



Quarterly Investment Performance Analysis

City of Jacksonville Employees' Retirement System

Period Ended: December 31, 2020



Table of Contents

1	Capital Markets Review	Page 3
2	Total Fund	Page 10
3	Composite Profiles	Page 31
4	Investment Manager Profiles	Page 44
5	Addendum & Glossary	Page 70

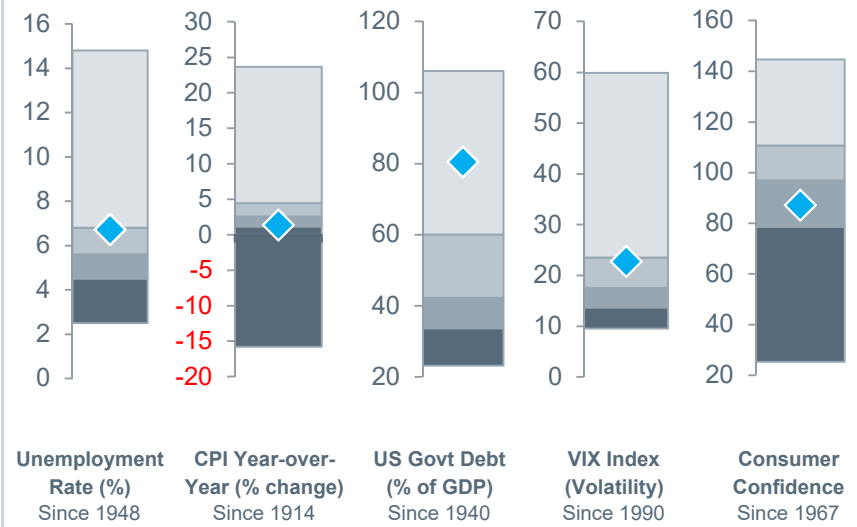
Capital Markets Review



Fourth Quarter Economic Environment

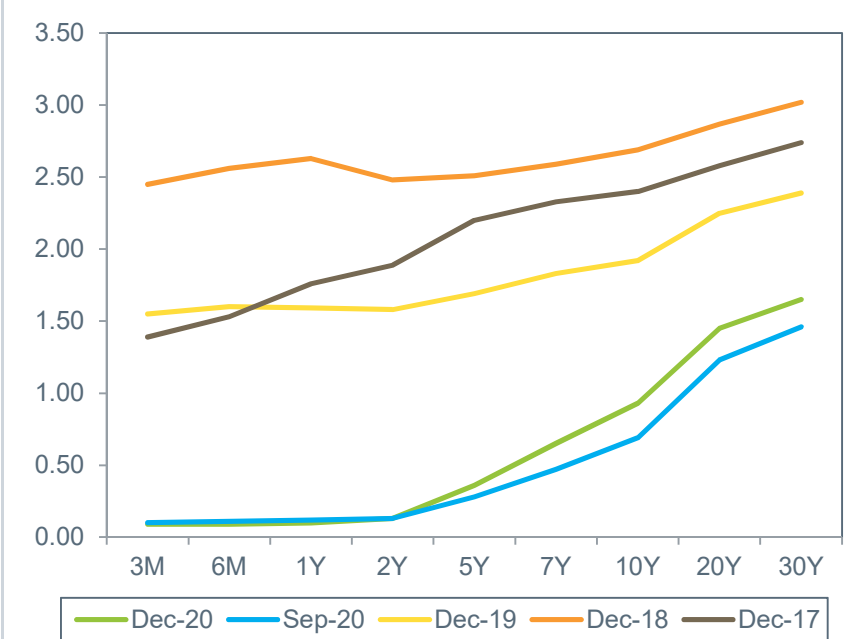
In Q4, multiple fundamental developments reinforced market sentiment and kept many investors positioned to add incremental risk despite the relatively weak economic environment and worsening global pandemic. Importantly, two closely watched coronavirus vaccine trials from Pfizer/BioNTech and Moderna released promising efficacy results leading to emergency use authorizations from the FDA, allowing market participants to pull forward expectations for normalized economic activity for much of the developed world in 2021. Investors also reacted favorably to completed negotiations around new fiscal stimulus following the November US elections, which culminated in a \$900B package being signed into law under a larger omnibus spending bill. The package included new supplemental unemployment benefits of \$300 per week for the 6.7% of unemployed Americans, as well as another one-time round of stimulus checks in the amount of \$600 for most individuals. The Fed reiterated its commitment to maintain monthly asset purchases, currently at \$120B, and zero interest rates until the economy makes significant progress toward its goal of full employment. Given the backdrop of supportive monetary and fiscal policies, risk assets posted another quarter of stellar returns. Though financial markets have rebounded from the sharp drawdown in early 2020, global economic activity remains well off its pre-pandemic peak.

Key Economic Indicators



Economic Indicators	Dec-20	Sep-20	Dec-19	Dec-17	20 Yr
Federal Funds Rate (%)	0.09	0.09	1.55	1.33	1.49
Breakeven Infl. - 5 Yr (%)	1.97 ▲	1.49	1.70	1.88	1.82
Breakeven Infl. - 10 Yr (%)	1.99 ▲	1.63	1.79	1.98	2.01
CPI YoY (Headline) (%)	1.4	1.4	2.3	2.1	2.1
Unemployment Rate (%)	6.7 ▼	7.8	3.6	4.1	6.1
Real GDP YoY (%)	-2.5 ▲	-2.8	2.3	2.7	1.7
PMI - Manufacturing	60.5 ▲	55.7	47.7	59.2	52.6
USD Total Wtd Idx	111.65 ▼	117.35	114.72	110.07	103.24
WTI Crude Oil per Barrel (\$)	48.5 ▲	40.2	61.1	60.4	62.4
Gold Spot per Oz (\$)	1,898 ▲	1,886	1,517	1,303	1,009

Treasury Yield Curve (%)



Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	12.15	18.40	18.40	15.22	13.88
Russell 2000	31.37	19.96	19.96	13.26	11.20
MSCI EAFE (Net)	16.05	7.82	7.82	7.45	5.51
MSCI EAFE SC (Net)	17.27	12.34	12.34	9.40	7.85
MSCI Emg Mkts (Net)	19.70	18.31	18.31	12.81	3.63
Bloomberg US Agg Bond	0.67	7.51	7.51	4.44	3.84
ICE BofAML 3 Mo US T-Bill	0.03	0.67	0.67	1.20	0.63
NCREIF ODCE (Gross)	1.30	1.19	1.19	6.21	9.88
FTSE NAREIT Eq REIT (TR)	11.57	-8.00	-8.00	4.77	8.31
HFRI FOF Comp	8.05	10.82	10.82	4.55	3.32
Bloomberg Cmnty (TR)	10.19	-3.12	-3.12	1.03	-6.50

Fourth Quarter Review

Broad Market

US equity markets finished strong in Q4 following a period of heightened volatility earlier in the quarter. Negotiations around another US fiscal stimulus package stalled in October and spikes in coronavirus infections contributed to the S&P 500 Index returning -2.7% for the month. In the latter half of the quarter, optimism around vaccine authorization, the announcement of additional stimulus in December, and the prospect of further fiscal support drove positive investor sentiment.

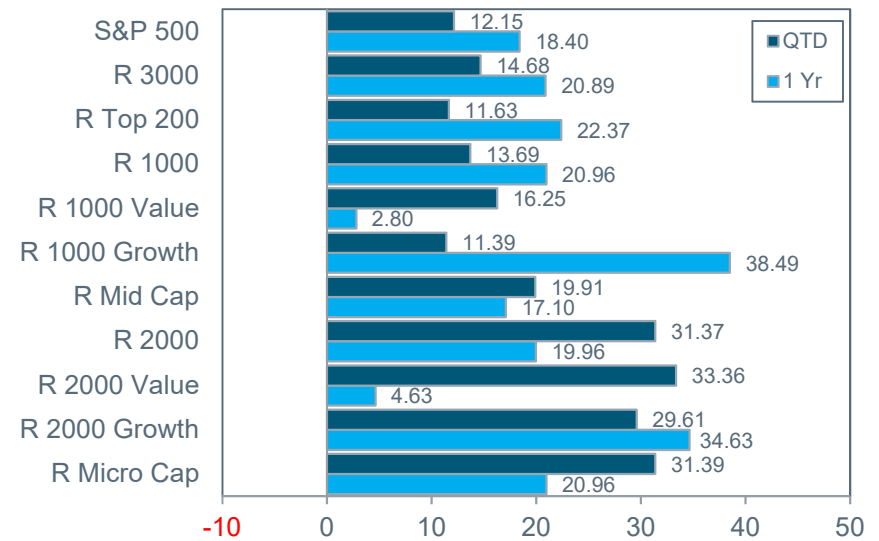
Market Cap

Additionally, small-cap stocks fared best in Q4, a reversal of what was seen in Q3. The prospect of lockdowns easing in 2021 also contributed to strong performance for small-cap stocks, with the Russell 2000 Index up 31.4% relative to the S&P 500 Index returning 12.1%.

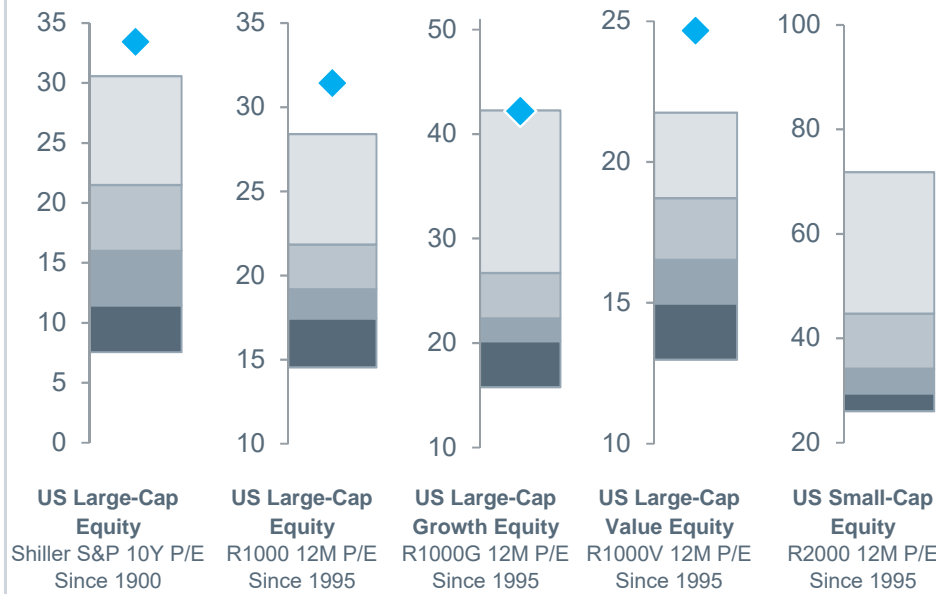
Style and Sector

This quarter marked the end of a consistent string of growth-led quarters, with value stocks outperforming their growth counterparts.

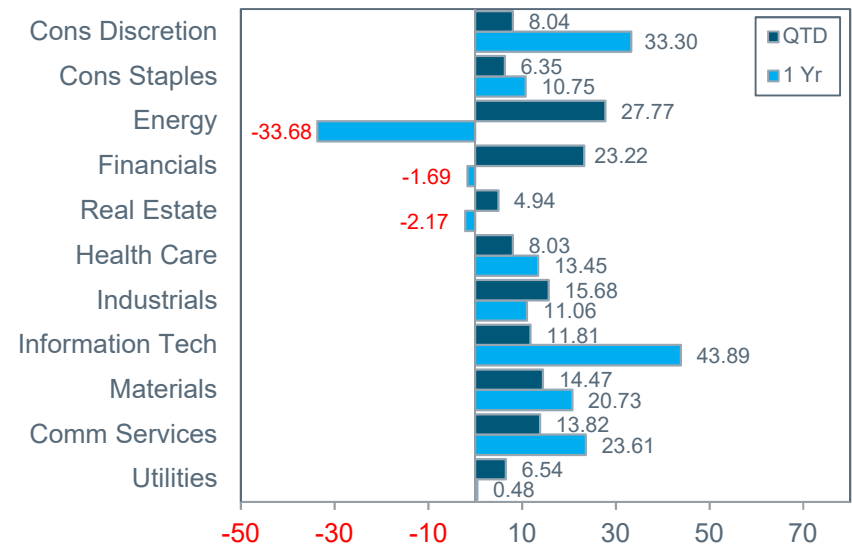
Style and Capitalization Market Performance (%)



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. Current R2000 P/E is unavailable due to negative earnings per share as of 12/31/2020.



Fourth Quarter Review

Developed Markets

Developed international markets had another strong quarter of returns. Value stocks outperformed growth, while small stocks beat their larger counterparts. Nearly all developed market countries saw double digit positive returns for the quarter. Active management saw split results during the quarter, with a majority of small-cap developed international equity managers beating their benchmarks while the majority of large-cap managers underperformed.

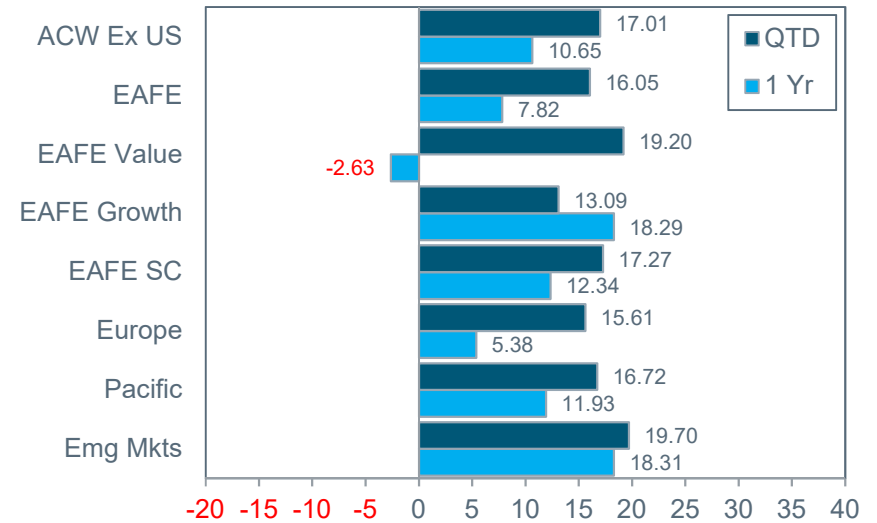
Emerging Markets

Emerging markets outpaced developed during the quarter continuing the trend for the third quarter in a row. Emerging market value stocks outperformed growth, while small stocks continued their outperformance of large since Q2. All sectors posted positive performance for the quarter led by technology, but more value-oriented sectors were not far behind.

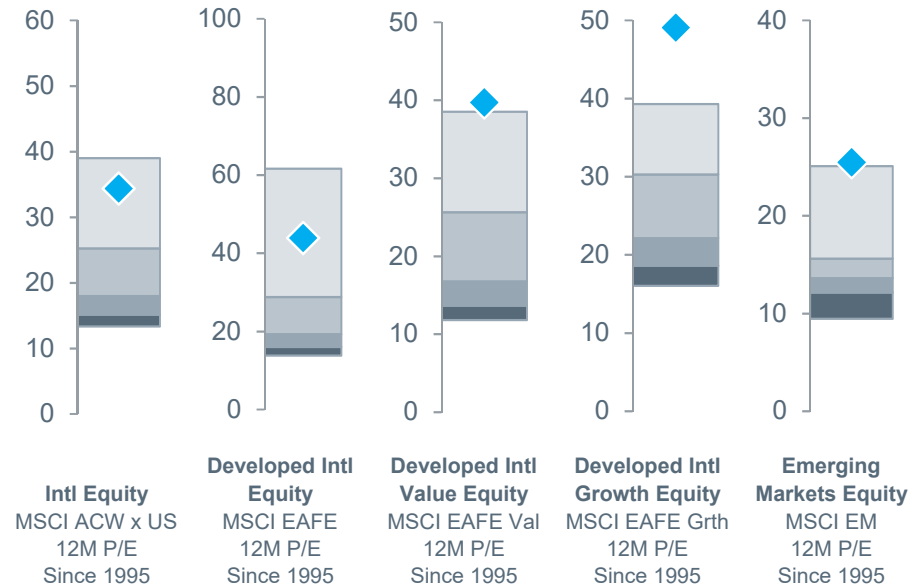
Market Cap & Style

In both developed international markets and emerging markets, value stocks outperformed growth, while small-cap stocks outperformed large-cap.

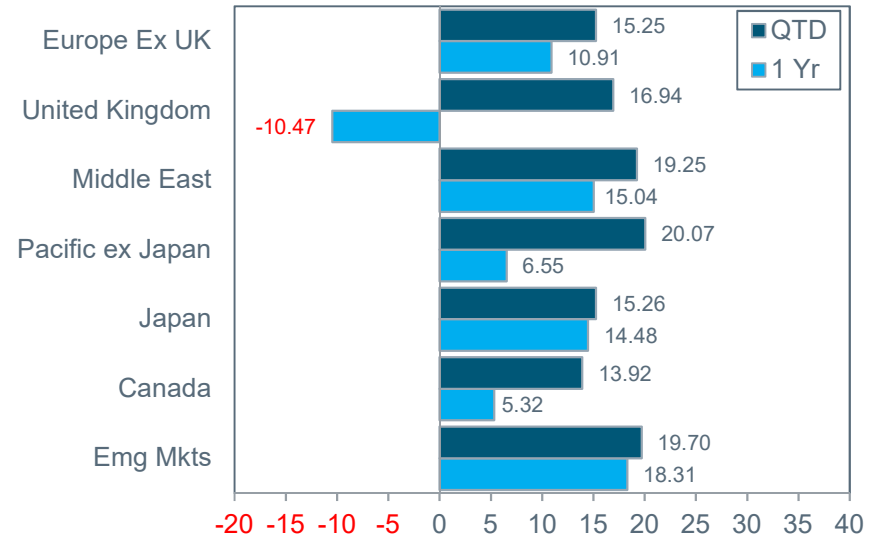
MSCI Style and Capitalization Market Performance (%)



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.

Fourth Quarter Review

Broad Market

The Bloomberg US Aggregate Index returned a modest 0.7% in Q4, capping off a 7.5% YTD return and an overall strong year for US fixed income, supported by record fiscal and monetary stimulus. In Q4, the Treasury yield curve steepened as front end rates remained anchored near zero, a sign of the Federal Reserve’s continued support, while yields for intermediate- and long-dated maturities increased over Q4.

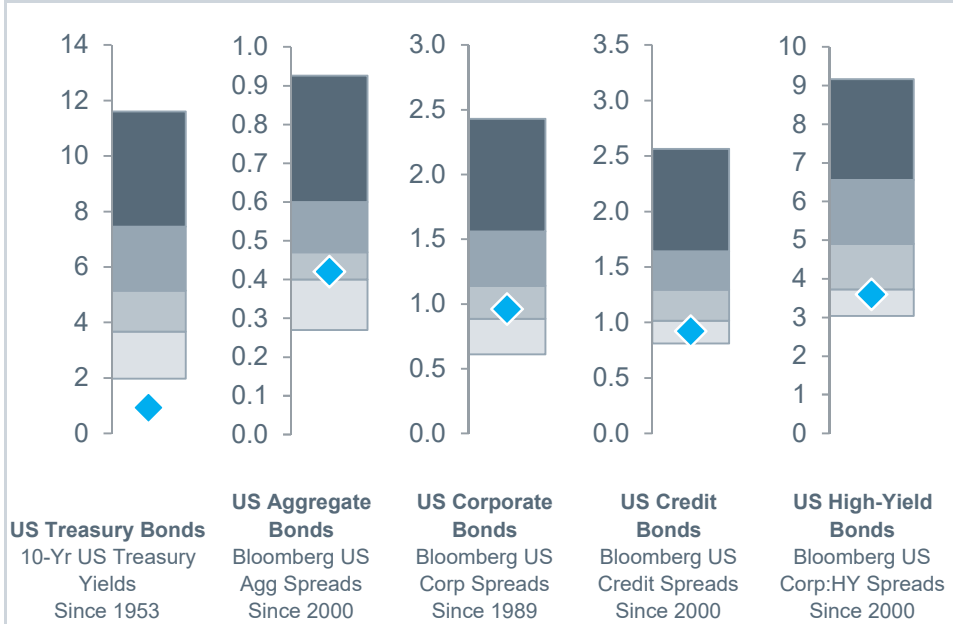
Credit Market

The Bloomberg US Credit Index returned 2.8% for Q4 2020, outperforming the broader fixed income market. Despite record-setting new issuance, credit spreads continued to tighten, compressing to 92 bps.

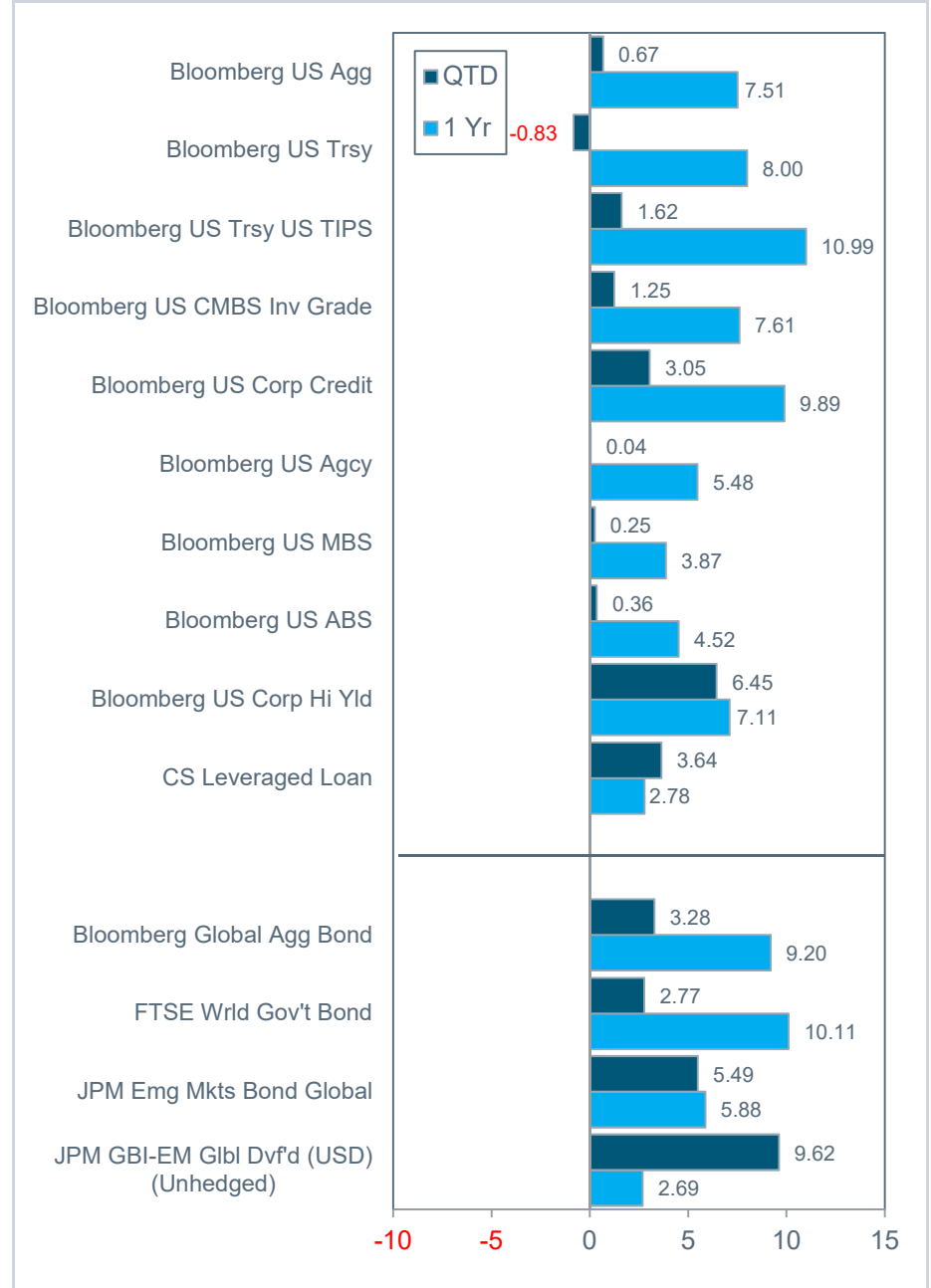
Emerging Market Debt

Emerging market debt also ended the year on a high note, with the JPM EMBI Global Diversified Index returning 5.8% for the quarter. However, the hard currency index was overshadowed by its local currency counterpart.

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.



Fourth Quarter Review - Absolute Return

General Market - Hedge Funds

The hedge fund industry posted double digit gains in back to back years for the first time since 2009-2010 as the HFRI Fund Weighted Composite Index returned 10.7% in Q4, bringing YTD returns to 11.6%. Equity Long/Short (“ELS”) managers led the way, reporting a Q4 return of 14.5% and a full-year return of 17.5% in one of the best alpha-generating years for fundamental equity managers in recent memory.

