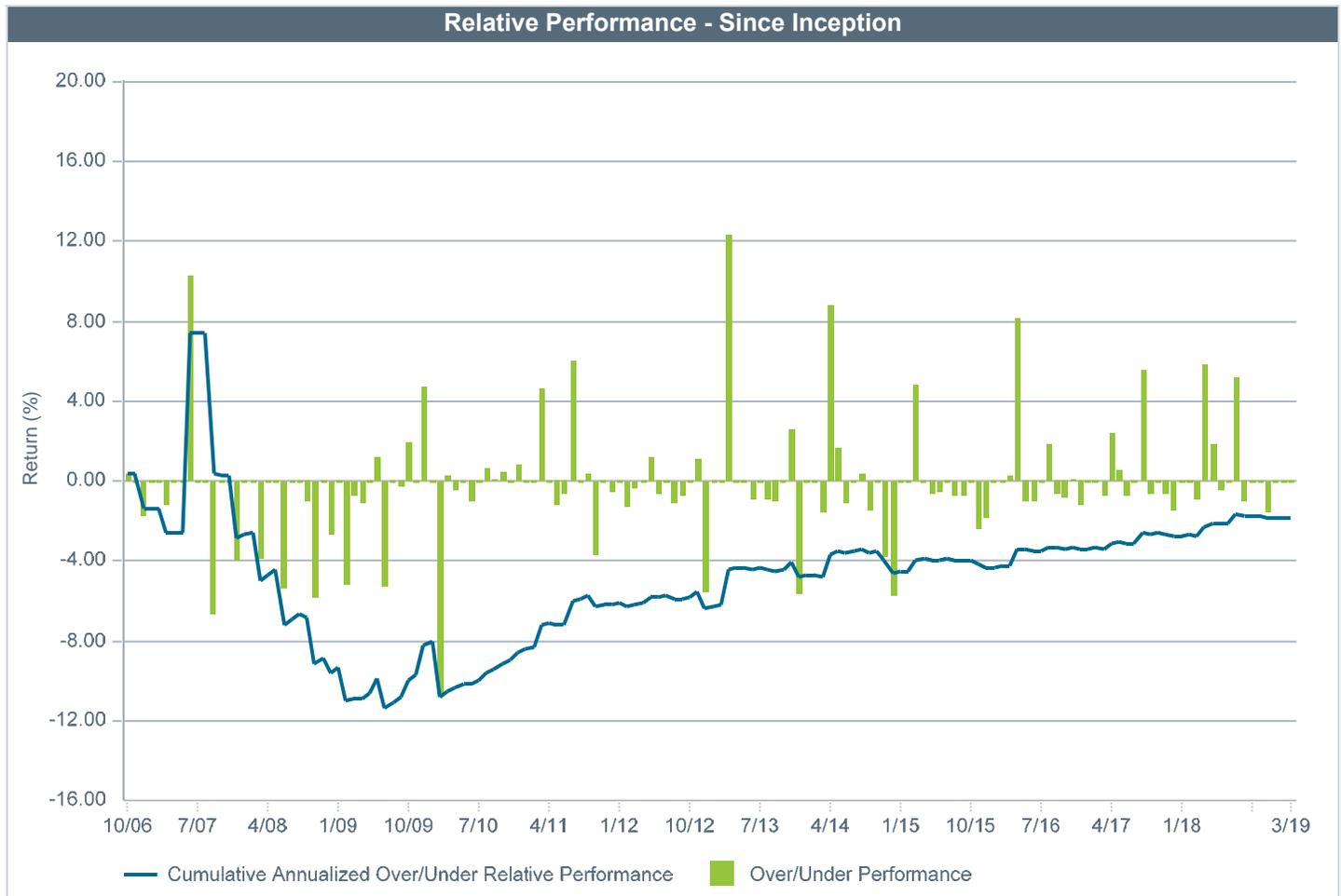


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	0.05	12.52	9.63	7.65	7.85	4.36	12.47	8.08	8.32	2.66	6.87
Benchmark	0.11	2.38	3.27	4.63	5.97	3.74	3.21	3.63	2.59	4.97	10.48
Difference	-0.06	10.14	6.36	3.02	1.88	0.62	9.26	4.45	5.73	-2.31	-3.61