General Market - Global Tactical Asset Allocation (GTAA)

Performance across GTAA strategies RVK follows closely generated positive absolute returns during the quarter ranging from mid-single digits to low double-digits. Long-biased strategies reported mixed performance versus a static and less diversified blend of 60% US equity and 40% US fixed income. Broadly speaking, strategies that have kept higher levels of risk and equity exposure have tended to outperform peers that opted to keep equity allocations relatively muted.

Fourth Quarter Review - Real Assets

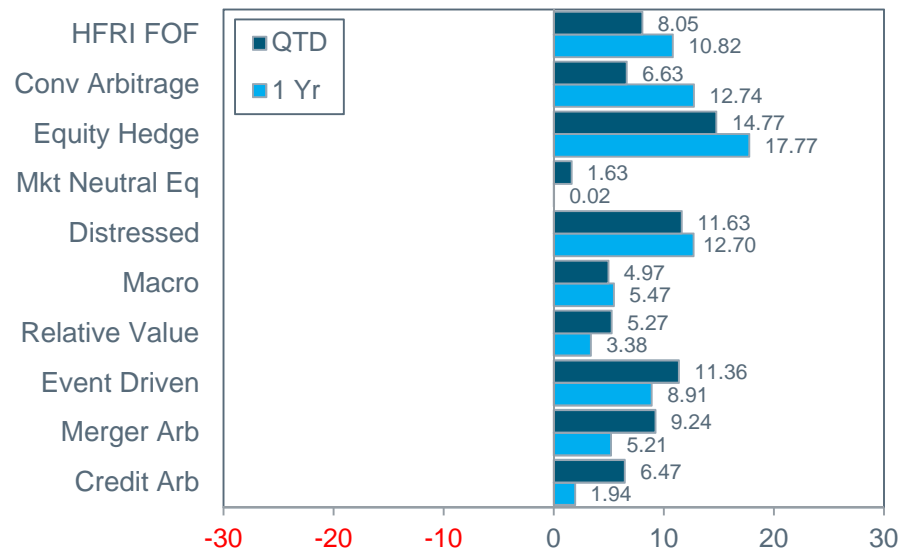
General Market - Diversified Inflation Strategies (DIS)

Performance for DIS managers that RVK follows closely largely generated positive absolute performance during Q4, while producing mix results for the full year. For the quarter, most traditionally inflation-sensitive asset classes were drivers of positive returns. In Q4, strategies with relatively larger allocations to segments with higher historical volatility, such as REITs, listed infrastructure and global natural resources, generated stronger relative returns versus peers.

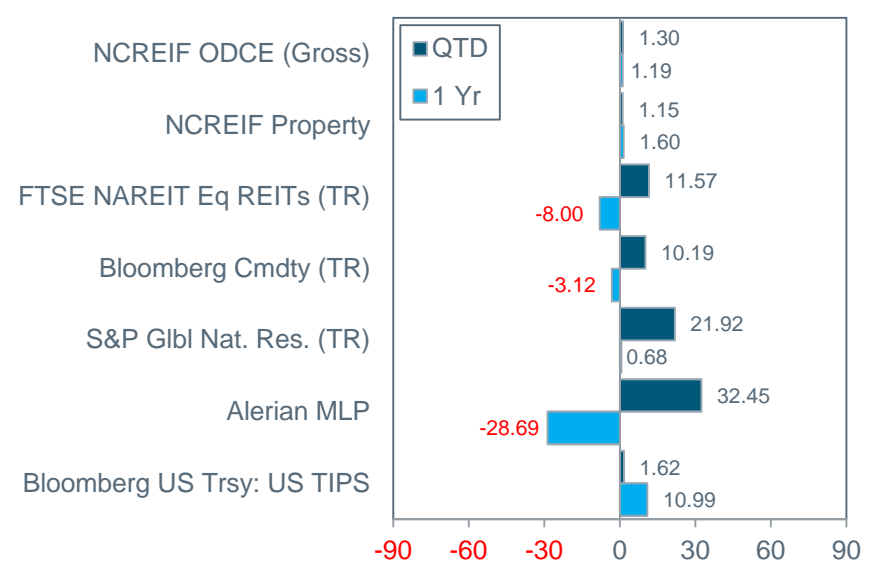
General Market - Real Estate

Core private real estate returned 1.3% in Q4, as reported by the NFI-ODCE Index, with the total return comprised of 0.9% income and 0.4% price appreciation. While the income component remained relatively healthy and in-line with historical levels, price appreciation rebounded meaningfully from a negative return in Q3. Investors in publicly traded real estate outperformed their private market counterparts by a meaningful margin.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Annual Asset Class Performance

As of December 31, 2020

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	CYTD
Best	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	31.49	19.96
	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	26.00	18.40
	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	25.53	18.31
	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	24.96	16.12
	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	22.01	12.34
	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	19.59	10.99
	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	18.44	10.82
	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	14.32	7.82
	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	8.72	7.51
	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	8.43	7.11
	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	8.39	1.19
	2.72	1.45	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	0.67
	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	5.34	-3.12
Worst	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	2.28	-8.00
	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 December 31, 2020

	Allocation		Performance (%)		Allocation		Performance (%)
	Market Value (\$)	%	QTD		Market Value (\$)	%	QTD
US Equity	893,682,789	36.19	18.28	Real Estate	385,681,697	15.62	0.05
Eagle Capital Large Cap Value (SA)	222,345,369	9.00	20.11	Harrison Street Core Property, LP	108,705,962	4.40	0.00
Mellon Large Cap Core Index (CF)	252,679,981	10.23	13.60	PGIM Real Estate PRISA II LP (CF)	56,860,023	2.30	0.00
Loomis Sayles Large Cap Growth (CF)	177,490,489	7.19	8.71	Principal US Property (CF)	124,527,914	5.04	1.71
William Blair Small Cap Value (SA)	97,483,746	3.95	27.40	UBS Trumbull Property (CF)	94,491,298	3.83	-2.08
Pinnacle Associates US SMID Cap Growth (SA)	143,683,204	5.82	33.02	Vanguard RE Idx;ETF (VNQ)	1,096,500	0.04	9.26
International Equity	604,307,267	24.47	18.13	Diversifying Assets	103,379,365	4.19	13.07
Silchester International Value (CF)	235,639,777	9.54	15.20	Harvest Fund Advisors MLP (SA)	35,499,058	1.44	22.66
Baillie Gifford International Growth (BGEFX)	237,779,776	9.63	20.86	Tortoise Capital Advisors MLP (SA)	31,483,650	1.27	21.75
Acadian Emerging Markets (CF)	130,887,713	5.30	18.63	Hancock Timberland (SA)	29,851,265	1.21	3.84
Fixed Income	476,686,711	19.30	1.56	Adams Street, LP	6,545,392	0.27	N/A
Richmond Capital Core (SA)	150,001,227	6.07	0.65	Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,781,206	0.23	0.00
BMO Intermediate Fixed Income (SA)	146,680,414	5.94	0.96	Transition Account	43	0.00	N/A
Franklin Templeton Global Multisector Plus (CF)	98,623,792	3.99	1.75				
Loomis Sayles Multisector Full Discretion (CF)	81,381,278	3.30	4.15				

Schedule of Investable Assets (Total Assets)

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return	Unit Value
CYTD	2,342,377,799	-122,188,266	249,329,545	2,469,519,078	11.18	111.18

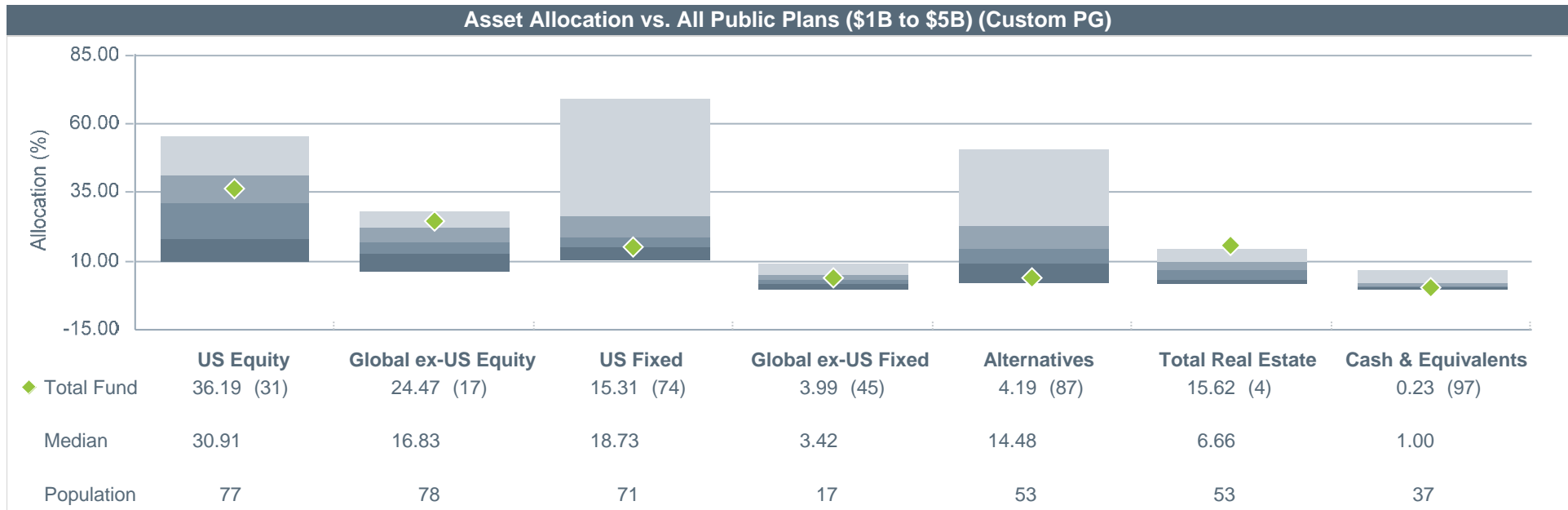
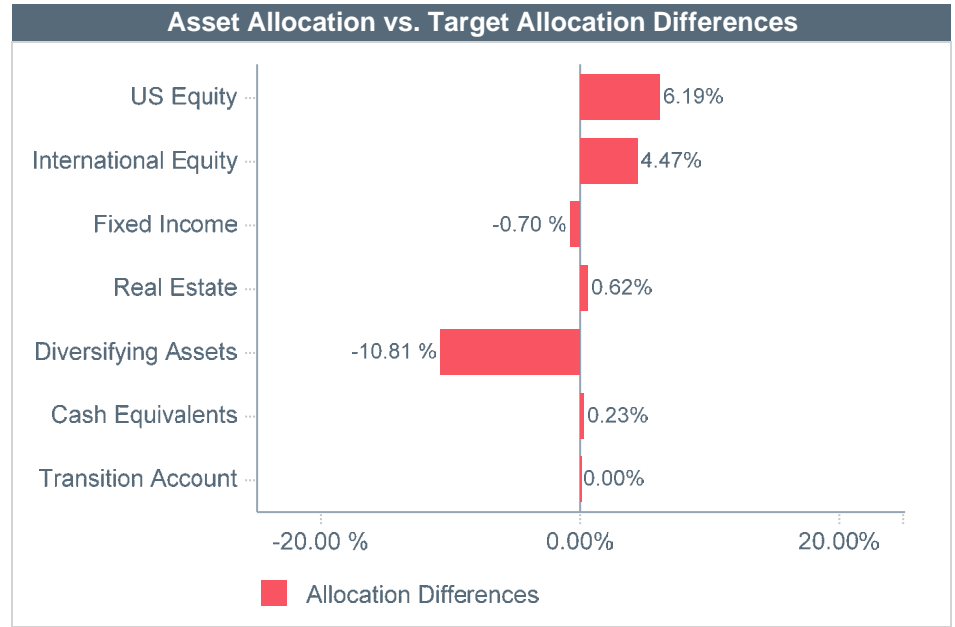
Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding. Adams Street initiated its first capital call in 10/2020.



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 December 31, 2020

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
Total Fund	2,469,519,078	100.00	-	100.00	-
US Equity	893,682,789	36.19	20.00	30.00	40.00
International Equity	604,307,267	24.47	10.00	20.00	25.00
Fixed Income	476,686,711	19.30	10.00	20.00	30.00
Real Estate	385,681,697	15.62	0.00	15.00	20.00
Diversifying Assets	103,379,365	4.19	0.00	15.00	20.00
Cash Equivalents	5,781,206	0.23	0.00	0.00	10.00
Transition Account	43	0.00	0.00	0.00	0.00

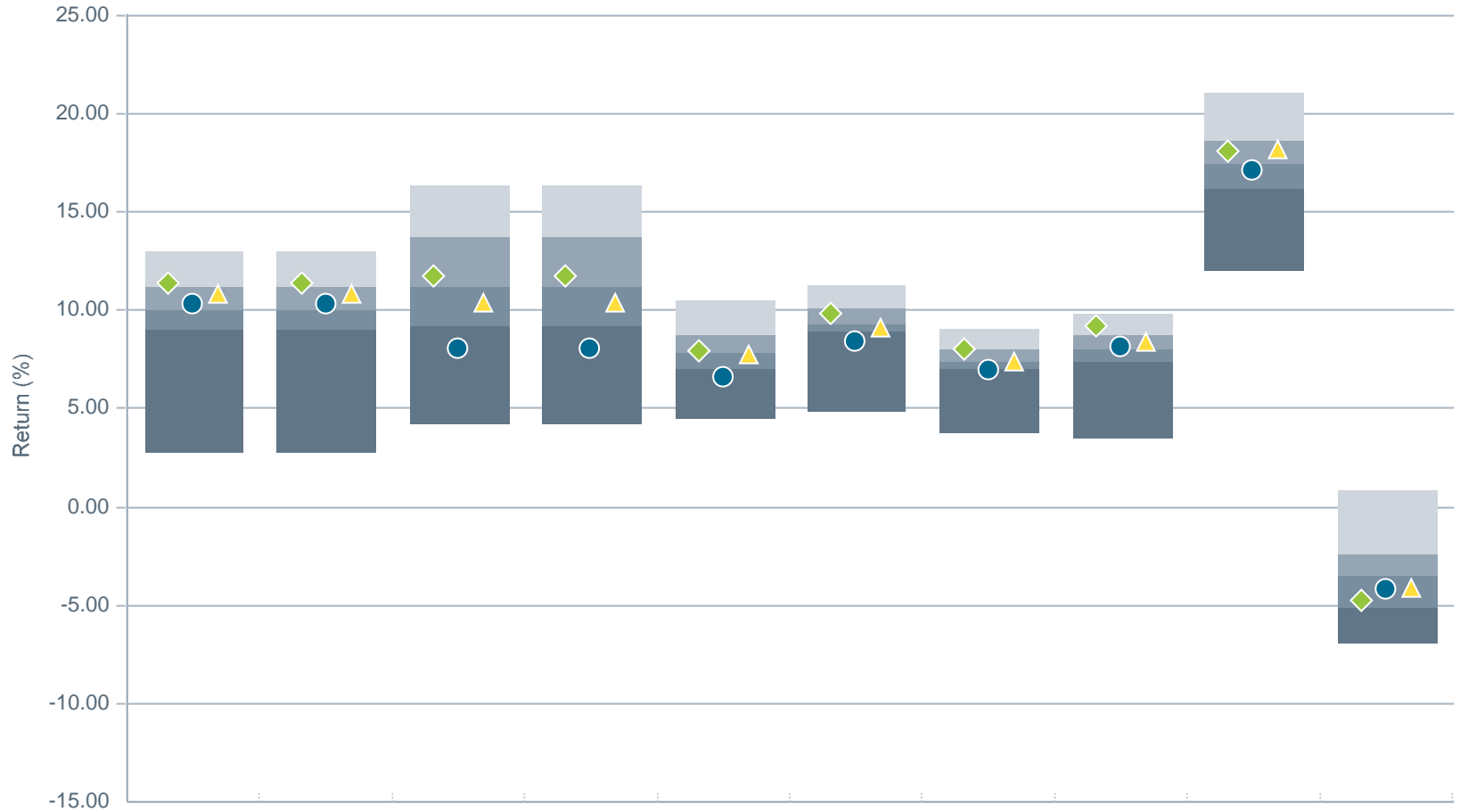


Allocations shown may not sum up to 100% exactly due to rounding. Parentheses contain percentile ranks.



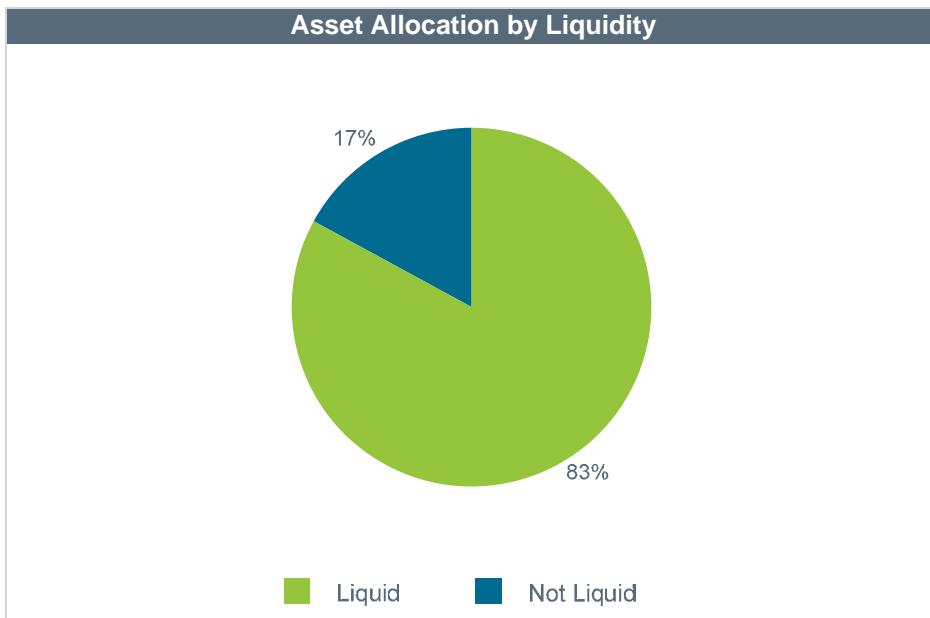
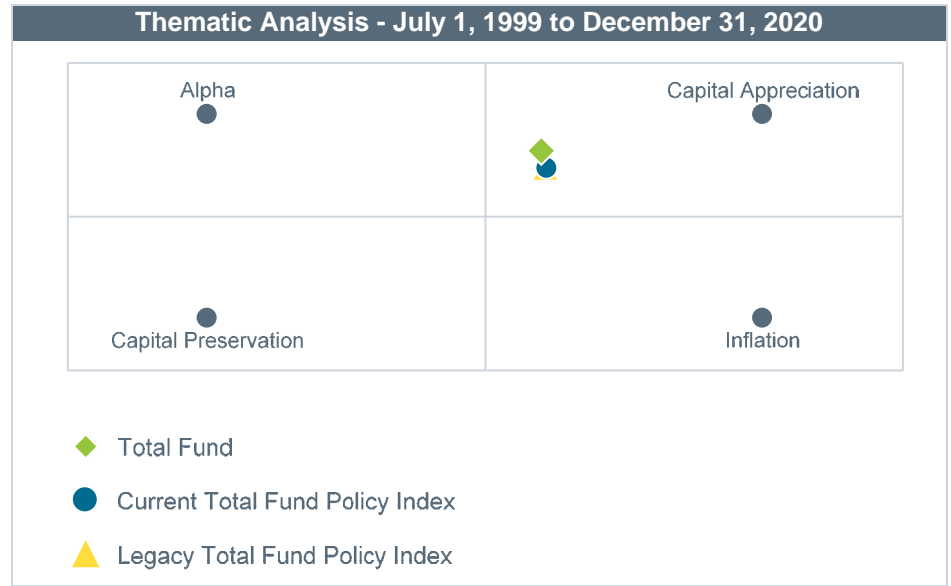
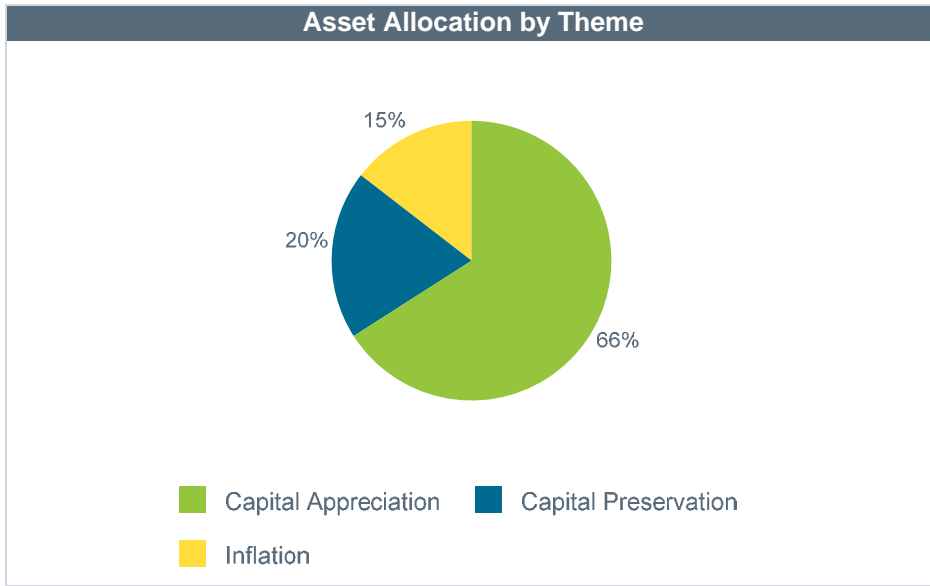
City of Jacksonville Employees' Retirement System
 Total Fund vs. All Public Plans (\$1B to \$5B) (Custom PG)
 Plan Sponsor Peer Group Analysis

As of December 31, 2020



	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018
◆ Total Fund	11.39 (19)	11.39 (19)	11.73 (43)	11.73 (43)	7.94 (49)	9.82 (32)	7.99 (31)	9.26 (12)	18.13 (33)	-4.72 (71)
● Current Total Fund Policy Index	10.27 (46)	10.27 (46)	8.02 (89)	8.02 (89)	6.59 (82)	8.40 (87)	6.95 (78)	8.09 (50)	17.07 (57)	-4.24 (68)
▲ Legacy Total Fund Policy Index	10.86 (31)	10.86 (31)	10.39 (61)	10.39 (61)	7.72 (53)	9.11 (62)	7.45 (47)	8.44 (37)	18.15 (33)	-4.16 (67)
5th Percentile	13.01	13.01	16.36	16.36	10.46	11.26	9.05	9.82	21.07	0.91
1st Quartile	11.22	11.22	13.76	13.76	8.80	10.14	8.08	8.78	18.62	-2.37
Median	10.06	10.06	11.18	11.18	7.89	9.30	7.38	8.06	17.43	-3.49
3rd Quartile	9.03	9.03	9.22	9.22	7.08	8.94	7.06	7.41	16.21	-5.08
95th Percentile	2.81	2.81	4.21	4.21	4.53	4.87	3.79	3.52	12.00	-6.91

Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



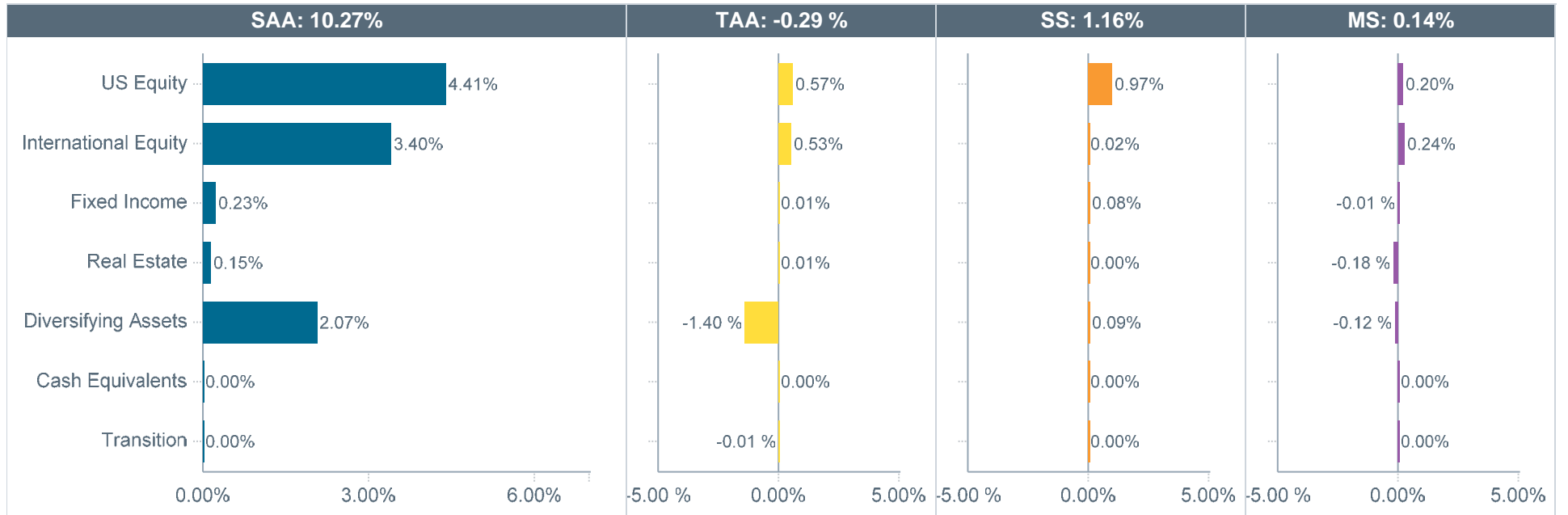
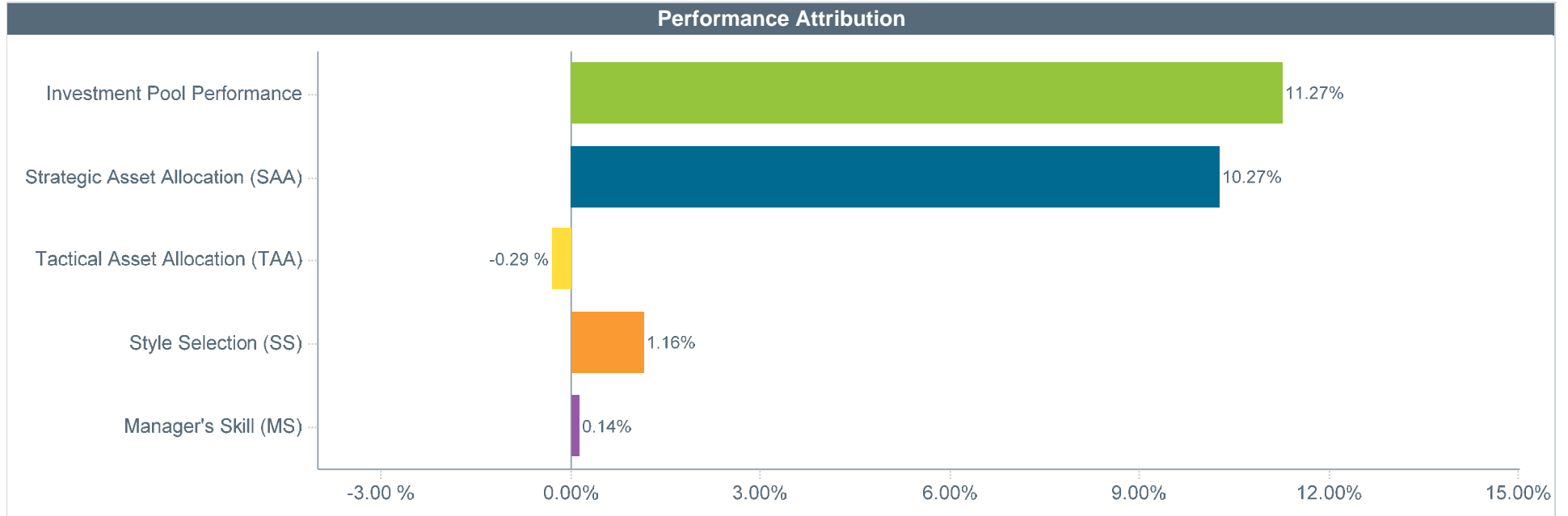
Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.71	1.00		
C	-0.26	-0.39	1.00	
D	0.61	0.79	-0.10	1.00

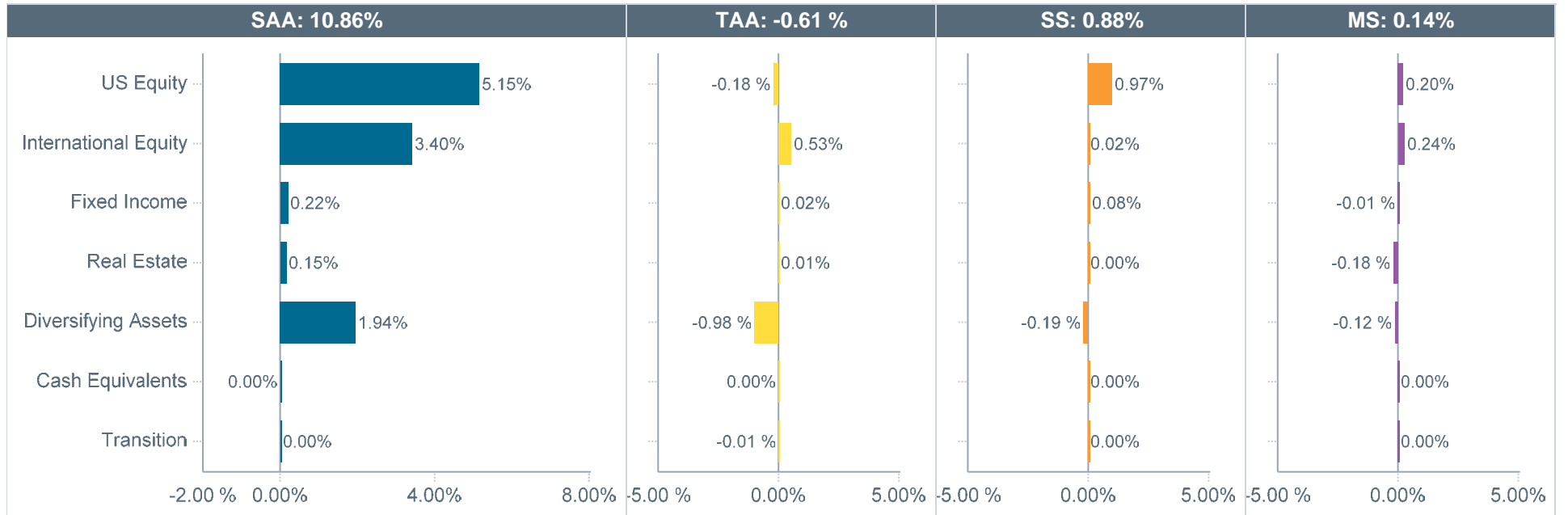
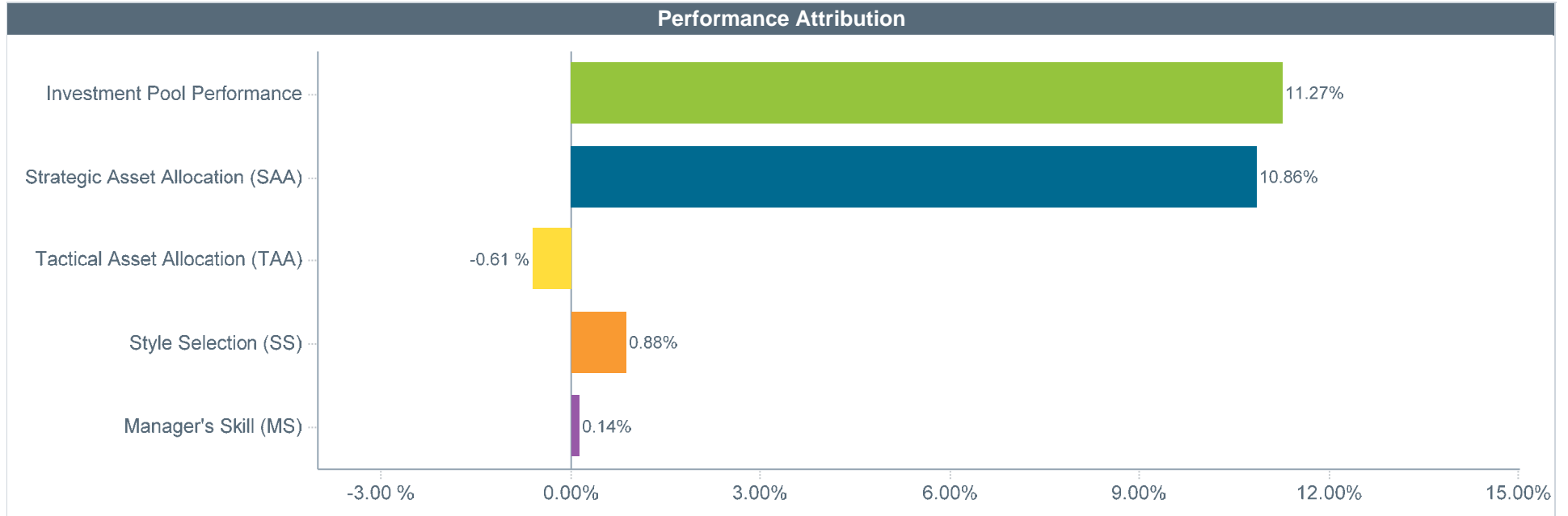
Legend:

- A = HFRI EH: Equity Market Neutral 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.

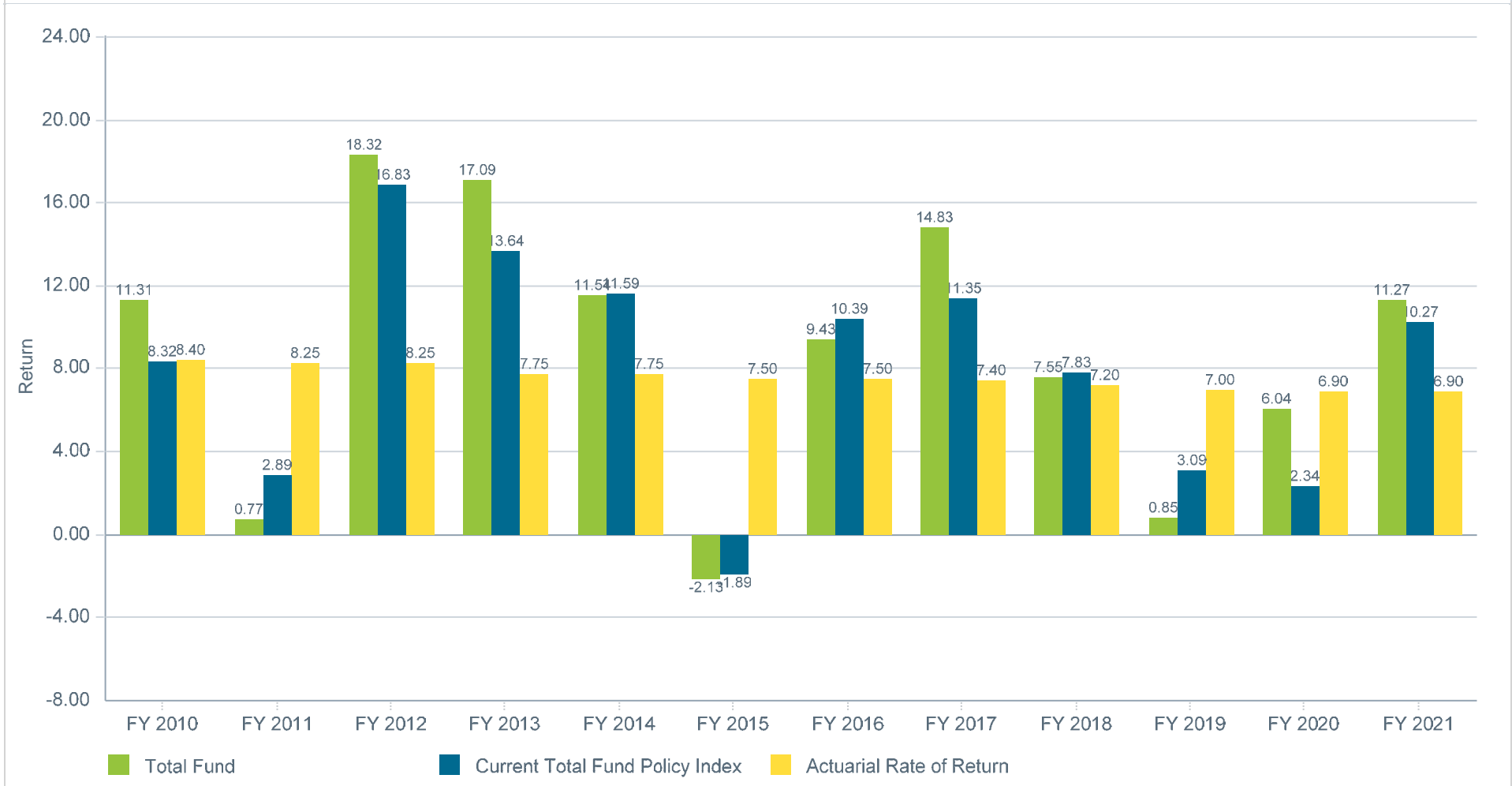


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

City of Jacksonville Employees' Retirement System
Historical Fiscal Year Returns

As of December 31, 2020

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FYTD
Total Fund	11.31	0.77	18.32	17.09	11.54	-2.13	9.43	14.83	7.55	0.85	6.04	11.27
Current Total Fund Policy Index	8.32	2.89	16.83	13.64	11.59	-1.89	10.39	11.35	7.83	3.09	2.34	10.27
Difference	2.99	-2.12	1.49	3.45	-0.05	-0.24	-0.96	3.48	-0.28	-2.24	3.70	1.00
Actuarial Rate of Return	8.40	8.25	8.25	7.75	7.75	7.50	7.50	7.40	7.20	7.00	6.90	6.90
Difference	2.91	-7.48	10.07	9.34	3.79	-9.63	1.93	7.43	0.35	-6.15	-0.86	4.37



Performance shown is net of fees. Fiscal year for the COJ ends 09/30. The Fiscal Year Actuarial Rate of Return changed from 8.40% to 8.25% effective 10/01/2010, changed to 7.75% effective 10/01/2012, changed to 7.50% effective 10/01/2014, changed to 7.40% effective 10/01/2016, changed to 7.20% effective 10/01/2017, changed to 7.00% effective 10/01/2018, and then changed to 6.90% effective 10/01/2019. Please see the Addendum for custom index definitions.



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

As of December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,469,519,078	100.00	11.39	11.39	11.73	11.73	7.94	9.82	7.99	9.26	6.90	07/01/1999
Current Total Fund Policy Index			10.27	10.27	8.02	8.02	6.59	8.40	6.95	8.09	6.01	
Difference			1.12	1.12	3.71	3.71	1.35	1.42	1.04	1.17	0.89	
Legacy Total Fund Policy Index			10.86	10.86	10.39	10.39	7.72	9.11	7.45	8.44	6.16	
Difference			0.53	0.53	1.34	1.34	0.22	0.71	0.54	0.82	0.74	
All Public Plans (\$1B to \$5B) (Custom PG) Median			10.06	10.06	11.18	11.18	7.89	9.30	7.38	8.06	6.44	
Rank			19	19	43	43	49	32	31	12	27	
Total Equity	1,497,990,055	60.66	18.36	18.36	20.31	20.31	11.72	14.01	10.75	11.83	7.24	07/01/1999
US Equity	893,682,789	36.19	18.41	18.41	20.35	20.35	14.33	14.77	12.27	13.54	7.66	07/01/1999
US Equity Index			14.68	14.68	20.89	20.89	14.49	15.43	12.76	13.79	7.35	
Difference			3.73	3.73	-0.54	-0.54	-0.16	-0.66	-0.49	-0.25	0.31	
IM U.S. Equity (SA+CF) Median			18.57	18.57	15.98	15.98	11.18	13.66	10.84	12.73	9.43	
Rank			51	51	40	40	38	43	39	42	79	
International Equity	604,307,267	24.47	18.29	18.29	20.20	20.20	7.66	12.78	8.04	8.63	6.97	07/01/1999
International Equity Index			17.01	17.01	10.65	10.65	4.88	8.93	4.82	5.06	4.42	
Difference			1.28	1.28	9.55	9.55	2.78	3.85	3.22	3.57	2.55	
IM International Equity (SA+CF) Median			17.35	17.24	13.77	13.77	5.59	10.02	6.38	6.66	7.65	
Rank			42	41	31	31	35	29	33	23	62	
Fixed Income	476,686,711	19.30	1.62	1.62	5.97	5.97	4.15	4.44	3.51	4.09	5.45	07/01/1999
Fixed Income Index			1.29	1.29	7.58	7.58	5.45	4.49	4.13	3.87	5.07	
Difference			0.33	0.33	-1.61	-1.61	-1.30	-0.05	-0.62	0.22	0.38	
IM Global Fixed Income (SA+CF) Median			4.92	4.79	8.68	8.68	5.58	6.17	4.48	4.46	5.97	
Rank			93	91	72	72	83	90	74	57	74	
Real Estate	385,681,697	15.62	0.16	0.16	0.31	0.31	4.69	6.08	8.00	8.71	6.01	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	6.74	
Difference			-1.14	-1.14	-0.88	-0.88	-0.23	-0.13	-0.32	-1.17	-0.73	
Diversifying Assets	103,379,365	4.19	13.17	13.17	-14.35	-14.35	-4.55	-0.10	-1.05	N/A	4.06	03/01/2011
Diversifying Assets Index			13.78	13.78	-18.40	-18.40	-6.44	-1.75	-2.53	1.42	1.11	
Difference			-0.61	-0.61	4.05	4.05	1.89	1.65	1.48	N/A	2.95	

Performance shown is gross 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 (Gross of Fees)

As of December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	222,345,369	9.00	20.32	20.32	15.54	15.54	13.57	15.19	12.93	14.92	11.64	02/01/2007
Russell 1000 Val Index			16.25	16.25	2.80	2.80	6.07	9.74	8.20	10.50	6.29	
Difference			4.07	4.07	12.74	12.74	7.50	5.45	4.73	4.42	5.35	
IM U.S. Large Cap Value Equity (SA+CF) Median			15.92	15.92	5.00	5.00	7.23	10.64	8.92	11.19	7.67	
Rank			20	20	14	14	12	11	7	4	2	
Mellon Large Cap Core Index (CF)	252,679,981	10.23	13.60	13.60	20.82	20.82	N/A	N/A	N/A	N/A	19.13	05/01/2019
Russell 1000 Index			13.69	13.69	20.96	20.96	14.82	15.60	13.04	14.01	19.22	
Difference			-0.09	-0.09	-0.14	-0.14	N/A	N/A	N/A	N/A	-0.09	
IM U.S. Large Cap Core Equity (SA+CF) Median			12.15	12.15	16.00	16.00	12.94	14.26	12.33	13.58	16.33	
Rank			28	28	28	28	N/A	N/A	N/A	N/A	25	
Loomis Sayles Large Cap Growth (CF)	177,490,489	7.19	8.83	8.83	32.98	32.98	20.10	N/A	N/A	N/A	21.11	08/01/2017
Russell 1000 Grth Index			11.39	11.39	38.49	38.49	22.99	21.00	17.53	17.21	23.73	
Difference			-2.56	-2.56	-5.51	-5.51	-2.89	N/A	N/A	N/A	-2.62	
IM U.S. Large Cap Growth Equity (SA+CF) Median			11.57	11.57	34.51	34.51	20.95	19.01	16.03	16.25	21.64	
Rank			91	90	57	57	62	N/A	N/A	N/A	55	
William Blair Small Cap Value (SA)	97,483,746	3.95	27.63	27.63	-4.55	-4.55	-0.17	6.70	N/A	N/A	4.97	11/01/2014
Russell 2000 Val Index			33.36	33.36	4.63	4.63	3.72	9.65	6.25	8.66	6.80	
Difference			-5.73	-5.73	-9.18	-9.18	-3.89	-2.95	N/A	N/A	-1.83	
IM U.S. Small Cap Value Equity (SA+CF) Median			29.84	29.84	5.20	5.20	4.47	9.67	6.95	9.97	7.34	
Rank			65	65	96	96	91	91	N/A	N/A	92	
Pinnacle Associates US SMID Cap Growth (SA)	143,683,204	5.82	33.21	33.21	33.32	33.32	19.16	17.54	13.67	14.54	16.57	03/01/2010
Russell 2500 Grth Index			25.89	25.89	40.47	40.47	19.91	18.68	14.09	15.00	16.38	
Difference			7.32	7.32	-7.15	-7.15	-0.75	-1.14	-0.42	-0.46	0.19	
IM U.S. SMID Cap Growth Equity (SA+CF) Median			22.95	22.95	42.59	42.59	23.54	19.68	14.56	15.52	17.11	
Rank			4	4	71	71	71	74	63	75	64	

Performance shown is gross 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 (Gross of Fees)

As of December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity												
Silchester International Value (CF)	235,639,777	9.54	15.36	15.36	0.17	0.17	0.66	7.18	5.29	7.77	9.67	06/01/2009
MSCI EAFE Val Index (USD) (Net)			19.20	19.20	-2.63	-2.63	-1.24	4.20	1.32	3.37	4.92	
Difference			-3.84	-3.84	2.80	2.80	1.90	2.98	3.97	4.40	4.75	
IM EAFE Value (SA+CF) Median			17.81	17.81	4.37	4.37	2.16	6.69	3.71	6.23	8.31	
Rank			66	66	82	82	72	33	25	15	15	
Baillie Gifford International Growth (BGEFX)	237,779,776	9.63	21.00	21.00	63.91	63.91	23.52	23.11	14.52	13.53	15.24	06/01/2009
Baillie Gifford Index			13.92	13.92	22.20	22.20	10.02	10.80	7.52	7.65	9.47	
Difference			7.08	7.08	41.71	41.71	13.50	12.31	7.00	5.88	5.77	
Baillie Gifford Spliced Index			17.01	17.01	10.65	10.65	5.56	8.23	4.93	5.89	7.53	
Difference			3.99	3.99	53.26	53.26	17.96	14.88	9.59	7.64	7.71	
IM ACWI Ex US Growth (SA+CF) Median			15.42	15.42	22.91	22.91	11.32	13.06	8.83	8.92	11.08	
Rank			3	3	1	1	3	3	7	7	4	
Acadian Emerging Markets (CF)	130,887,713	5.30	18.82	18.82	12.48	12.48	2.65	11.32	5.37	N/A	4.29	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			19.70	19.70	18.31	18.31	6.17	12.81	6.17	3.63	3.95	
Difference			-0.88	-0.88	-5.83	-5.83	-3.52	-1.49	-0.80	N/A	0.34	
IM Emerging Markets Equity (SA+CF) Median			19.78	19.72	18.14	18.14	6.18	12.71	6.66	5.10	5.41	
Rank			63	62	73	73	80	68	72	N/A	71	
Fixed Income												
Richmond Capital Core (SA)	150,001,227	6.07	0.70	0.70	7.85	7.85	5.57	4.72	4.48	4.30	5.45	06/01/1999
Richmond Capital Index			0.67	0.67	7.51	7.51	5.34	4.44	4.09	3.84	5.05	
Difference			0.03	0.03	0.34	0.34	0.23	0.28	0.39	0.46	0.40	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			1.13	1.13	8.60	8.60	5.88	5.04	4.58	4.41	5.40	
Rank			78	78	72	72	72	72	60	57	48	
BMO Intermediate Fixed Income (SA)	146,680,414	5.94	0.99	0.99	6.75	6.75	4.81	4.49	3.64	3.90	5.08	06/01/1999
ICE BofAML US Corp & Gov't 1-10 Yr Index			0.50	0.50	6.30	6.30	4.67	3.66	3.25	3.17	4.50	
Difference			0.49	0.49	0.45	0.45	0.14	0.83	0.39	0.73	0.58	
IM U.S. Intermediate Duration (SA+CF) Median			0.69	0.69	6.88	6.88	4.92	3.93	3.53	3.49	4.84	
Rank			31	31	56	56	59	14	38	18	24	
Franklin Templeton Global Multisector Plus (CF)	98,623,792	3.99	1.86	1.86	-3.88	-3.88	-1.30	1.34	0.47	2.83	6.05	09/01/2007
Frank. Temp. Global Multisector Index			3.52	3.52	9.02	9.02	4.83	4.99	3.12	2.99	4.02	
Difference			-1.66	-1.66	-12.90	-12.90	-6.13	-3.65	-2.65	-0.16	2.03	
IM Global Fixed Income (SA+CF) Median			4.92	4.79	8.68	8.68	5.58	6.17	4.48	4.46	5.16	
Rank			92	90	100	100	99	100	98	87	29	

Performance shown is gross 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 (Gross of Fees)