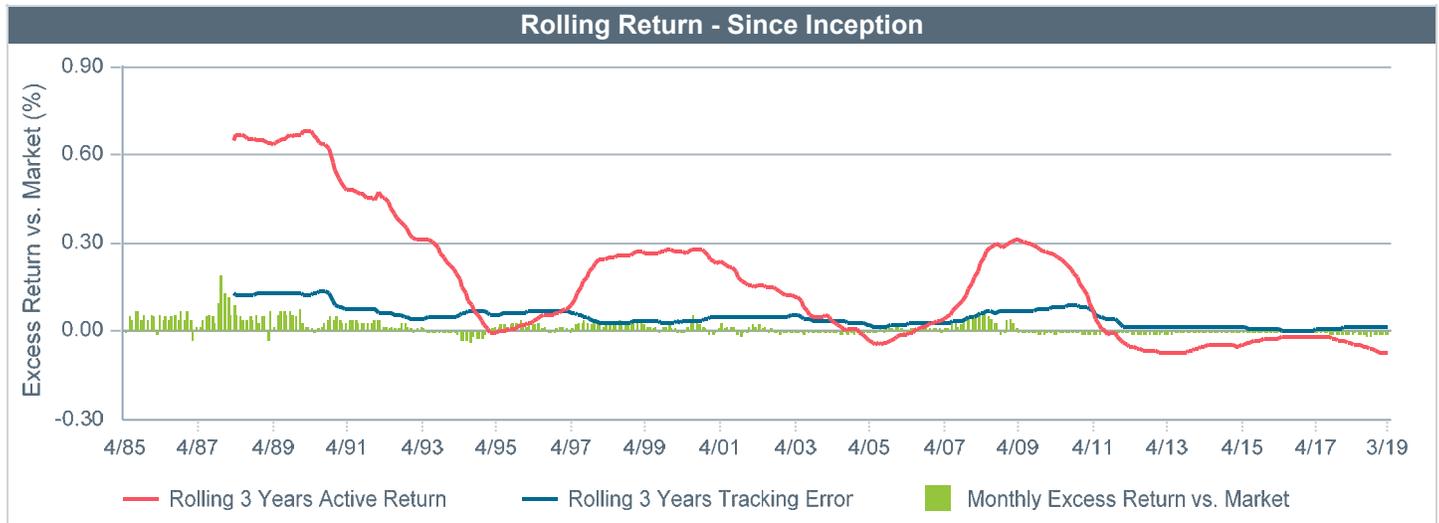
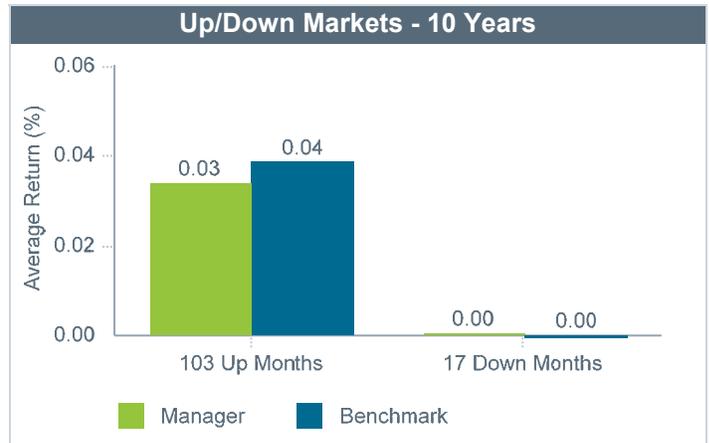
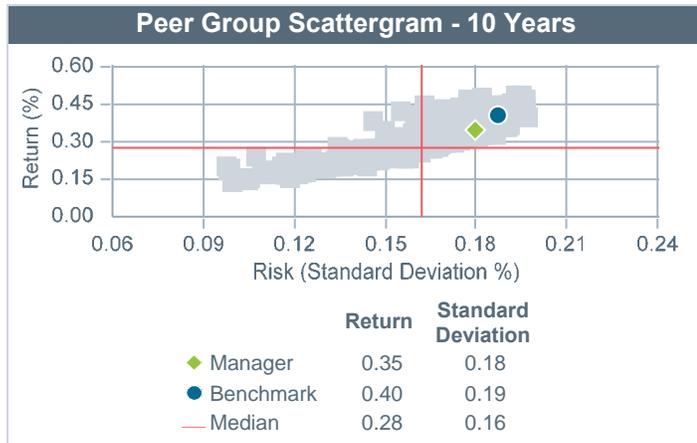
Actual Correlation - 10 Years

	Actual Correlation
NCREIF Timberland Index	0.07
S&P 500 Index (Cap Wtd)	-0.11
Russell 2000 Index	-0.10
MSCI EAFE Index (USD) (Net)	-0.08
MSCI Emg Mkts Index (USD) (Net)	-0.09
Bloomberg US Agg Bond Index	0.02
Bloomberg US Trsy US TIPS Index	0.15
Wilshire US REIT Index	-0.12
HFRI FOF Comp Index	0.00
Bloomberg Cmdb Index (TR)	0.04
ICE BofAML 3 Mo US T-Bill Index	0.08
Cons Price Index (Unadjusted)	0.23