As of December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Loomis Sayles Multisector Full Discretion (CF)	81,381,278	3.30	4.25	4.25	15.07	15.07	8.14	8.72	6.62	7.30	7.51	10/01/2007
Bloomberg Gbl Agg Bond Index			3.28	3.28	9.20	9.20	4.85	4.79	3.01	2.83	3.68	
Difference			0.97	0.97	5.87	5.87	3.29	3.93	3.61	4.47	3.83	
IM Global Fixed Income (SA+CF) Median			4.92	4.79	8.68	8.68	5.58	6.17	4.48	4.46	5.00	
Rank			62	60	6	6	6	9	9	6	4	
Real Estate												
Harrison Street Core Property, LP	108,705,962	4.40	0.00	0.00	3.58	3.58	7.13	7.82	N/A	N/A	7.56	11/01/2015
NCREIF ODCE Index (AWA) (Gross)			1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	6.68	
Difference			-1.30	-1.30	2.39	2.39	2.21	1.61	N/A	N/A	0.88	
PGIM Real Estate PRISA II LP (CF)	56,860,023	2.30	0.00	0.00	-0.70	-0.70	6.14	7.41	N/A	N/A	8.20	01/01/2015
NCREIF ODCE Index (AWA) (Gross)			1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	7.63	
Difference			-1.30	-1.30	-1.89	-1.89	1.22	1.20	N/A	N/A	0.57	
Principal US Property (CF)	124,527,914	5.04	1.92	1.92	1.56	1.56	5.85	7.32	9.27	N/A	9.27	01/01/2014
NCREIF ODCE Index (AWA) (Gross)			1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	8.32	
Difference			0.62	0.62	0.37	0.37	0.93	1.11	0.95	N/A	0.95	
UBS Trumbull Property (CF)	94,491,298	3.83	-1.90	-1.90	-4.05	-4.05	0.16	2.73	5.37	7.10	5.41	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	6.74	
Difference			-3.20	-3.20	-5.24	-5.24	-4.76	-3.48	-2.95	-2.78	-1.33	
Vanguard RE Idx;ETF (VNQ)	1,096,500	0.04	9.26	9.26	-4.62	-4.62	4.91	5.48	8.17	8.33	12.56	12/01/2008
Custom REITs Index			9.28	9.28	-4.55	-4.55	5.54	6.05	8.70	8.93	13.40	
Difference			-0.02	-0.02	-0.07	-0.07	-0.63	-0.57	-0.53	-0.60	-0.84	
Diversifying Assets												
Harvest Fund Advisors MLP (SA)	35,499,058	1.44	22.88	22.88	-24.56	-24.56	-9.35	-3.15	-4.97	N/A	2.45	03/01/2011
S&P MLP Index (TR)			29.23	29.23	-28.75	-28.75	-11.60	-4.47	-8.04	-1.42	-2.10	
Difference			-6.35	-6.35	4.19	4.19	2.25	1.32	3.07	N/A	4.55	
Tortoise Capital Advisors MLP (SA)	31,483,650	1.27	21.95	21.95	-30.83	-30.83	-13.03	-5.78	-6.36	N/A	0.46	03/01/2011
Tortoise Spliced Index			20.15	20.15	-31.14	-31.14	-12.59	-5.12	-8.49	-1.75	-2.44	
Difference			1.80	1.80	0.31	0.31	-0.44	-0.66	2.13	N/A	2.90	
Hancock Timberland (SA)	29,851,265	1.21	3.84	3.84	10.18	10.18	6.80	7.36	6.61	6.80	3.92	10/01/2006
NCREIF Timberland Index			0.58	0.58	0.81	0.81	1.77	2.30	3.81	4.55	5.16	
Difference			3.26	3.26	9.37	9.37	5.03	5.06	2.80	2.25	-1.24	
Adams Street, LP	6,545,392	0.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	11/01/2020
S&P 500 Index+3%			12.98	12.98	21.95	21.95	17.60	18.67	16.30	17.30	15.78	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.78	

Performance shown is gross 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 (Gross of Fees)

As of December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,781,206	0.23	0.03	0.03	0.52	0.52	1.60	1.22	0.90	0.65	1.40	04/01/2001
FTSE 3 Mo T-Bill Index			0.02	0.02	0.58	0.58	1.56	1.16	0.83	0.60	1.37	
Difference			0.01	0.01	-0.06	-0.06	0.04	0.06	0.07	0.05	0.03	

Performance shown is gross 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 December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,469,519,078	100.00	11.27	11.27	11.18	11.18	7.39	9.26	7.45	8.73	6.59	07/01/1999
Current Total Fund Policy Index			10.27	10.27	8.02	8.02	6.59	8.40	6.95	8.09	6.01	
Difference			1.00	1.00	3.16	3.16	0.80	0.86	0.50	0.64	0.58	
Legacy Total Fund Policy Index			10.86	10.86	10.39	10.39	7.72	9.11	7.45	8.44	6.16	
Difference			0.41	0.41	0.79	0.79	-0.33	0.15	0.00	0.29	0.43	
Total Equity	1,497,990,055	60.66	18.21	18.21	19.71	19.71	11.14	13.41	10.16	11.23	6.93	07/01/1999
US Equity	893,682,789	36.19	18.28	18.28	19.80	19.80	13.77	14.19	11.70	12.94	7.36	07/01/1999
US Equity Index			14.68	14.68	20.89	20.89	14.49	15.43	12.76	13.79	7.35	
Difference			3.60	3.60	-1.09	-1.09	-0.72	-1.24	-1.06	-0.85	0.01	
International Equity	604,307,267	24.47	18.13	18.13	19.54	19.54	7.06	12.15	7.43	8.04	6.65	07/01/1999
International Equity Index			17.01	17.01	10.65	10.65	4.88	8.93	4.82	5.06	4.42	
Difference			1.12	1.12	8.89	8.89	2.18	3.22	2.61	2.98	2.23	
Fixed Income	476,686,711	19.30	1.56	1.56	5.72	5.72	3.89	4.19	3.29	3.88	5.29	07/01/1999
Fixed Income Index			1.29	1.29	7.58	7.58	5.45	4.49	4.13	3.87	5.07	
Difference			0.27	0.27	-1.86	-1.86	-1.56	-0.30	-0.84	0.01	0.22	
Real Estate	385,681,697	15.62	0.05	0.05	-0.48	-0.48	3.85	5.29	7.18	7.87	5.32	12/01/2005
NCREIF ODCE Index (AWA) (Net)			1.10	1.10	0.34	0.34	3.99	5.27	7.34	8.87	5.76	
Difference			-1.05	-1.05	-0.82	-0.82	-0.14	0.02	-0.16	-1.00	-0.44	
Diversifying Assets	103,379,365	4.19	13.07	13.07	-14.70	-14.70	-5.00	-0.57	-1.53	N/A	3.57	03/01/2011
Diversifying Assets Index			13.78	13.78	-18.40	-18.40	-6.44	-1.75	-2.53	1.42	1.11	
Difference			-0.71	-0.71	3.70	3.70	1.44	1.18	1.00	N/A	2.46	

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 December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	222,345,369	9.00	20.11	20.11	14.73	14.73	12.72	14.34	12.09	14.06	10.95	02/01/2007
Russell 1000 Val Index			16.25	16.25	2.80	2.80	6.07	9.74	8.20	10.50	6.29	
Difference			3.86	3.86	11.93	11.93	6.65	4.60	3.89	3.56	4.66	
Mellon Large Cap Core Index (CF)	252,679,981	10.23	13.60	13.60	20.79	20.79	N/A	N/A	N/A	N/A	19.10	05/01/2019
Russell 1000 Index			13.69	13.69	20.96	20.96	14.82	15.60	13.04	14.01	19.22	
Difference			-0.09	-0.09	-0.17	-0.17	N/A	N/A	N/A	N/A	-0.12	
Loomis Sayles Large Cap Growth (CF)	177,490,489	7.19	8.71	8.71	32.35	32.35	19.54	N/A	N/A	N/A	20.54	08/01/2017
Russell 1000 Grth Index			11.39	11.39	38.49	38.49	22.99	21.00	17.53	17.21	23.73	
Difference			-2.68	-2.68	-6.14	-6.14	-3.45	N/A	N/A	N/A	-3.19	
William Blair Small Cap Value (SA)	97,483,746	3.95	27.40	27.40	-5.38	-5.38	-1.09	5.82	N/A	N/A	4.15	11/01/2014
Russell 2000 Val Index			33.36	33.36	4.63	4.63	3.72	9.65	6.25	8.66	6.80	
Difference			-5.96	-5.96	-10.01	-10.01	-4.81	-3.83	N/A	N/A	-2.65	
Pinnacle Associates US SMID Cap Growth (SA)	143,683,204	5.82	33.02	33.02	32.56	32.56	18.48	16.84	12.90	13.73	15.79	03/01/2010
Russell 2500 Grth Index			25.89	25.89	40.47	40.47	19.91	18.68	14.09	15.00	16.38	
Difference			7.13	7.13	-7.91	-7.91	-1.43	-1.84	-1.19	-1.27	-0.59	
International Equity												
Silchester International Value (CF)	235,639,777	9.54	15.20	15.20	-0.40	-0.40	0.09	6.57	4.68	7.13	9.02	06/01/2009
MSCI EAFE Val Index (USD) (Net)			19.20	19.20	-2.63	-2.63	-1.24	4.20	1.32	3.37	4.92	
Difference			-4.00	-4.00	2.23	2.23	1.33	2.37	3.36	3.76	4.10	
Baillie Gifford International Growth (BGEFX)	237,779,776	9.63	20.86	20.86	63.13	63.13	22.90	22.47	13.91	13.05	14.82	06/01/2009
Baillie Gifford Index			13.92	13.92	22.20	22.20	10.02	10.80	7.52	7.65	9.47	
Difference			6.94	6.94	40.93	40.93	12.88	11.67	6.39	5.40	5.35	
Baillie Gifford Spliced Index			17.01	17.01	10.65	10.65	5.56	8.23	4.93	5.89	7.53	
Difference			3.85	3.85	52.48	52.48	17.34	14.24	8.98	7.16	7.29	
Acadian Emerging Markets (CF)	130,887,713	5.30	18.63	18.63	11.81	11.81	2.05	10.67	4.75	N/A	3.68	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			19.70	19.70	18.31	18.31	6.17	12.81	6.17	3.63	3.95	
Difference			-1.07	-1.07	-6.50	-6.50	-4.12	-2.14	-1.42	N/A	-0.27	

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 December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income												
Richmond Capital Core (SA)	150,001,227	6.07	0.65	0.65	7.67	7.67	5.39	4.54	4.30	4.12	5.35	06/01/1999
Richmond Capital Index			0.67	0.67	7.51	7.51	5.34	4.44	4.09	3.84	5.05	
Difference			-0.02	-0.02	0.16	0.16	0.05	0.10	0.21	0.28	0.30	
BMO Intermediate Fixed Income (SA)	146,680,414	5.94	0.96	0.96	6.62	6.62	4.69	4.36	3.52	3.77	5.01	06/01/1999
ICE BofAML US Corp & Gov't 1-10 Yr Index			0.50	0.50	6.30	6.30	4.67	3.66	3.25	3.17	4.50	
Difference			0.46	0.46	0.32	0.32	0.02	0.70	0.27	0.60	0.51	
Franklin Templeton Global Multisector Plus (CF)	98,623,792	3.99	1.75	1.75	-4.28	-4.28	-1.78	0.84	-0.13	2.13	5.29	09/01/2007
Frank. Temp. Global Multisector Index			3.52	3.52	9.02	9.02	4.83	4.99	3.12	2.99	4.02	
Difference			-1.77	-1.77	-13.30	-13.30	-6.61	-4.15	-3.25	-0.86	1.27	
Loomis Sayles Multisector Full Discretion (CF)	81,381,278	3.30	4.15	4.15	14.65	14.65	7.73	8.27	6.19	6.87	7.15	10/01/2007
Bloomberg Gbl Agg Bond Index			3.28	3.28	9.20	9.20	4.85	4.79	3.01	2.83	3.68	
Difference			0.87	0.87	5.45	5.45	2.88	3.48	3.18	4.04	3.47	
Real Estate												
Harrison Street Core Property, LP	108,705,962	4.40	0.00	0.00	2.80	2.80	6.32	7.34	N/A	N/A	7.09	11/01/2015
NCREIF ODCE Index (AWA) (Net)			1.10	1.10	0.34	0.34	3.99	5.27	7.34	8.87	5.72	
Difference			-1.10	-1.10	2.46	2.46	2.33	2.07	N/A	N/A	1.37	
PGIM Real Estate PRISA II LP (CF)	56,860,023	2.30	0.00	0.00	-1.56	-1.56	4.99	6.43	N/A	N/A	7.29	01/01/2015
NCREIF ODCE Index (AWA) (Net)			1.10	1.10	0.34	0.34	3.99	5.27	7.34	8.87	6.67	
Difference			-1.10	-1.10	-1.90	-1.90	1.00	1.16	N/A	N/A	0.62	
Principal US Property (CF)	124,527,914	5.04	1.71	1.71	0.76	0.76	4.99	6.46	8.39	N/A	8.39	01/01/2014
NCREIF ODCE Index (AWA) (Net)			1.10	1.10	0.34	0.34	3.99	5.27	7.34	8.87	7.34	
Difference			0.61	0.61	0.42	0.42	1.00	1.19	1.05	N/A	1.05	
UBS Trumbull Property (CF)	94,491,298	3.83	-2.08	-2.08	-4.78	-4.78	-0.64	1.82	4.41	6.09	4.47	12/01/2005
NCREIF ODCE Index (AWA) (Net)			1.10	1.10	0.34	0.34	3.99	5.27	7.34	8.87	5.76	
Difference			-3.18	-3.18	-5.12	-5.12	-4.63	-3.45	-2.93	-2.78	-1.29	
Vanguard RE Idx;ETF (VNQ)	1,096,500	0.04	9.26	9.26	-4.62	-4.62	4.91	5.48	8.17	8.33	12.56	12/01/2008
Custom REITs Index			9.28	9.28	-4.55	-4.55	5.54	6.05	8.70	8.93	13.40	
Difference			-0.02	-0.02	-0.07	-0.07	-0.63	-0.57	-0.53	-0.60	-0.84	

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 December 31, 2020

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Diversifying Assets												
Harvest Fund Advisors MLP (SA)	35,499,058	1.44	22.66	22.66	-25.13	-25.13	-10.05	-3.89	-5.71	N/A	1.70	03/01/2011
S&P MLP Index (TR)			29.23	29.23	-28.75	-28.75	-11.60	-4.47	-8.04	-1.42	-2.10	
Difference			-6.57	-6.57	3.62	3.62	1.55	0.58	2.33	N/A	3.80	
Tortoise Capital Advisors MLP (SA)	31,483,650	1.27	21.75	21.75	-31.31	-31.31	-13.67	-6.51	-7.07	N/A	-0.26	03/01/2011
Tortoise Spliced Index			20.15	20.15	-31.14	-31.14	-12.59	-5.12	-8.49	-1.75	-2.44	
Difference			1.60	1.60	-0.17	-0.17	-1.08	-1.39	1.42	N/A	2.18	
Hancock Timberland (SA)	29,851,265	1.21	3.84	3.84	10.18	10.18	6.80	7.36	6.61	6.80	3.92	10/01/2006
NCREIF Timberland Index			0.58	0.58	0.81	0.81	1.77	2.30	3.81	4.55	5.16	
Difference			3.26	3.26	9.37	9.37	5.03	5.06	2.80	2.25	-1.24	
Adams Street, LP	6,545,392	0.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	11/01/2020
S&P 500 Index+3%			12.98	12.98	21.95	21.95	17.60	18.67	16.30	17.30	15.78	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-15.78	
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	5,781,206	0.23	0.00	0.00	0.37	0.37	1.48	1.14	0.85	0.61	1.37	04/01/2001
FTSE 3 Mo T-Bill Index			0.02	0.02	0.58	0.58	1.56	1.16	0.83	0.60	1.37	
Difference			-0.02	-0.02	-0.21	-0.21	-0.08	-0.02	0.02	0.01	0.00	

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.



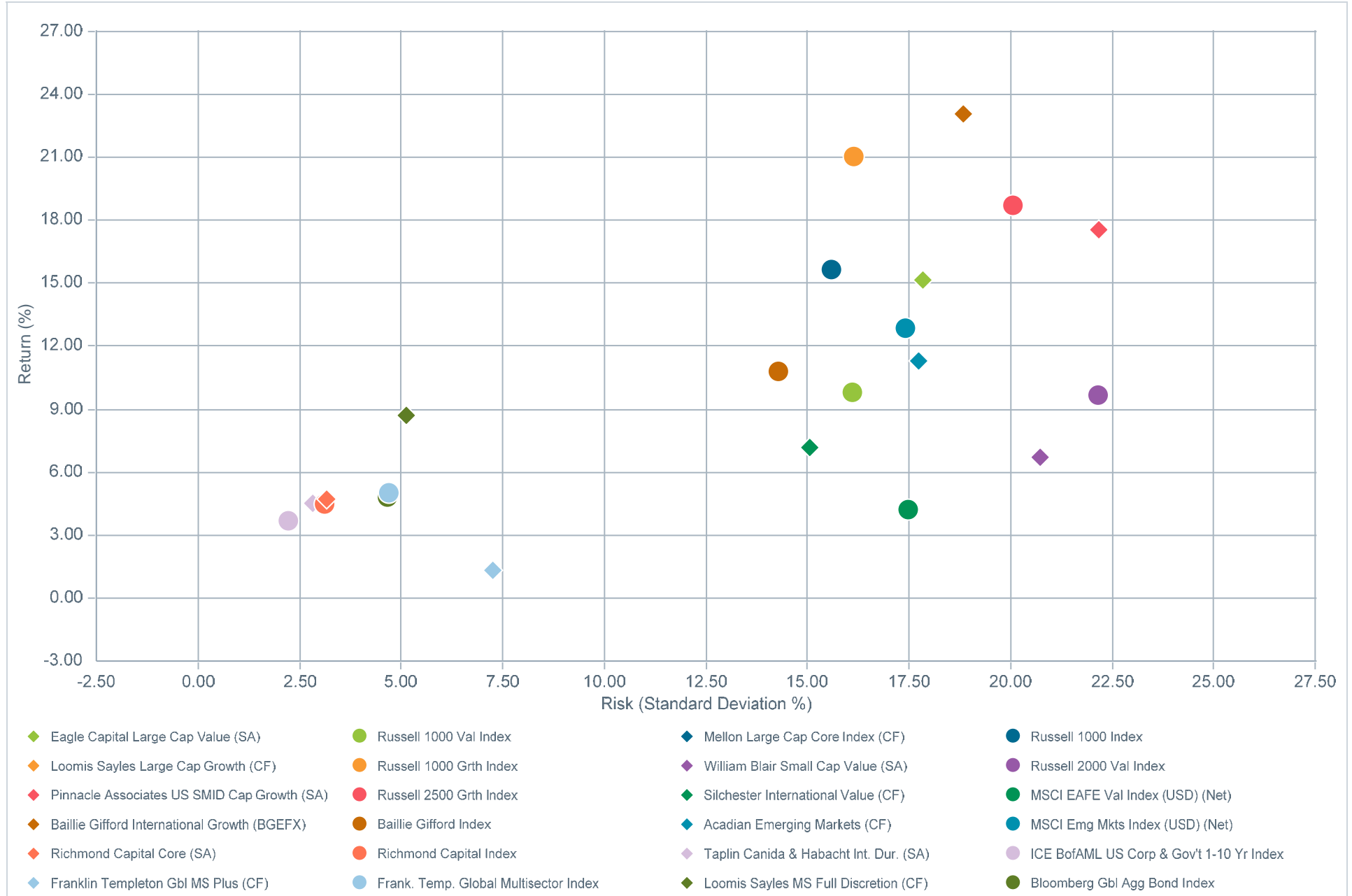
City of Jacksonville Employees' Retirement System
 Risk and Return
 Traditional Managers

3 Years Ending December 31, 2020

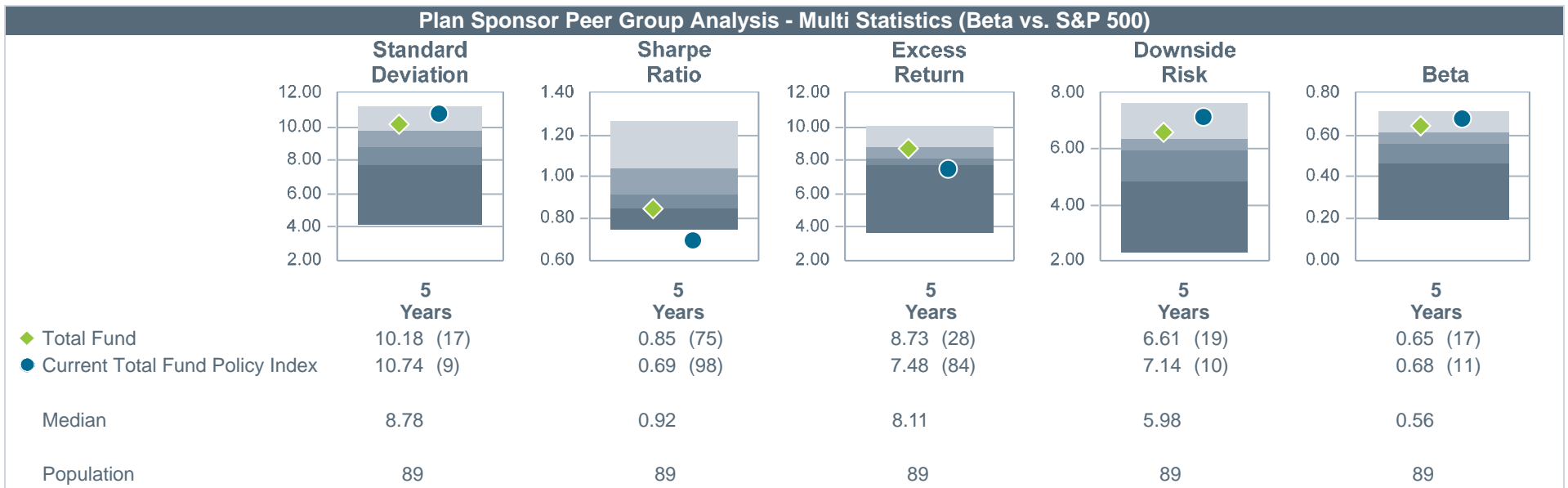
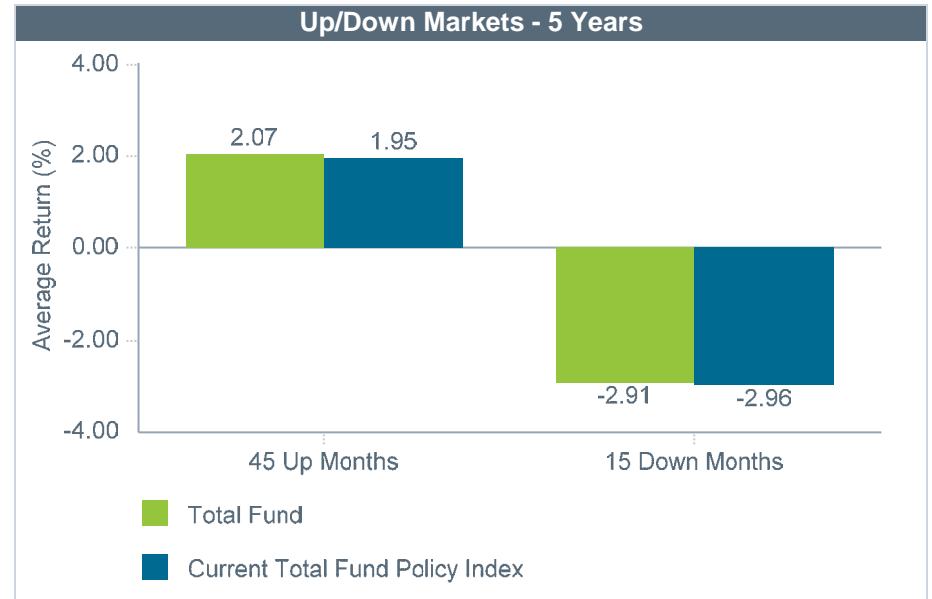
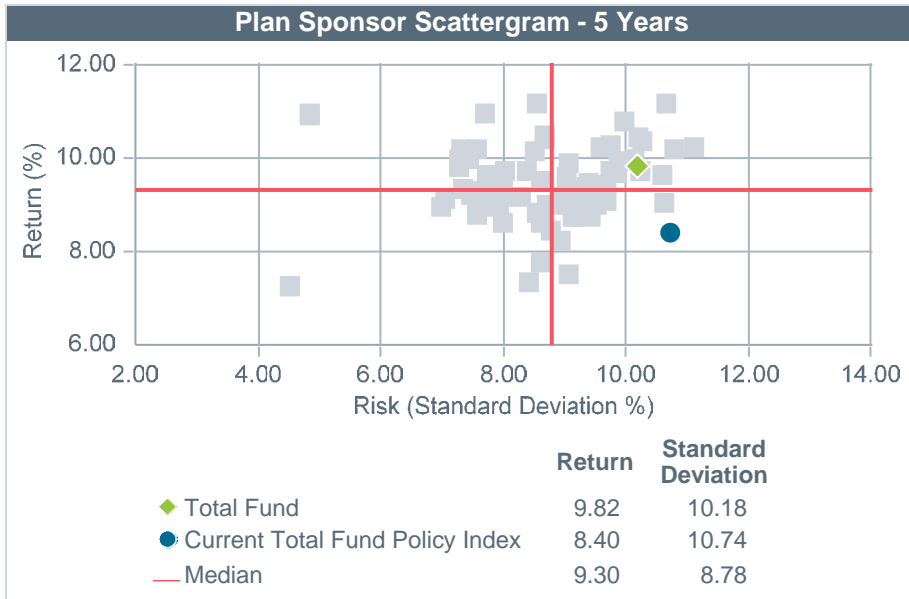


Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period will not appear. Please see the Addendum for custom index definitions.