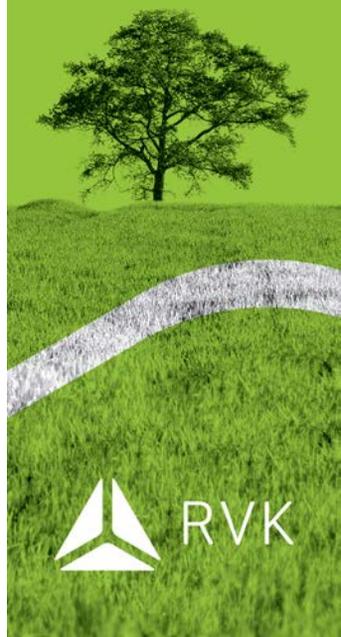
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2018	2017	2016	2015	2014
Manager	0.57	1.99	1.10	0.67	0.48	0.35	1.73	0.79	0.25	0.01	0.01
Benchmark	0.60	2.11	1.17	0.72	0.54	0.40	1.86	0.84	0.27	0.03	0.02
Difference	-0.03	-0.12	-0.07	-0.05	-0.06	-0.05	-0.13	-0.05	-0.02	-0.02	-0.01
Peer Group Median	0.52	1.80	0.88	0.54	0.38	0.28	1.54	0.55	0.06	0.01	0.01
Rank	22	21	18	19	20	22	22	17	18	35	48
Population	829	817	724	647	630	571	815	830	742	696	989



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Addendum & Glossary



City of Jacksonville Employees' Retirement System Addendum

Performance Related Comments:

- Performance is annualized for periods greater than one year.
- The inception date shown indicates the first full month of performance following initial funding.
- The market value shown for the Transition Account includes residual assets from terminated managers.
- RVK began monitoring the assets of the City of Jacksonville Retirement System on 01/01/2019. Prior historical data was provided by the custodian and previous consultant.

Custom Composite Benchmark Comments:

- **Current Total Fund Policy Index:** The passive Current Total Fund Policy Index is calculated monthly and currently consists of 30% Russell 3000 Index, 20% MSCI ACW Ex US Index (USD) (Net), 20% Fixed Income Index, 15% NCREIF ODCE Index (AWA) (Net), and 15% Diversifying Assets Index. The Current Total Fund Policy Index is representative of the target asset allocation approved 10/26/2017. Prior to 11/1/2017, the Current Total Fund Policy Index consists of the Legacy Total Fund Policy Index.
- **Legacy Total Fund Policy Index:** The passive Legacy Total Fund Policy Index is calculated monthly and currently consists of 35% Russell 3000 Index, 20% MSCI ACW Ex US Index (USD) (Net), 19% Fixed Income Index, 15% NCREIF ODCE Index (AWA) (Net), 10% Diversifying Assets Index, and 1% FTSE 3 Mo US T-Bill Index.
- **US Equity Index:** The passive US Equity Index consists of 100% DJ US TSM Index through 06/2009 and 100% Russell 3000 Index thereafter.
- **International Equity Index:** The passive International Equity Index consists of 100% MSCI EAFE Index (USD) (Gross) through 01/2011 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Fixed Income Index:** The passive Fixed Income Index consists of 100% Bloomberg US Agg Bond Index through 10/2017 and 100% Bloomberg US Universal Bond Index thereafter.
- **Diversifying Assets Index:** The passive Diversifying Assets Index is calculated monthly and consists of 50% S&P MLP Index (TR)/50% NCREIF Timberland Index through 10/2017 and 67% S&P MLP Index (TR)/33% NCREIF Timberland Index thereafter.

Custom Manager Benchmark Comments:

- **INTECH Enhanced Index:** The passive INTECH Enhanced Index consists of 100% Russell 1000 Index through 09/2009 and 100% S&P 500 Index (Cap Wtd) thereafter.
- **Baillie Gifford Index:** The passive Baillie Gifford Index consists of 100% MSCI EAFE Grth Index (USD) (Net) through 10/2017 and 100% MSCI ACW Ex US Grth Index (USD) (Net) thereafter.
- **Richmond Capital Index:** The passive Richmond Capital Index consists of 100% ICE BofAML US Domestic Master through 06/2011 and 100% Bbrg Barc US Aggregate Index thereafter.
- **Frank. Temp. Global Multisector Index:** The passive Frank. Temp. Global Multisector Index consists of 100% ICE BofAML Gbl Hi Yld Index through 12/2009 and 100% Bloomberg Multiverse Index thereafter.
- **Custom REITs Index:** The passive Custom REITs Index consists of 100% MSCI US REIT Index (USD) (Gross) through 01/31/2019 and 100% Vanguard Spl Real Estate Index thereafter.
- **Vanguard Spliced Real Estate Index:** The Vanguard Spl Real Estate Index consists of MSCI US REIT Index (USD) (Gross) adjusted to include a 2% cash position (Lipper Money Market Average) through 04/30/2009, MSCI US REIT Index (USD) (Gross) through 01/31/2018, MSCI US IM Real Estate 25/50 Transition Index through 07/24/2018, and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.