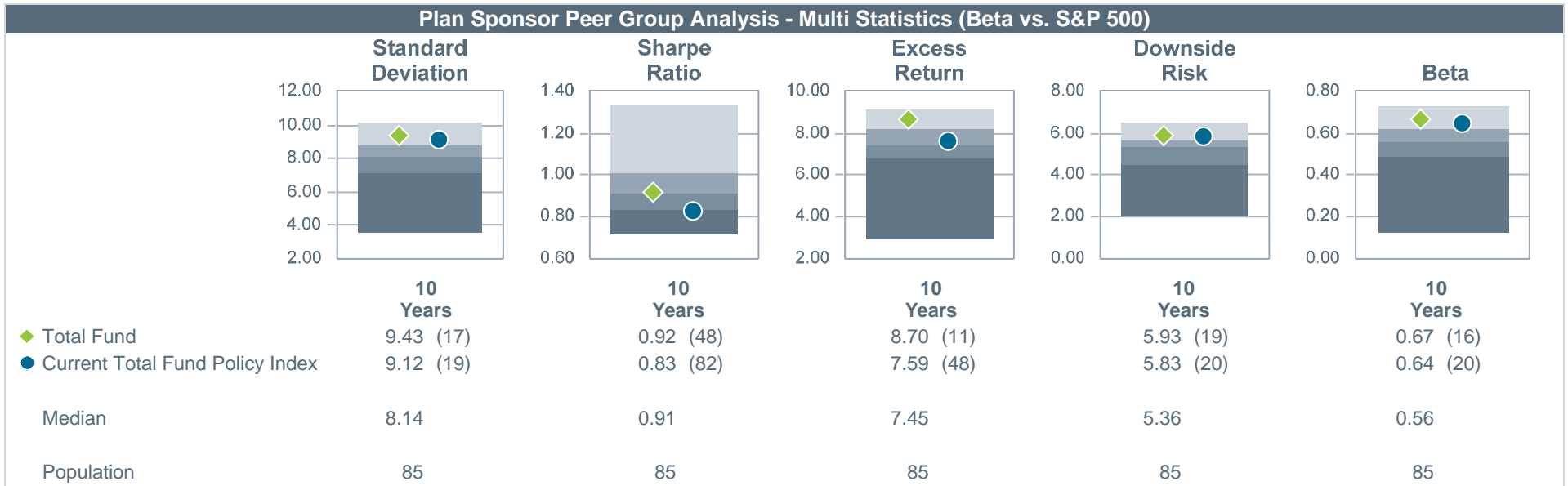
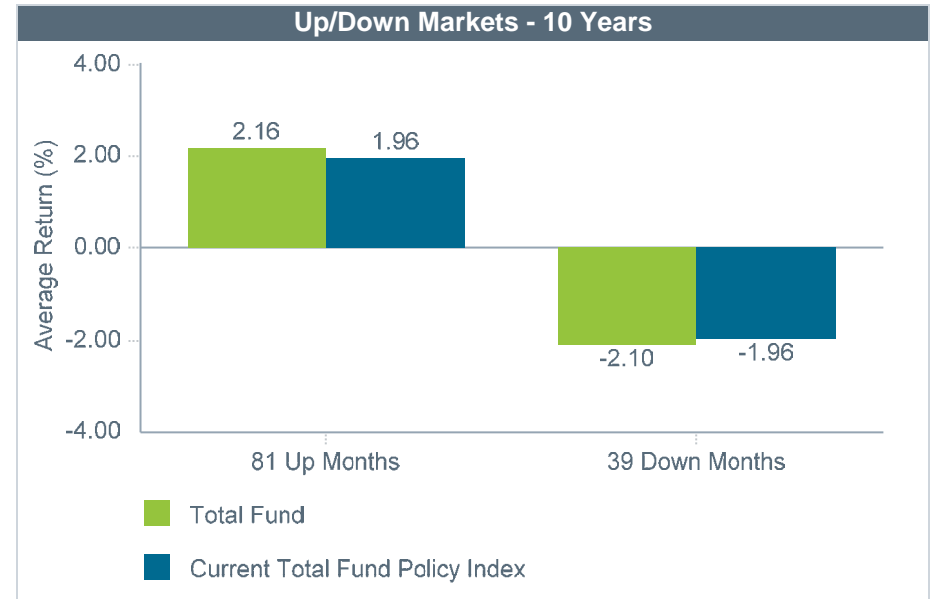
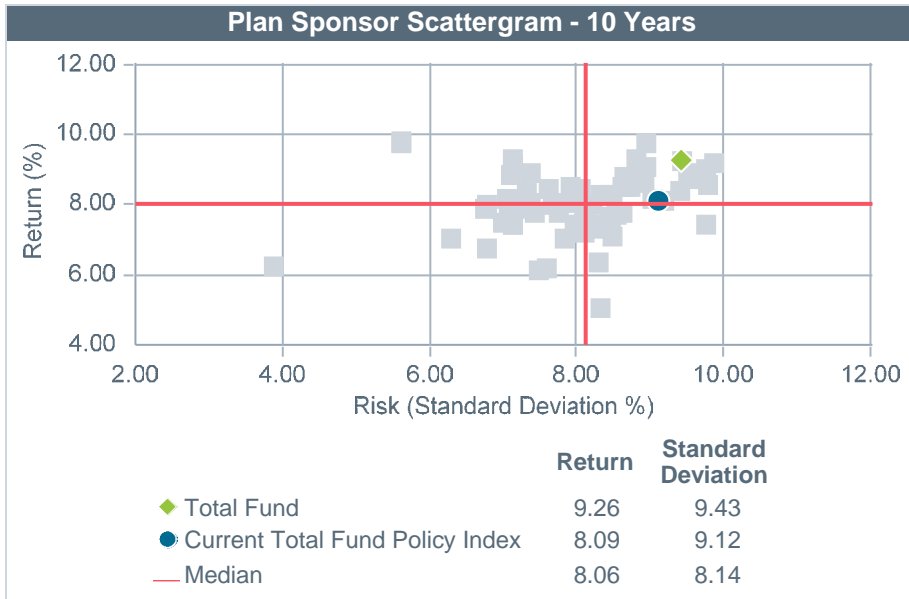




Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period will not appear. Please see the Addendum for custom index definitions.



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



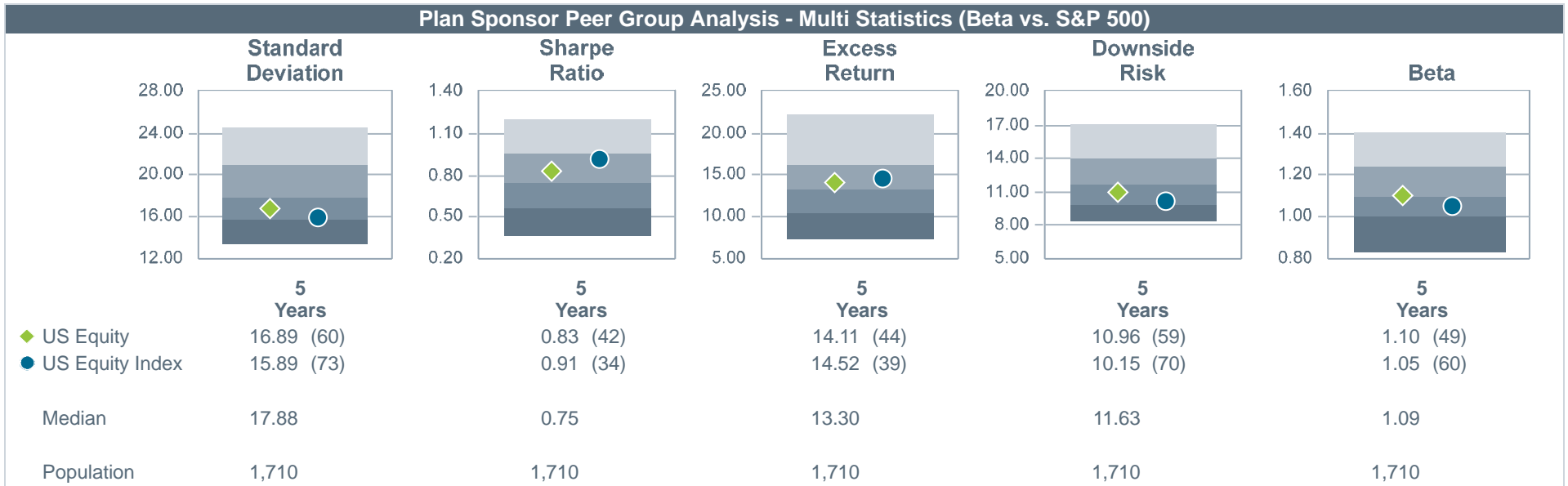
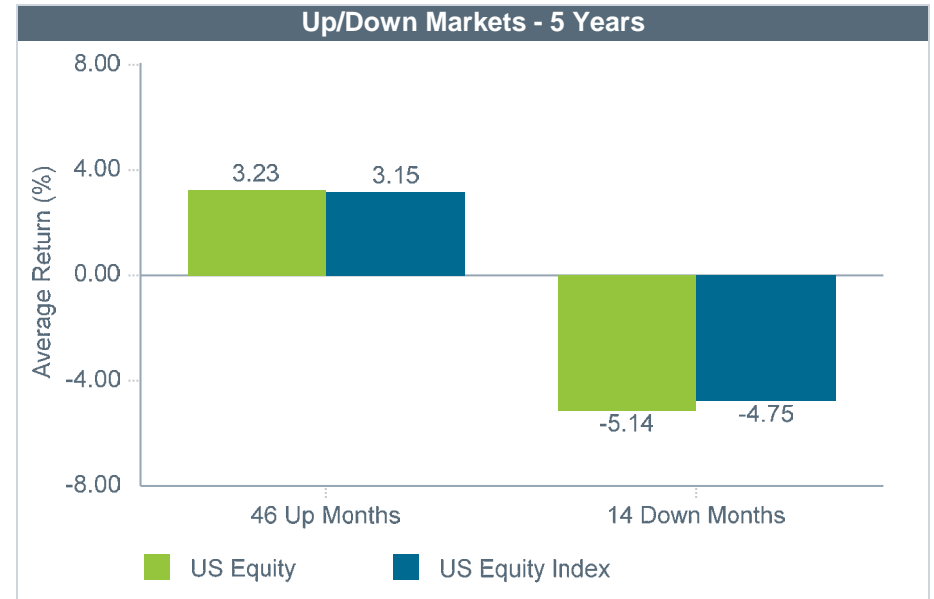
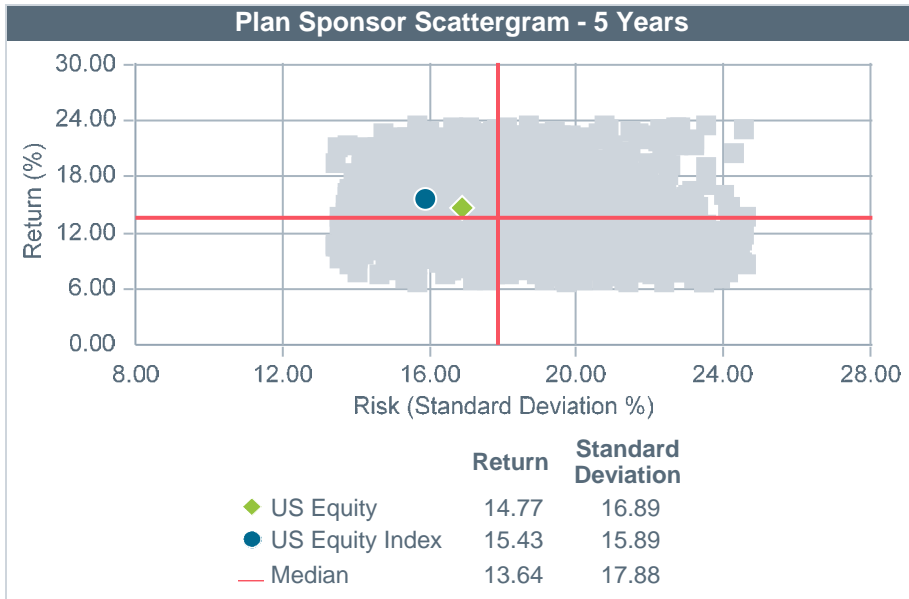
City of Jacksonville Employees' Retirement System
 US Equity vs. IM U.S. Equity (SA+CF)
 Peer Group Analysis

As of December 31, 2020



Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.

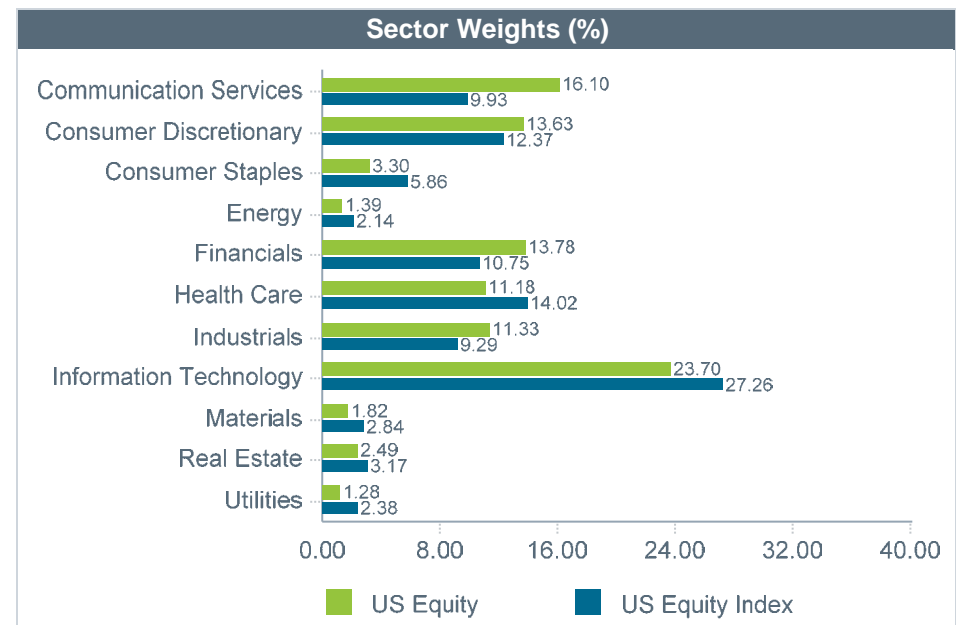
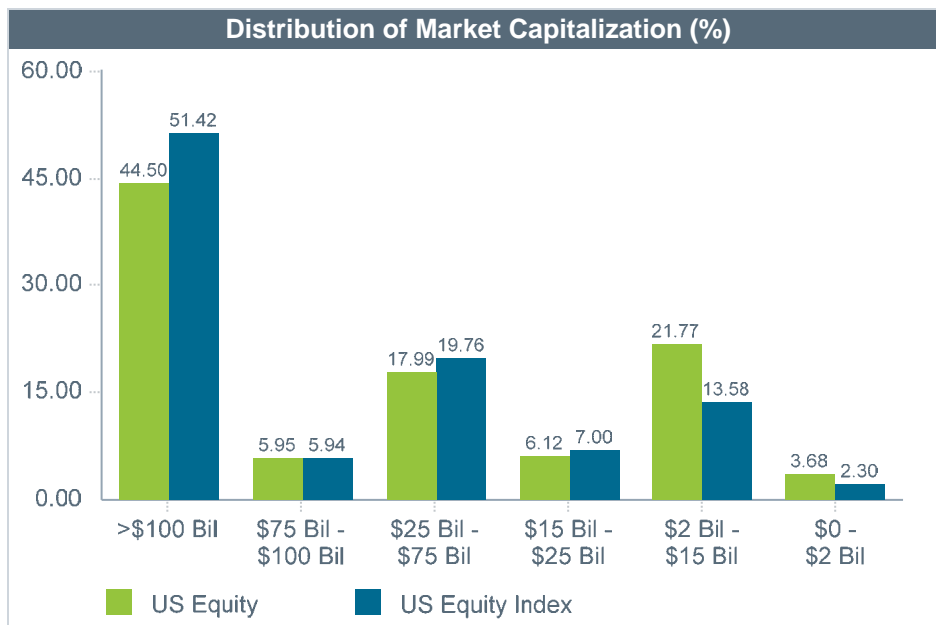




Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Amazon.com Inc	4.00	3.66	0.34	3.44
Microsoft Corp	3.97	4.41	-0.44	6.03
Facebook Inc	2.88	1.74	1.14	4.30
Alphabet Inc	2.70	1.38	1.32	19.21
Comcast Corp	2.01	0.63	1.38	13.86
Walt Disney Co (The)	1.82	0.87	0.95	46.02
Apple Inc	1.73	5.68	-3.95	14.77
Berkshire Hathaway Inc	1.68	1.18	0.50	8.89
Visa Inc	1.46	0.98	0.48	9.55
Marriott International Inc	1.33	0.09	1.24	42.49
% of Portfolio	23.58	20.62	2.96	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	322,194	406,840
Median Mkt. Cap (\$M)	11,084	1,989
Price/Earnings Ratio	29.17	28.99
Price/Book Ratio	4.10	4.42
5 Yr. EPS Growth Rate (%)	19.19	17.61
Current Yield (%)	1.00	1.42
Beta (5 Years, Monthly)	1.05	1.00
Number of Securities	1,134	3,060



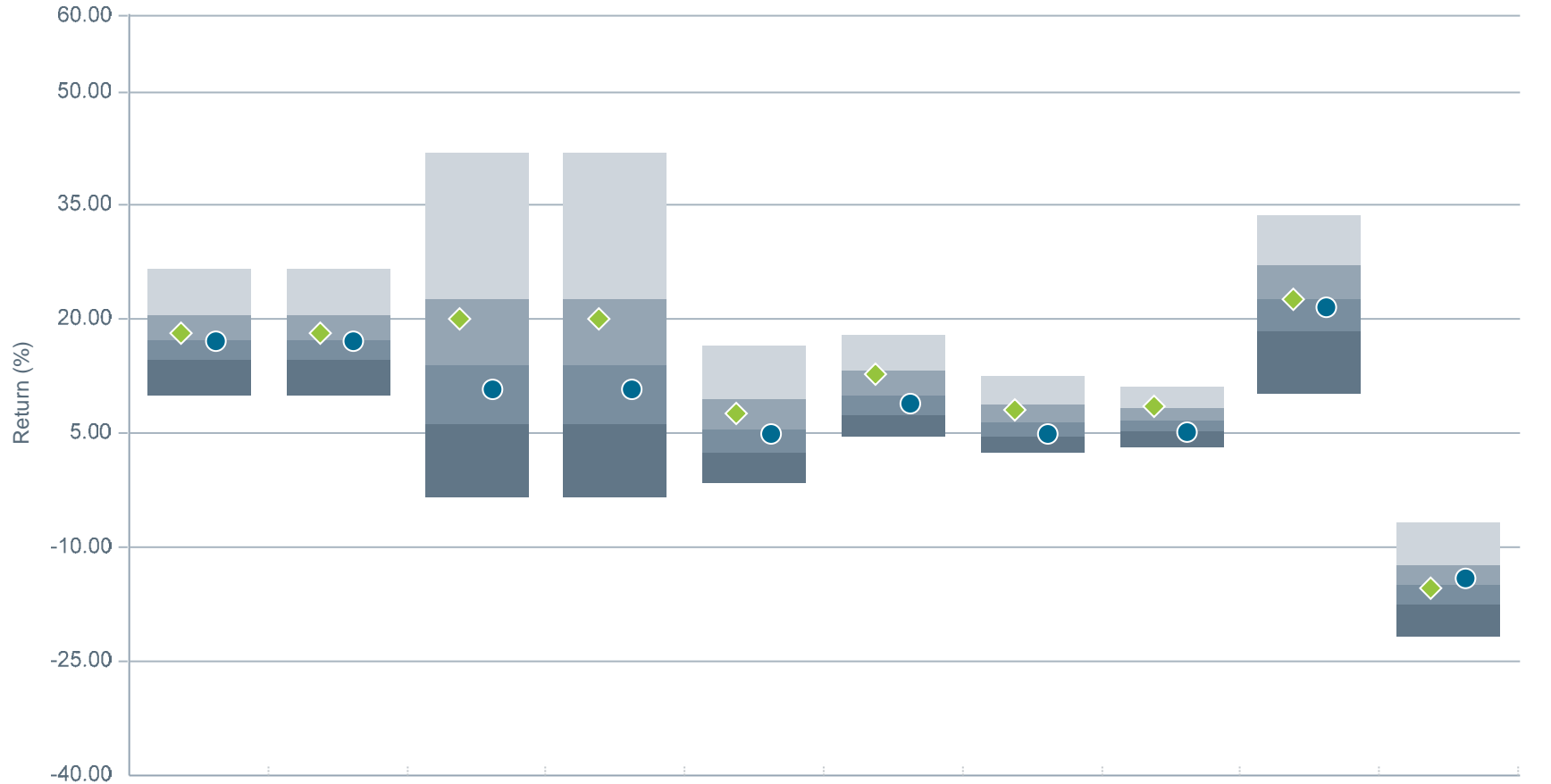
Style Map with History(12 Months)