Glossary

Active Return - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

Active Share - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

Alpha Ratio - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

Average Quality - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers) such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. *Standard & Poor's (S&P)* employs a system that uses + and - along with letters such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&P</u>	<u>Moody's</u>	<u>Explanation</u>	<u>S&P</u>	<u>Moody's</u>	<u>Explanation</u>
Higher Credit Quality – Investment Grade			Lower Credit Quality – Below Investment Grade		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

Benchmark Effect - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

Box Plots - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1st quartile, 2nd quartile, 3rd quartile, and 4th quartile). The median observation is where the 2nd quartile and 3rd quartile meet.

Buy and Hold Attribution - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

Sector - Attribution is calculated using the Global Industry Classification Standard (GICS) which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector, as defined by S&P Capital IQ data.

Country/Region - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data.

Style - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

Capital Markets Review -

Breakeven Inflation - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.

Consumer Confidence - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

Consumer Price Index (CPI) - Measures the change in the price level of consumer goods and services.

Federal Funds Rate - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

Option-Adjusted Spread - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

Glossary

Purchasing Managers Index (PMI) - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.

Real Gross Domestic Product (Real GDP) - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.

US Dollar Total Weighted Index - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

Unemployment Rate - The percentage of the total labor force that is unemployed but actively seeking employment.

VIX - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

Cash Flow Effect – The composite's active return minus the sum of each managers' active return minus the benchmark effect.

Consistency - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Convexity - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

Correlation - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

Coupon Rate - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

Current Yield - The annual income of a security divided by the security's current price.

Down Market Capture - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

Downside Risk - A measure similar to standard deviation, but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative monthly returns. The higher the factor, the riskier the product.

Earnings Per Share - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

Effective Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield.

Excess Return vs. Market - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

Excess Return vs. Risk Free - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

Excess Risk - A measure of the standard deviation of a portfolio's performance relative to the risk free return.

Expense Ratios - Morningstar is the source for mutual fund expense ratios.

Gain/Loss - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

Indices - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability and/or completeness.

Information Ratio - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

Liability Driven Investing (LDI) - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

Estimated Funded Status - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

Estimated PV of Liabilities - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.

Duration of Liabilities - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.

Duration of Assets - The dollar-weighted average duration of all the individual Plan assets.

Estimated Plan Hedge Ratio - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

Modified Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

Glossary

Mutual Fund Performance - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

Net Cash Flow - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

Peer Groups -

Plan Sponsor Peer Groups - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

Investment Manager Peer Groups - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees. For more information on Peer Groups, visit <https://www.invmetrics.com/style-peer-groups>.

Percentile Rankings - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value

100 - Lowest Statistical Value

Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4th percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.

Performance Methodology - RVK calculates performance for investment managers and composites using different methodologies.

Investment Managers - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of $\geq 10\%$ of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

Composites - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

Portfolio Characteristics - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

Price to Earnings Ratio - The ratio of a company's share price to its per-share earnings

Private Equity Quartile Ranks - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

Return - Compounded rate of return for the period.

% Return - The time-weighted rate of return of a portfolio for a given period.

R-Squared - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

Risk Free Benchmark - ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.

Glossary

RVK Liquidity Rating - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

<u>Asset Class</u>	<u>RVK Liquidity Rating</u>	<u>Asset Class</u>	<u>RVK Liquidity Rating</u>
<u>Liquid Investments</u>		<u>Less Liquid Investments</u>	
T-Bills and Treasuries	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Bank Loans	50
TIPS	95	Stable Value (Plan Sponsor Directed)	50
US Large Cap Equity	95	Absolute Return Strategies	35
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Non-US Large Cap Equity	90	<u>Not Liquid Investments</u>	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITS	85	Non-Core Real Estate	5
Non-US Small Cap Equity	85	Private Equity Funds of Funds	5
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

Sector Allocation - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Simple Alpha - The difference between the manager's return and the benchmark's return.

Spread Duration - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

Time Period Abbreviations - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

Thematic Classification - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

<u>Alpha</u>	<u>Capital Appreciation</u>	<u>Capital Preservation</u>	<u>Inflation</u>
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITS
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

Total Fund Attribution – The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

Strategic Asset Allocation (SAA) – The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

Tactical Asset Allocation (TAA) – The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

Style Selection (SS) – The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

Manager's Skill (MS) – The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

Total Fund Beta - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

Tracking Error - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

Glossary

Treynor Ratio - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

Up Market Capture - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

Yield to Maturity - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

Yield to Worst - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.

PORTLAND

CHICAGO

NEW YORK

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