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

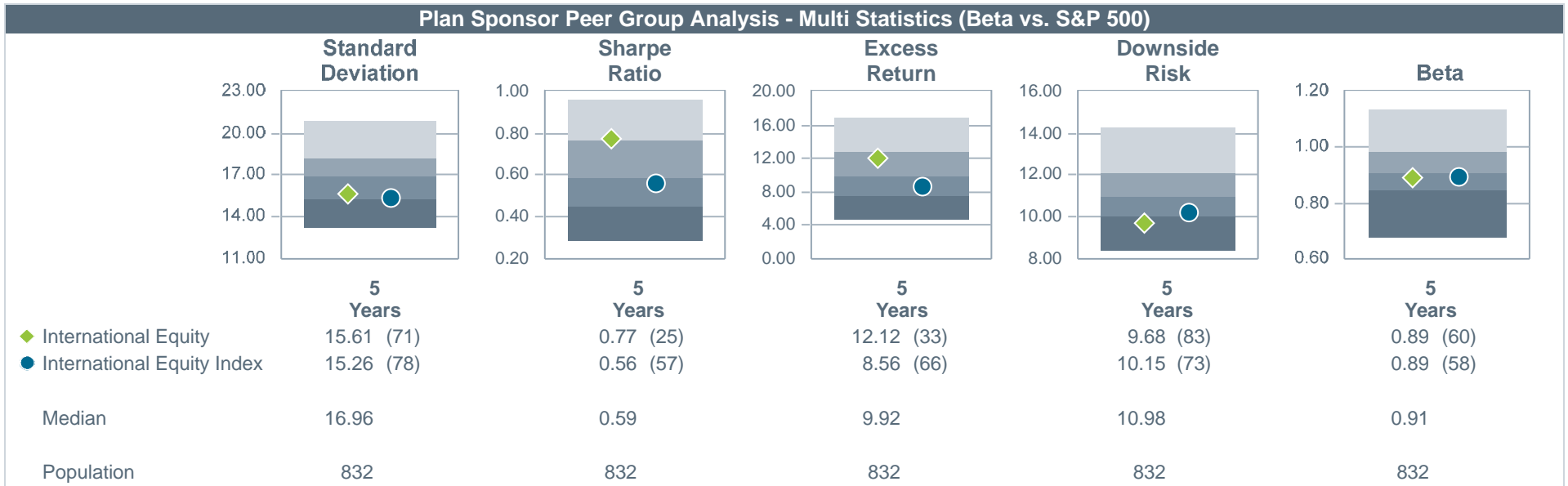
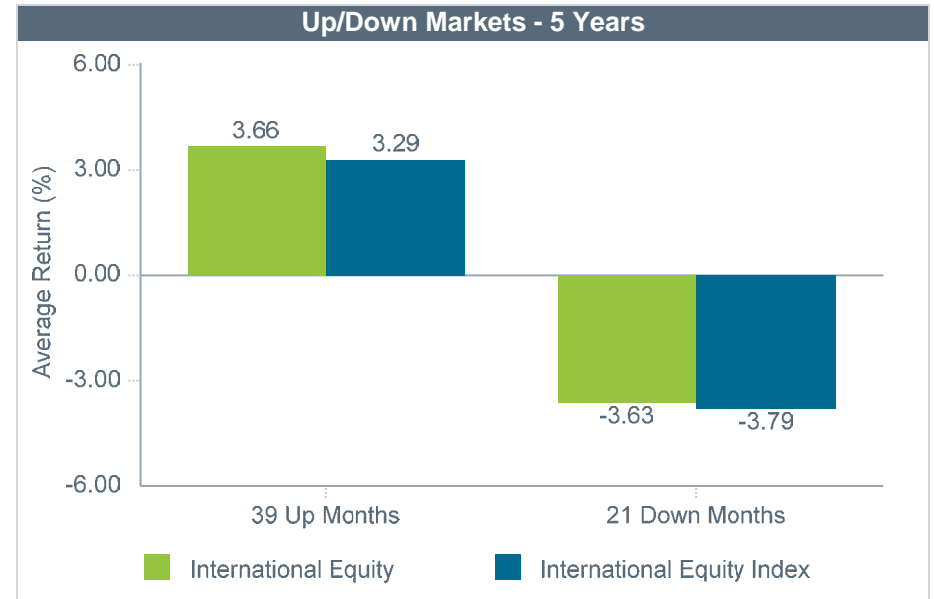
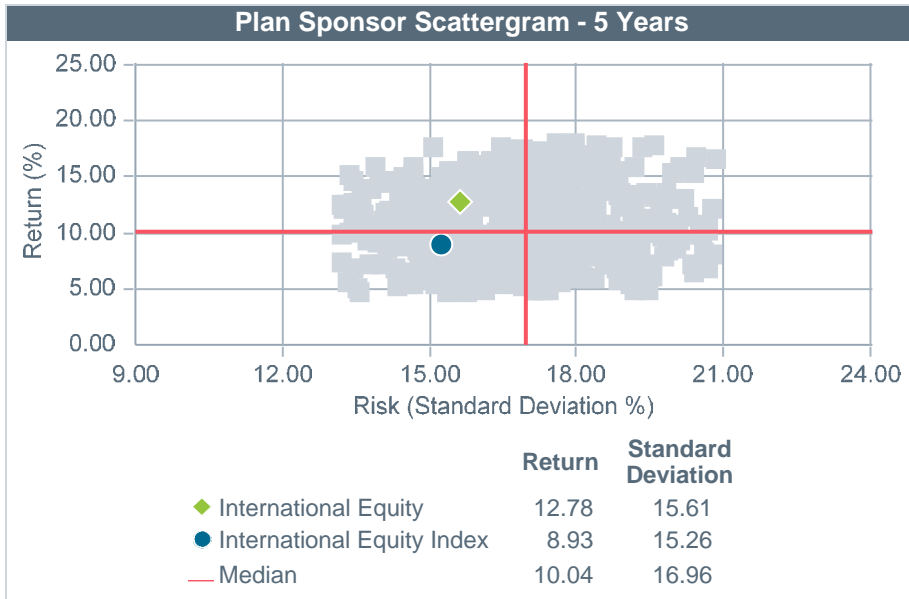
City of Jacksonville Employees' Retirement System
 International Equity vs. IM International Equity (SA+CF)
 Peer Group Analysis

As of December 31, 2020



	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018
◆ International Equity	18.29 (42)	18.29 (42)	20.20 (31)	20.20 (31)	7.66 (36)	12.78 (29)	8.04 (33)	8.63 (23)	22.73 (50)	-15.42 (56)
● International Equity Index	17.01 (55)	17.01 (55)	10.65 (61)	10.65 (61)	4.88 (58)	8.93 (63)	4.82 (72)	5.06 (80)	21.51 (59)	-14.20 (44)
5th Percentile	26.74	26.74	41.89	41.89	16.54	17.94	12.49	11.07	33.73	-6.61
1st Quartile	20.57	20.57	22.59	22.59	9.63	13.28	8.74	8.37	27.16	-12.34
Median	17.35	17.35	13.89	13.89	5.59	10.04	6.38	6.66	22.56	-14.83
3rd Quartile	14.66	14.66	6.32	6.32	2.45	7.45	4.60	5.32	18.42	-17.47
95th Percentile	9.97	9.97	-3.42	-3.42	-1.54	4.53	2.46	3.14	10.27	-21.79
Population	924	924	918	918	877	832	744	602	1,083	1,147

Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



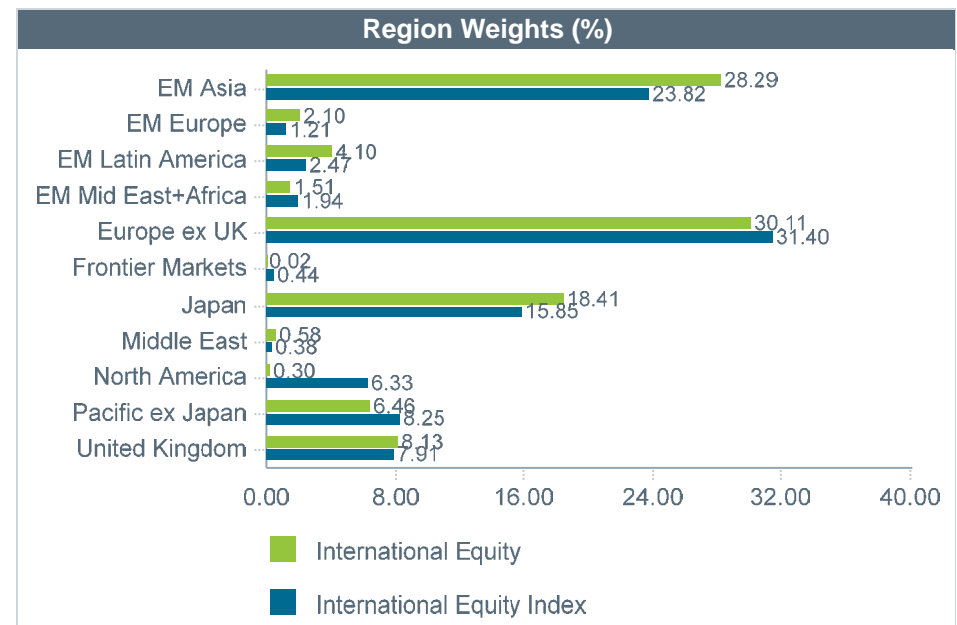
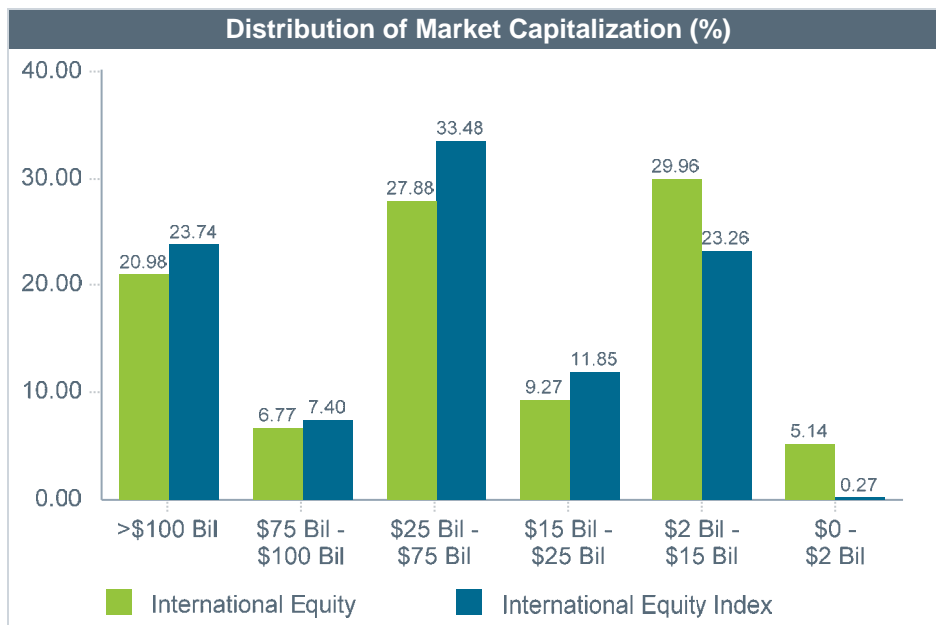
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

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

As of December 31, 2020

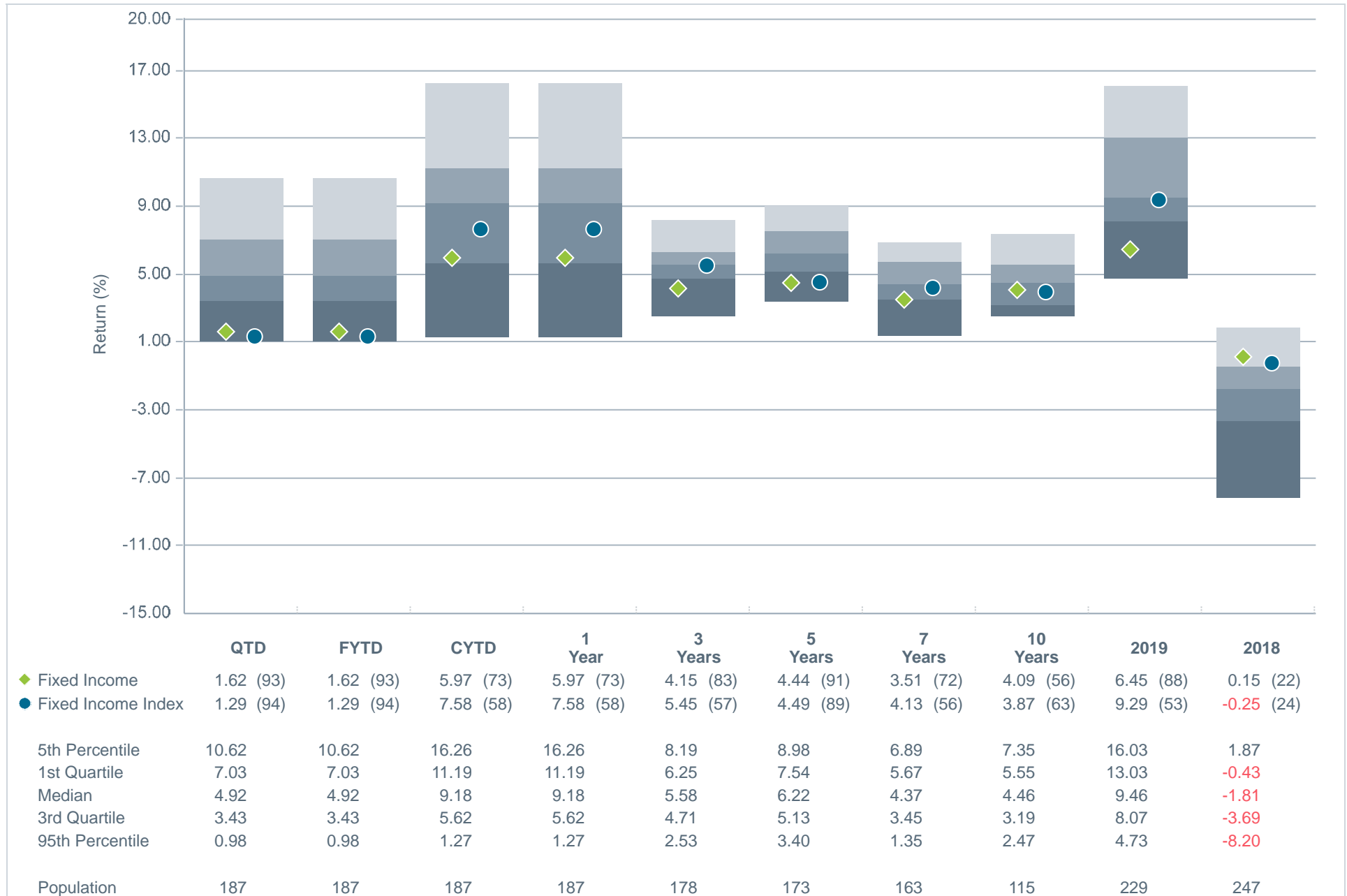
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Tencent Holdings LTD	3.37	1.65	1.72	10.21
M3 Inc	2.89	0.16	2.73	53.18
ASML Holding NV	2.81	0.82	1.99	32.10
MercadoLibre Inc	2.22	0.00	2.22	54.76
Meituan	1.95	0.54	1.41	21.78
Ferrari NV	1.72	0.12	1.60	25.46
Samsung Electronics Co Ltd	1.57	1.41	0.16	49.56
Kering	1.56	0.22	1.34	9.09
Alibaba Group Holding Ltd	1.54	1.74	-0.20	-15.64
Zalando SE	1.43	0.07	1.36	18.73
% of Portfolio	21.06	6.73	14.33	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	98,855	97,624
Median Mkt. Cap (\$M)	3,289	9,463
Price/Earnings Ratio	18.08	20.67
Price/Book Ratio	3.61	2.74
5 Yr. EPS Growth Rate (%)	6.59	6.01
Current Yield (%)	2.11	2.28
Beta (5 Years, Monthly)	1.01	1.00
Number of Securities	616	2,359



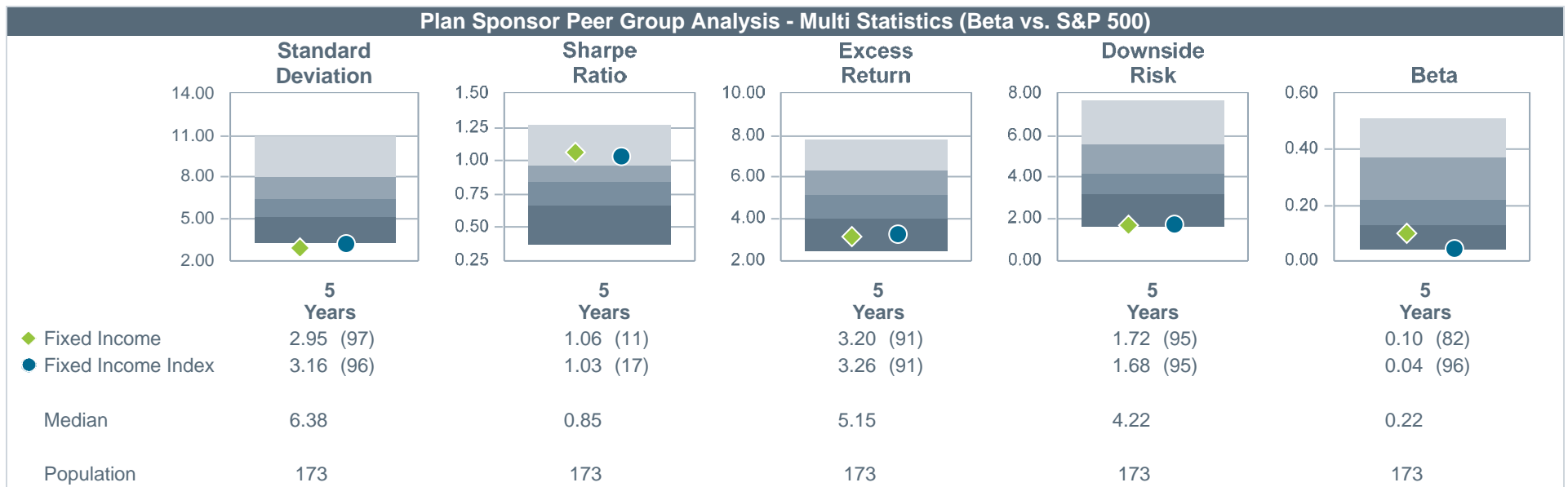
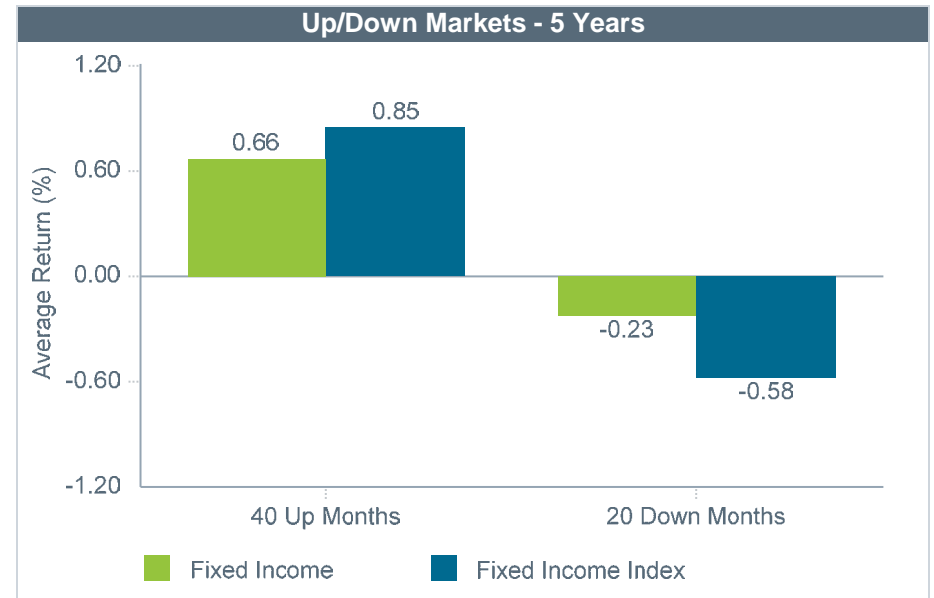
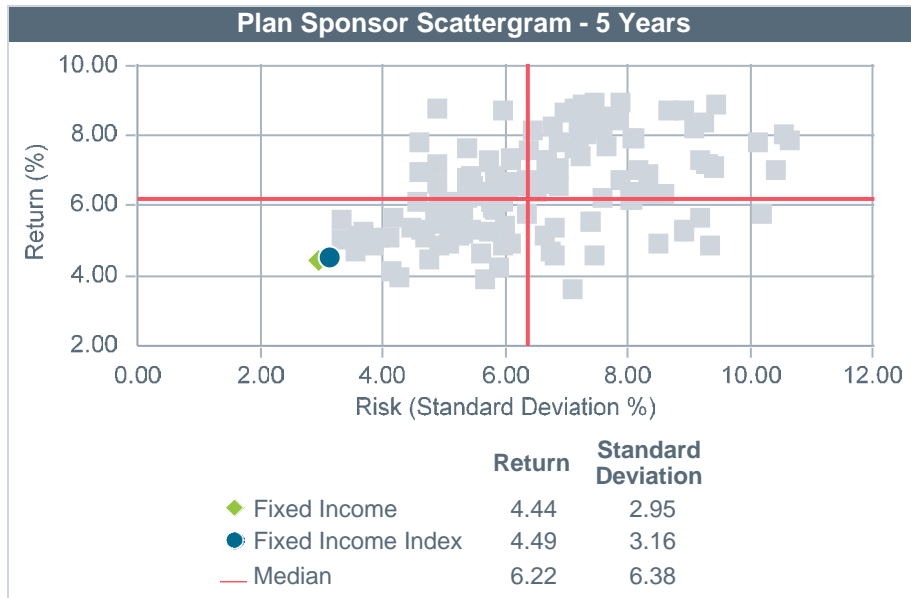
City of Jacksonville Employees' Retirement System
 Fixed Income vs. IM Global Fixed Income (SA+CF)
 Peer Group Analysis

As of December 31, 2020



Performance shown is gross of fees. Parentheses contain percentile ranks. Fiscal year for the COJ ends 09/30.



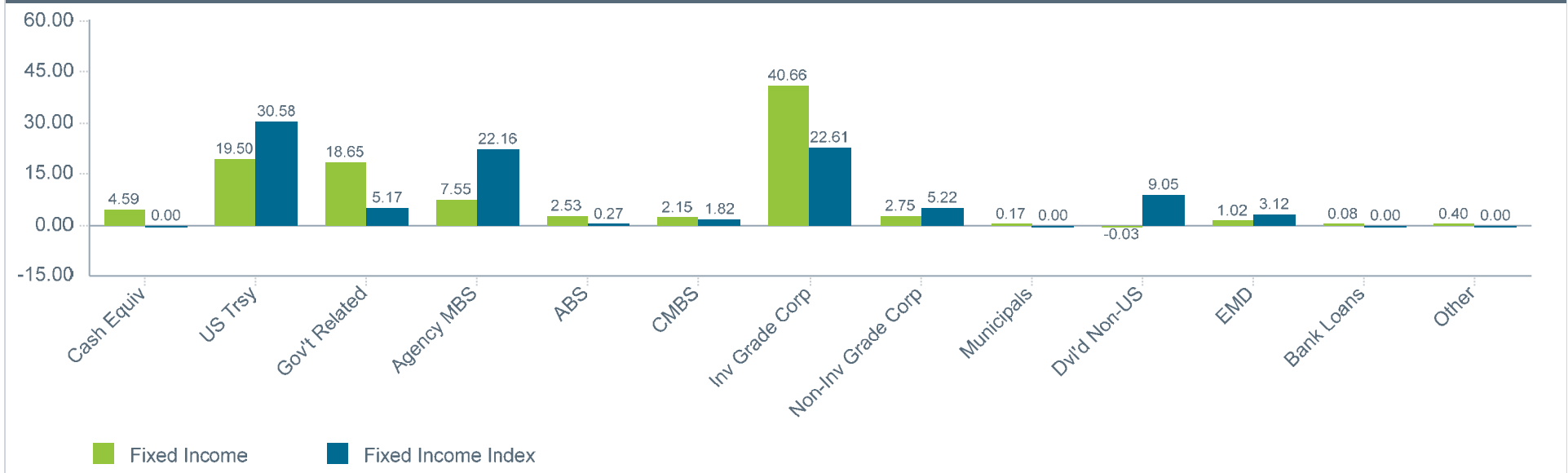


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	4.86	6.05
Avg. Maturity	5.99	8.22
Avg. Quality	A2	N/A
Yield To Maturity (%)	1.75	1.54
Coupon Rate (%)	3.42	3.10
Current Yield (%)	3.10	0.17

Sector Distribution (%)



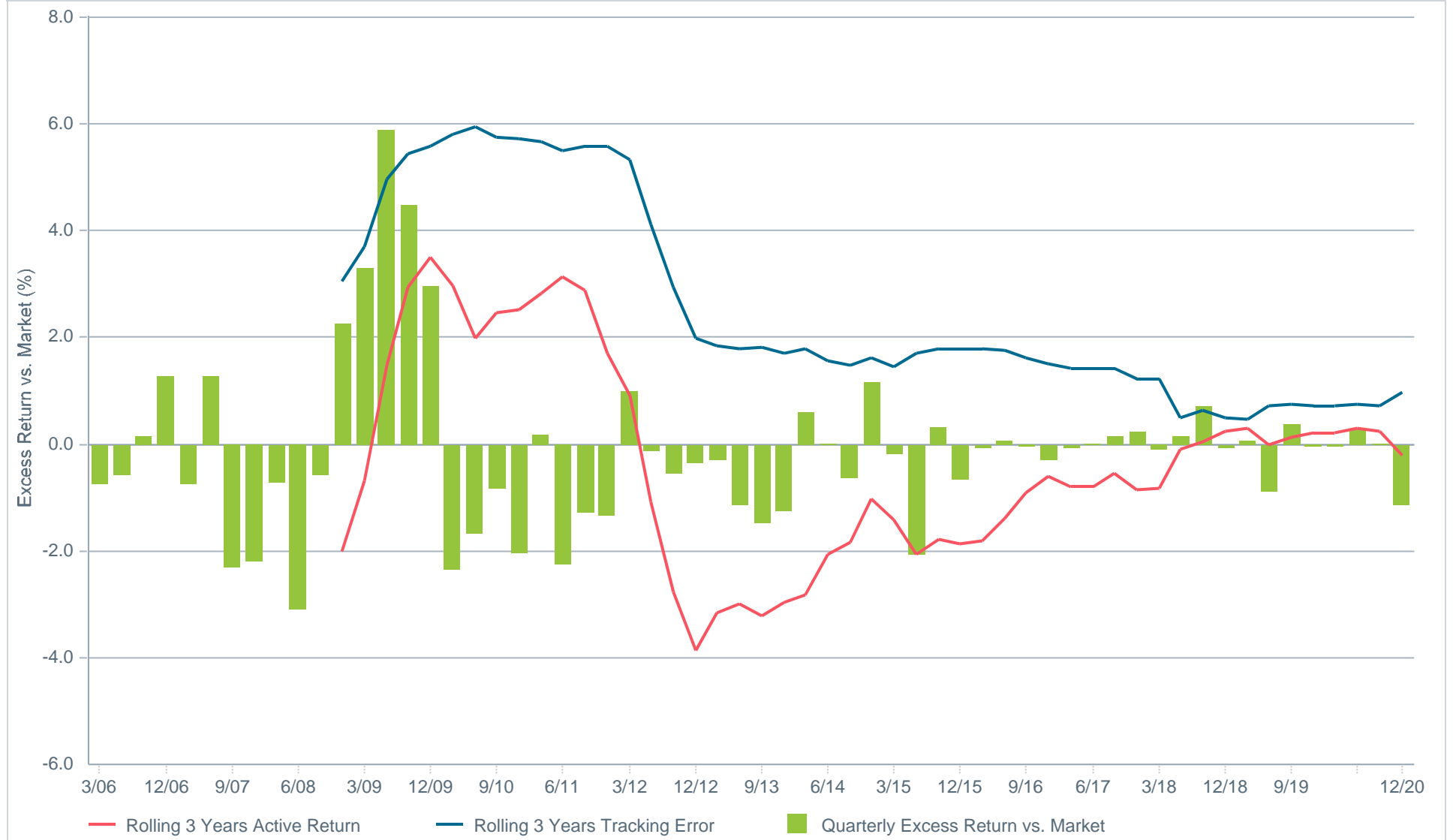
Cash equivalents are defined as any security with duration under one year. Allocation to "Other" consists of derivatives, preferred equity, hedges, and convertibles.



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

As of December 31, 2020

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
Real Estate	0.16	0.16	0.31	0.31	4.69	6.08	8.00	8.71	4.85	9.11	7.99	6.01	12/01/2005
NCREIF ODCE Index (AWA) (Gross)	1.30	1.30	1.19	1.19	4.92	6.21	8.32	9.88	5.34	8.35	7.62	6.74	
Difference	-1.14	-1.14	-0.88	-0.88	-0.23	-0.13	-0.32	-1.17	-0.49	0.76	0.37	-0.73	



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 December 31, 2020

	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	Since Incep.	Inception Date
Diversifying Assets	13.17	13.17	-14.35	-14.35	-4.55	-0.10	-1.05	N/A	6.21	-4.42	0.33	4.06	03/01/2011
Diversifying Assets Index	13.78	13.78	-18.40	-18.40	-6.44	-1.75	-2.53	1.42	7.29	-6.47	-0.66	1.11	
Difference	-0.61	-0.61	4.05	4.05	1.89	1.65	1.48	N/A	-1.08	2.05	0.99	2.95	



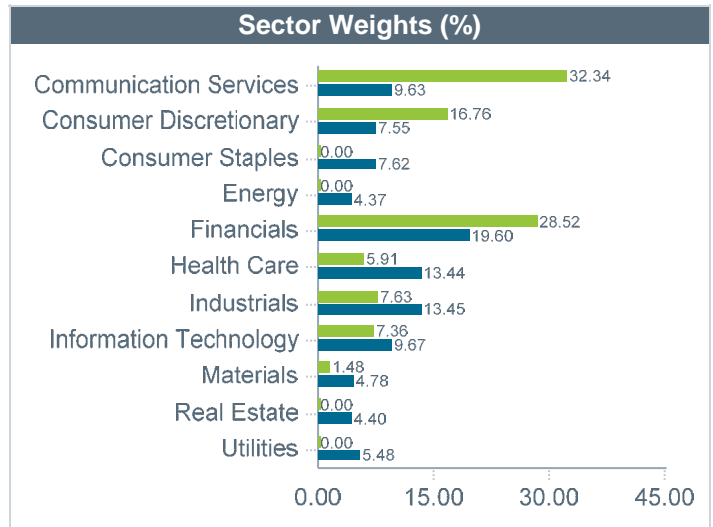
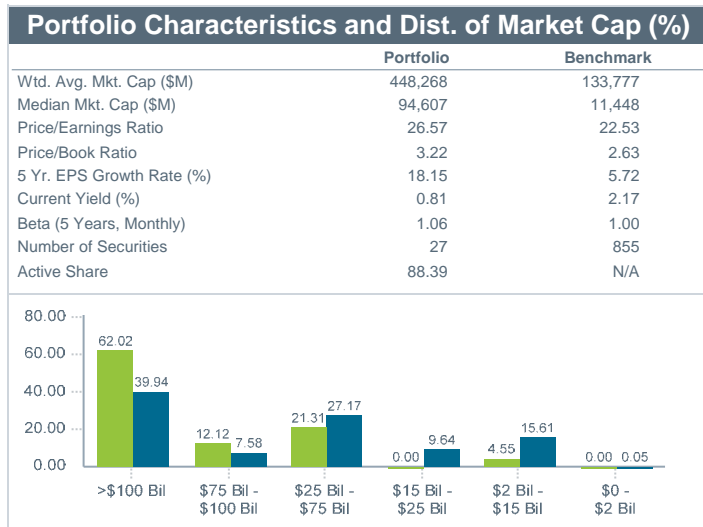
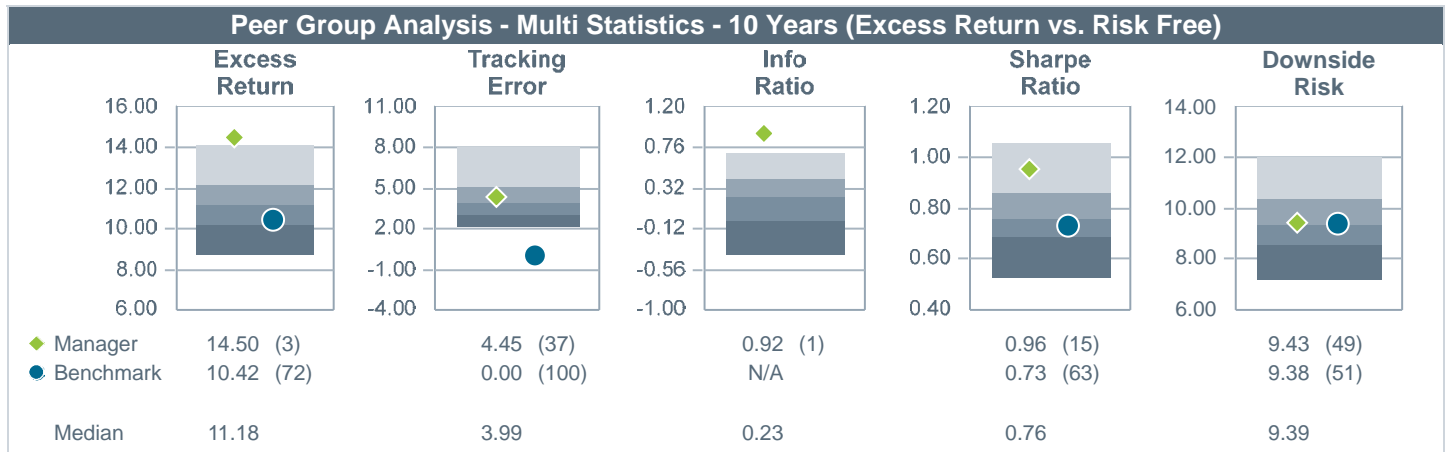
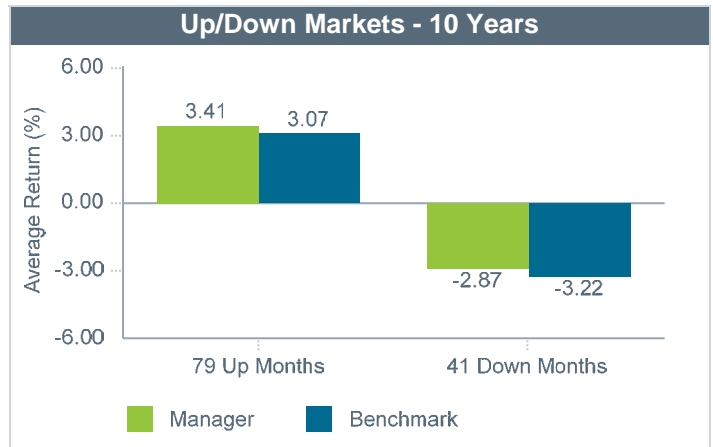
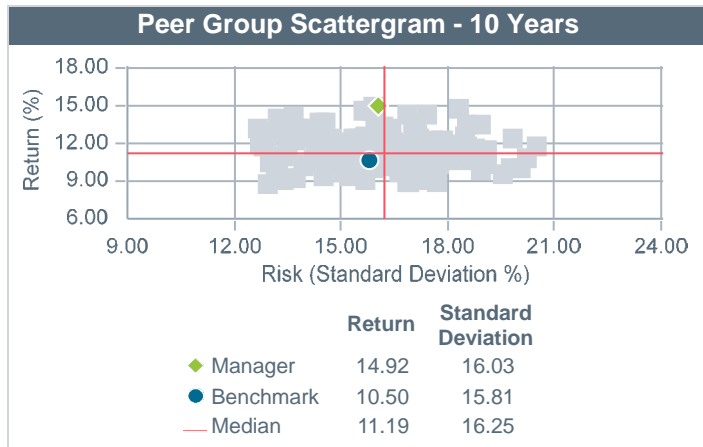
Performance shown is gross of fees. Calculation is based on quarterly periodicity.



Investment Manager Profiles



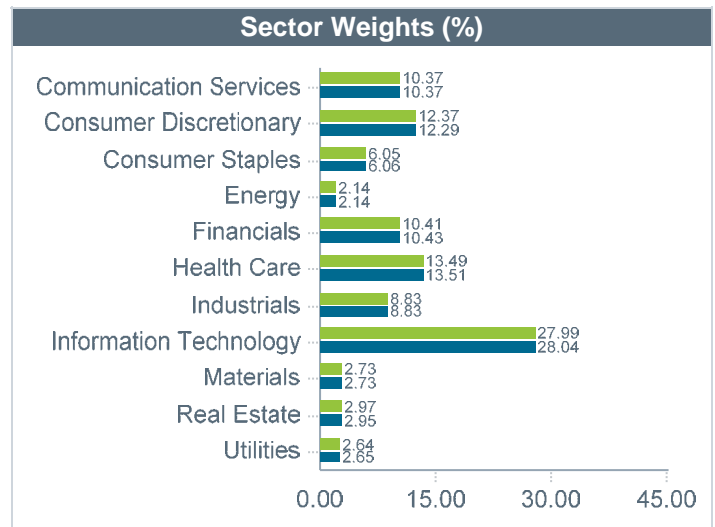
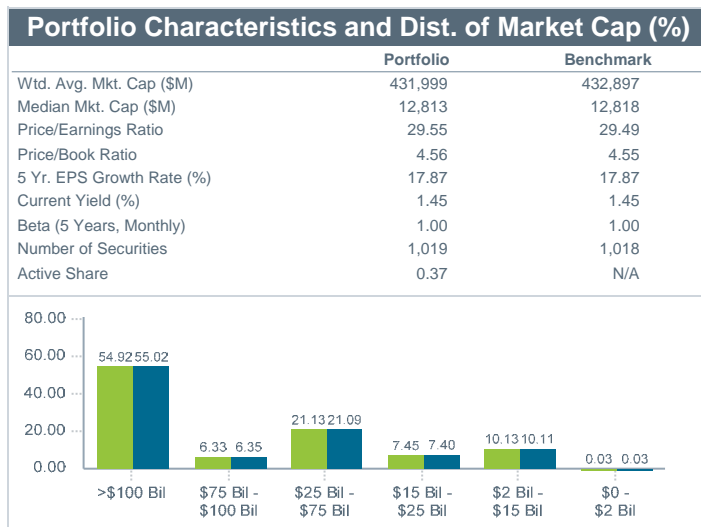
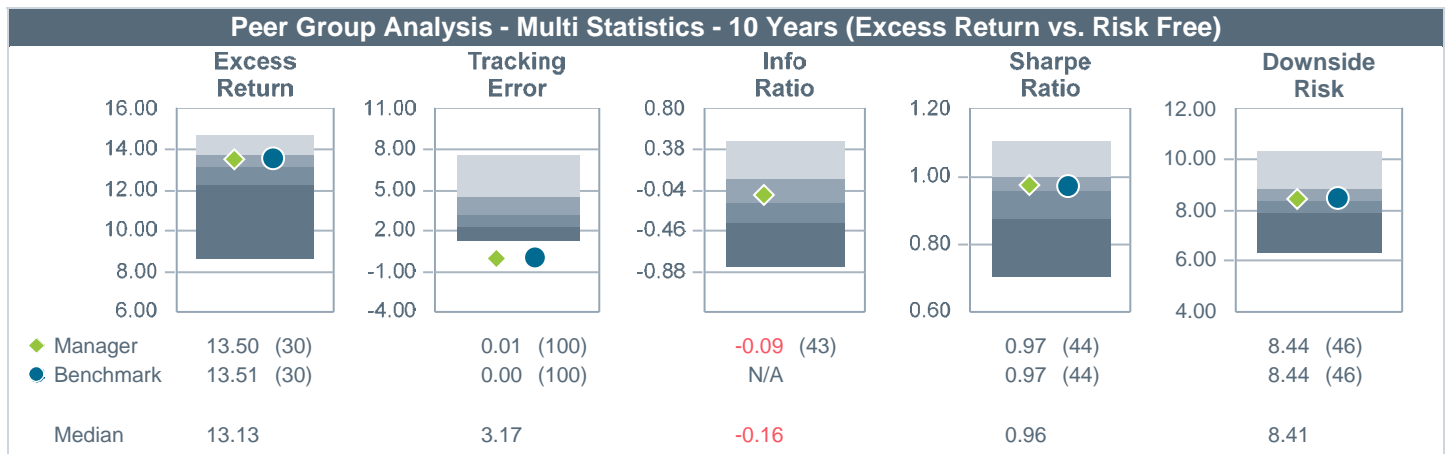
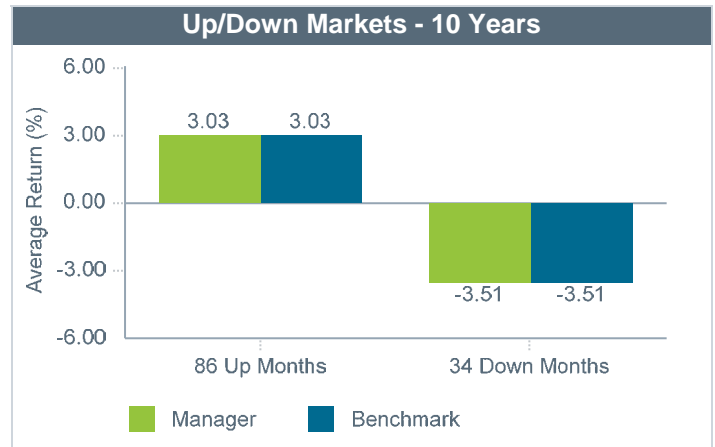
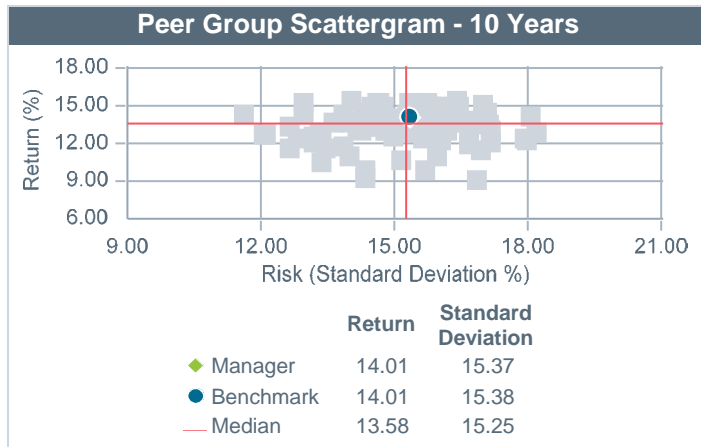
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	20.32	15.54	13.57	15.19	12.93	14.92	31.94	-3.90	24.19	11.46	2.34
Benchmark	16.25	2.80	6.07	9.74	8.20	10.50	26.54	-8.27	13.66	17.34	-3.83
Difference	4.07	12.74	7.50	5.45	4.73	4.42	5.40	4.37	10.53	-5.88	6.17
Peer Group Median	15.92	5.00	7.23	10.64	8.92	11.19	27.29	-8.27	17.27	14.53	-2.22
Rank	20	14	12	11	7	4	14	16	7	73	12
Population	254	253	250	245	237	213	310	330	349	378	392



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



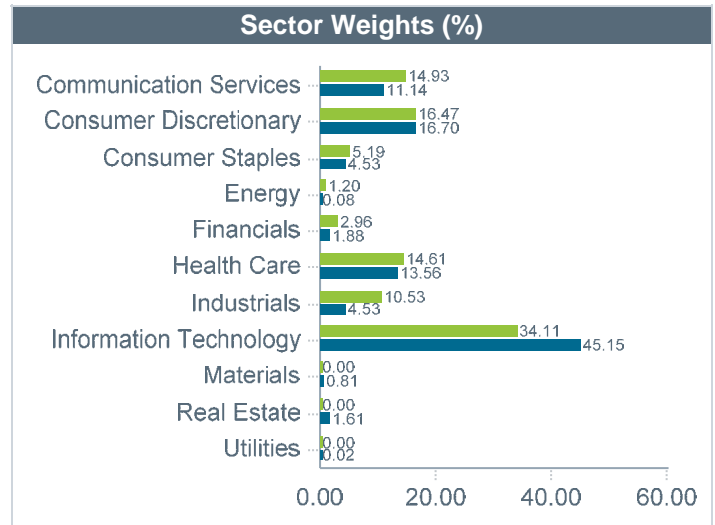
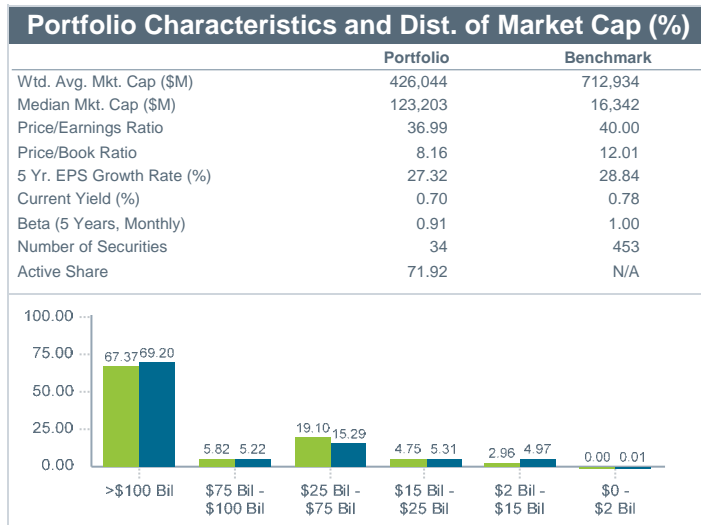
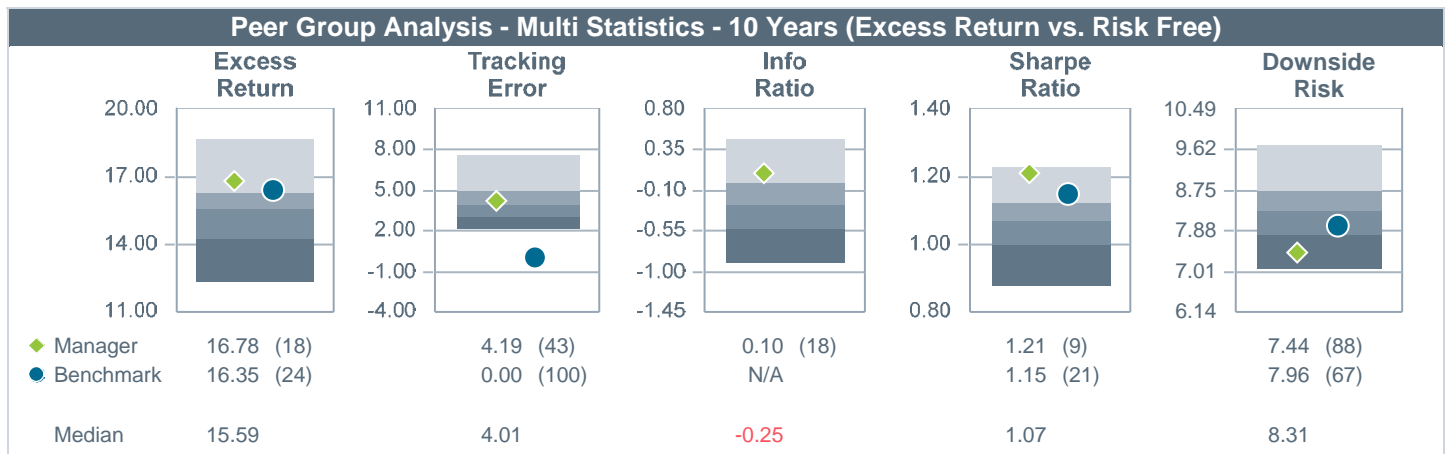
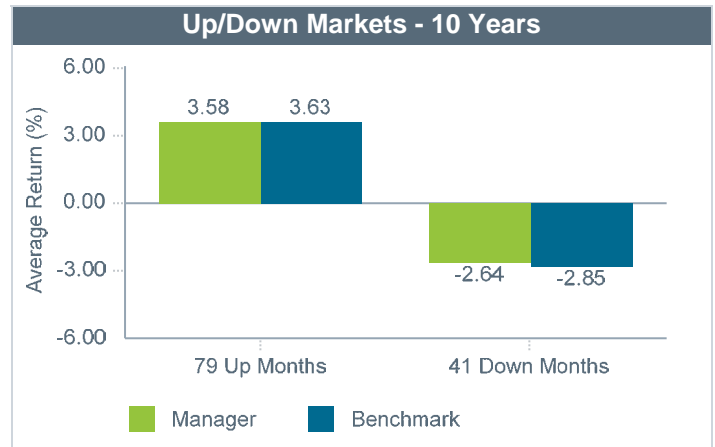
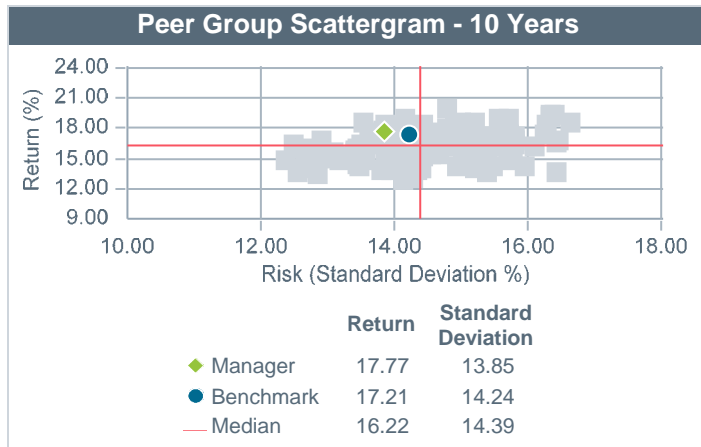
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	13.69	20.91	14.80	15.58	13.04	14.01	31.42	-4.77	21.68	12.04	0.93
Benchmark	13.69	20.96	14.82	15.60	13.04	14.01	31.43	-4.78	21.69	12.05	0.92
Difference	0.00	-0.05	-0.02	-0.02	0.00	0.00	-0.01	0.01	-0.01	-0.01	0.01
Peer Group Median	12.15	16.00	12.94	14.26	12.33	13.58	30.00	-5.15	21.84	10.54	1.43
Rank	28	26	26	25	29	32	36	43	53	32	57
Population	178	178	176	170	165	147	245	274	297	317	333



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

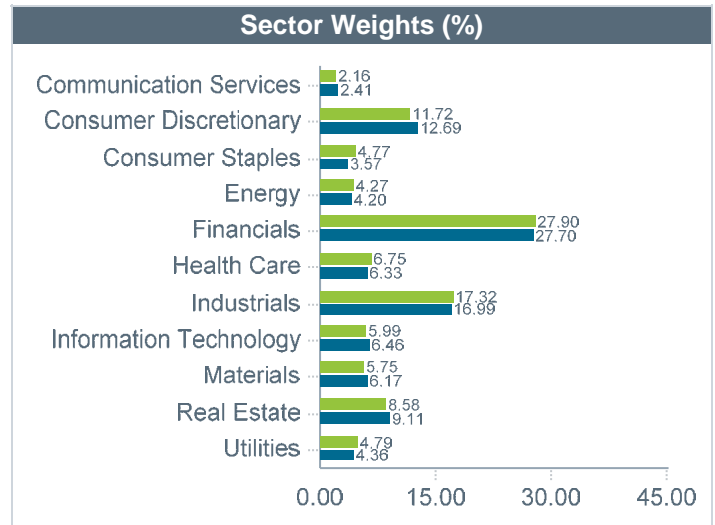
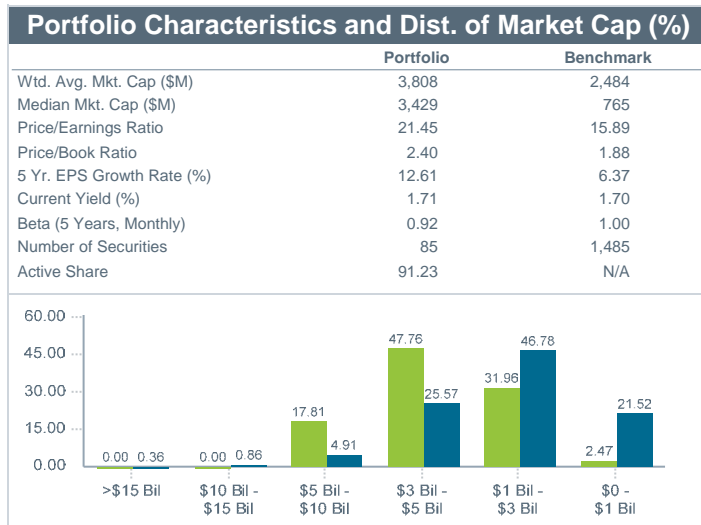
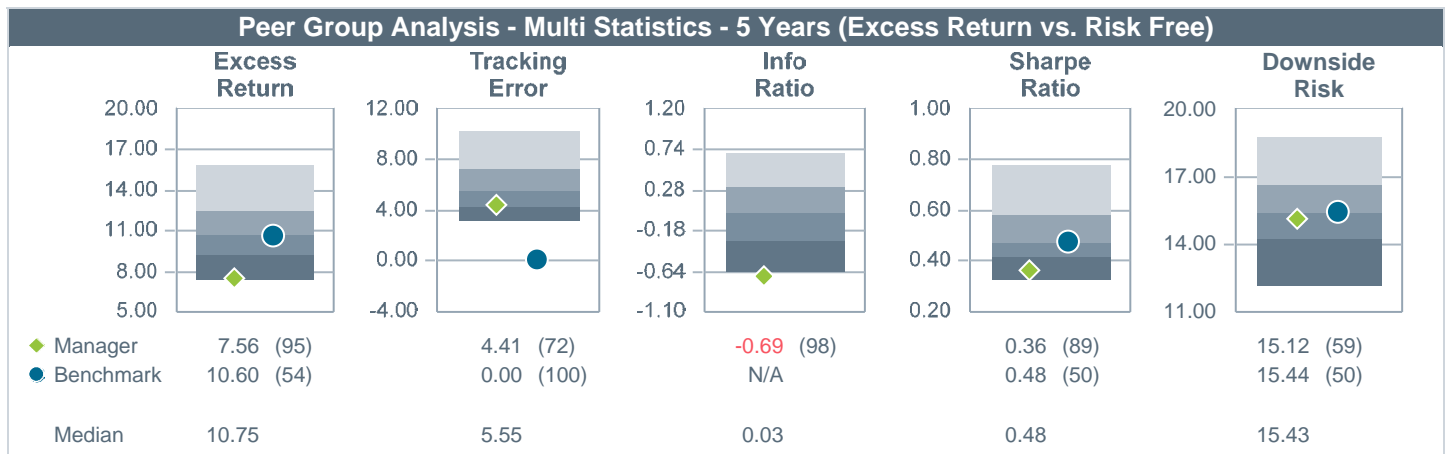
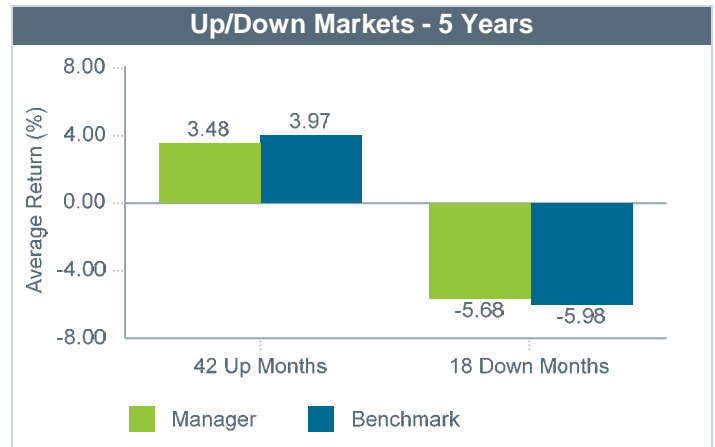
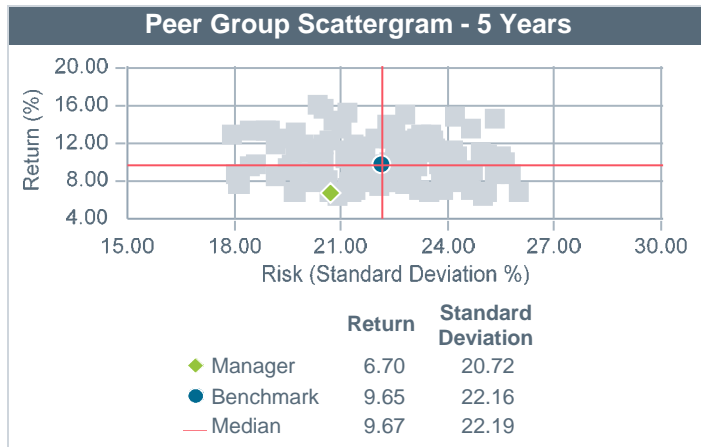


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	8.83	32.95	20.14	19.88	17.39	17.77	32.71	-1.72	34.03	6.54	10.99
Benchmark	11.39	38.49	22.99	21.00	17.53	17.21	36.39	-1.51	30.21	7.08	5.67
Difference	-2.56	-5.54	-2.85	-1.12	-0.14	0.56	-3.68	-0.21	3.82	-0.54	5.32
Peer Group Median	11.57	34.51	20.95	19.01	16.03	16.25	33.81	-0.93	28.26	4.72	5.07
Rank	91	57	61	39	26	17	61	56	16	34	11
Population	205	205	201	192	187	176	252	277	288	308	336



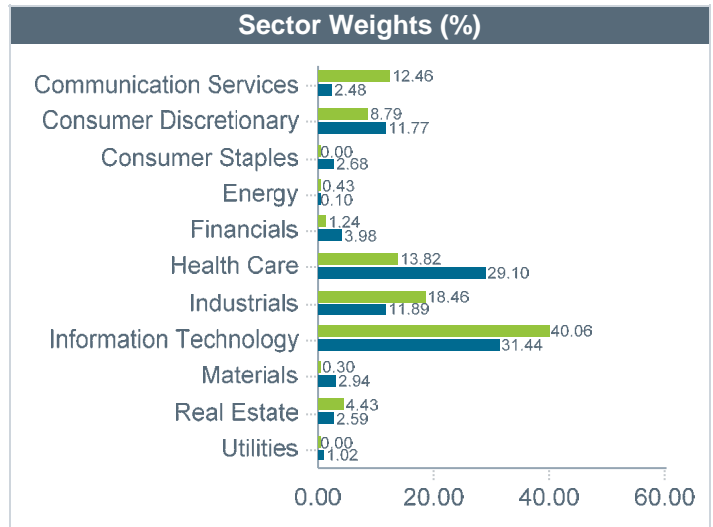
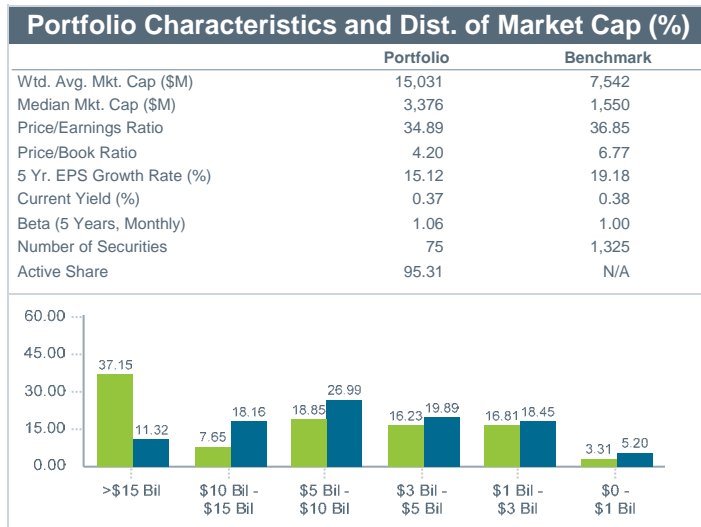
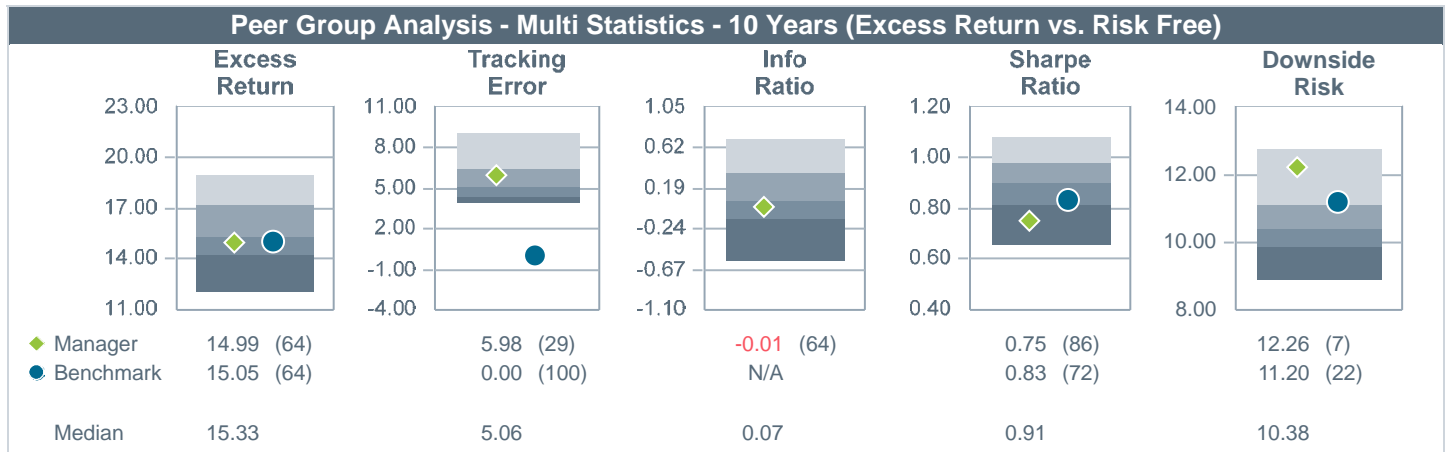
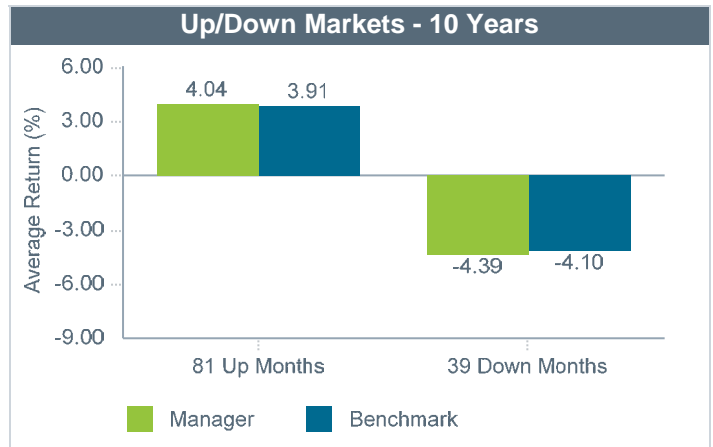
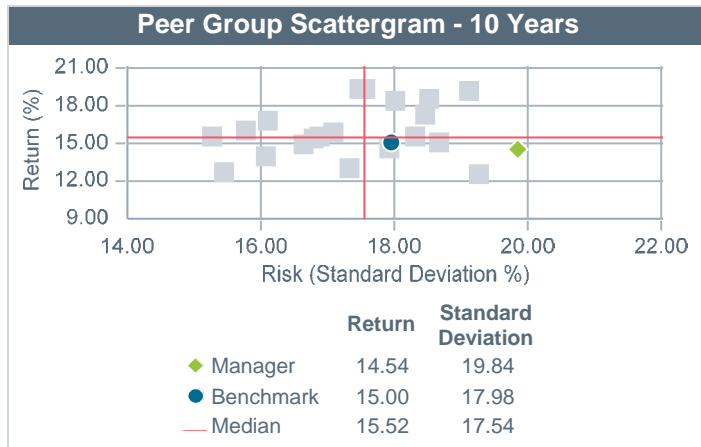
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	27.63	-4.55	-0.17	6.70	N/A	N/A	22.23	-14.72	8.97	27.58	-4.33
Benchmark	33.36	4.63	3.72	9.65	6.25	8.66	22.39	-12.86	7.84	31.74	-7.47
Difference	-5.73	-9.18	-3.89	-2.95	N/A	N/A	-0.16	-1.86	1.13	-4.16	3.14
Peer Group Median	29.84	5.20	4.47	9.67	6.95	9.97	25.07	-14.16	11.61	26.80	-4.30
Rank	65	96	91	91	N/A	N/A	75	55	68	44	51
Population	175	175	169	166	163	151	200	220	229	235	245



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

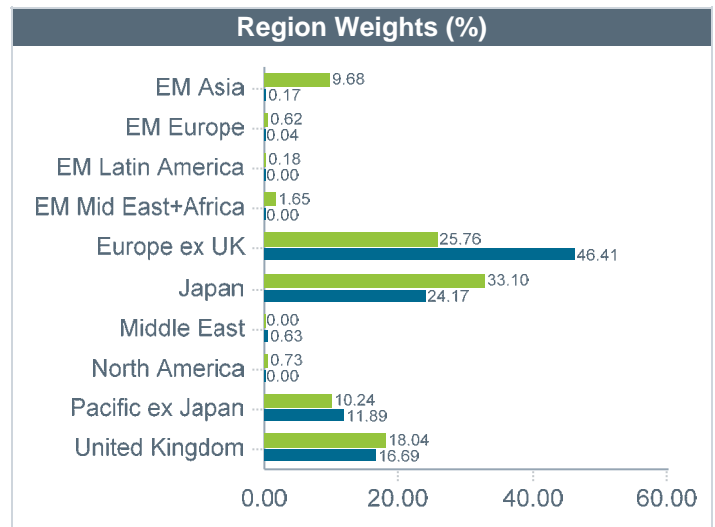
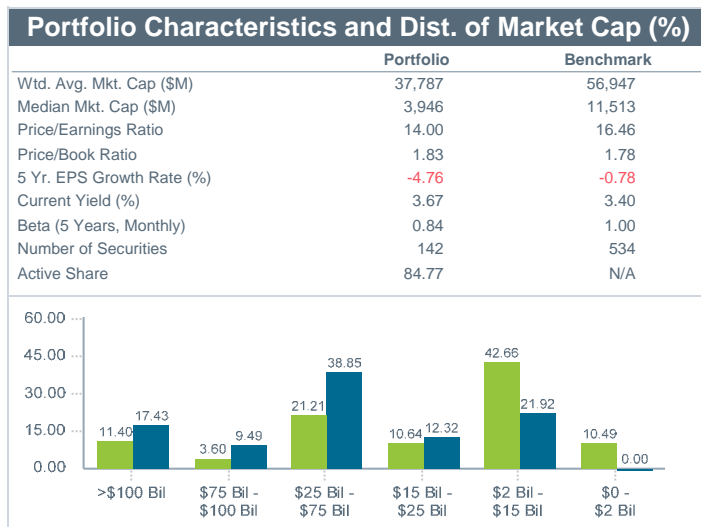
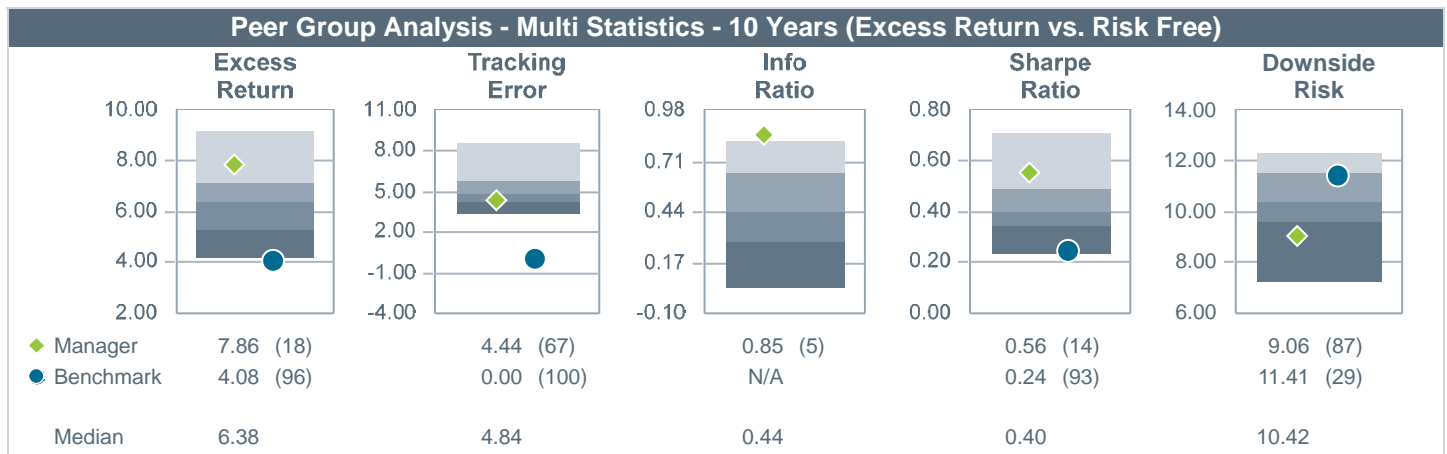
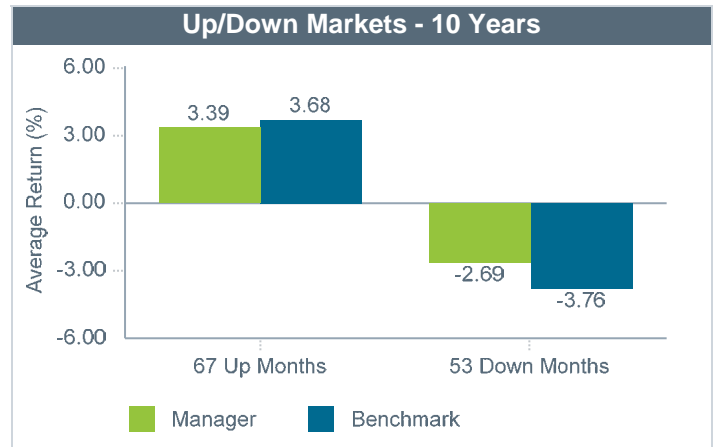
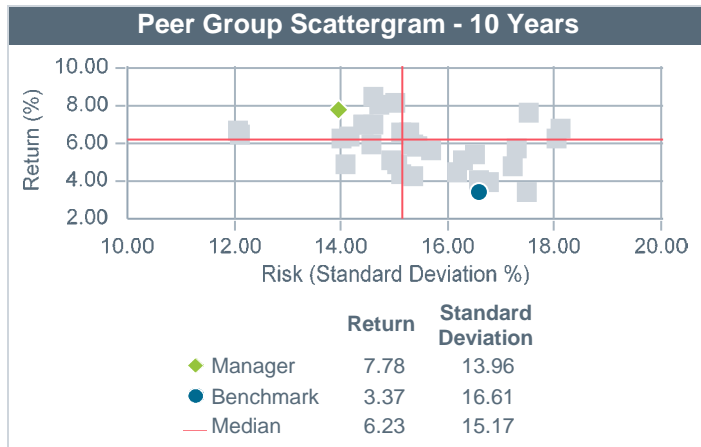
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	33.21	33.32	19.16	17.54	13.67	14.54	41.57	-10.36	25.99	5.26	0.62
Benchmark	25.89	40.47	19.91	18.68	14.09	15.00	32.65	-7.47	24.46	9.73	-0.19
Difference	7.32	-7.15	-0.75	-1.14	-0.42	-0.46	8.92	-2.89	1.53	-4.47	0.81
Peer Group Median	22.95	42.59	23.54	19.68	14.56	15.52	31.74	-4.63	24.95	8.56	0.11
Rank	4	71	71	74	63	75	3	86	43	78	40
Population	51	50	45	41	34	28	57	62	61	67	68



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

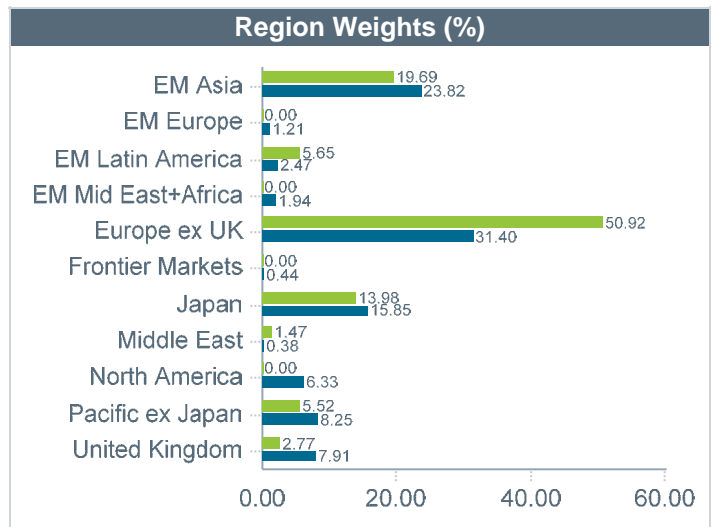
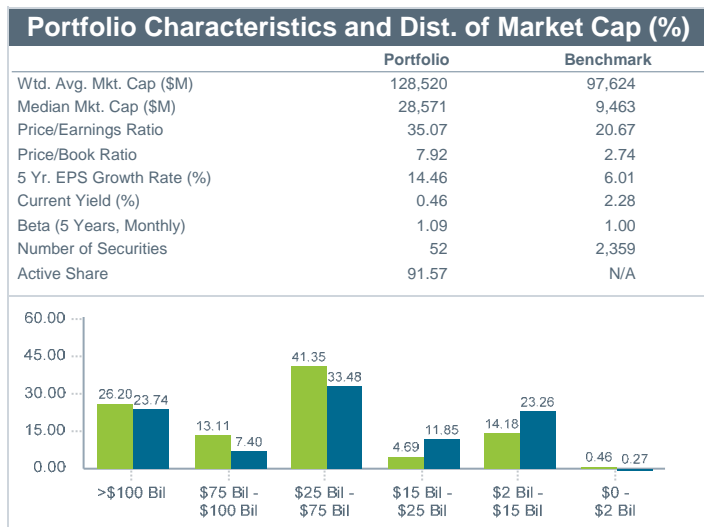
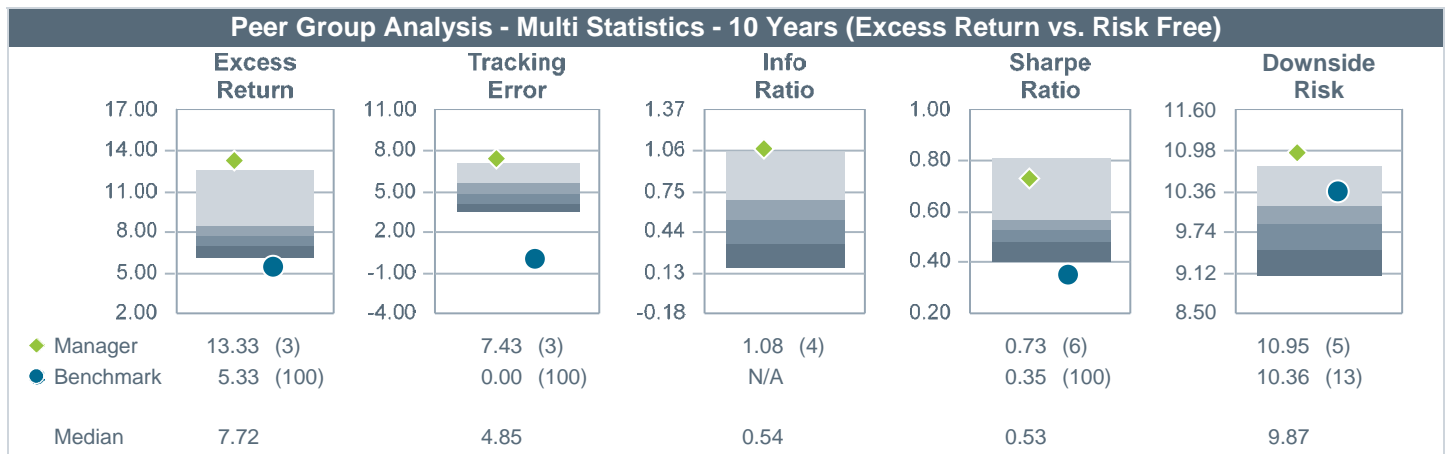
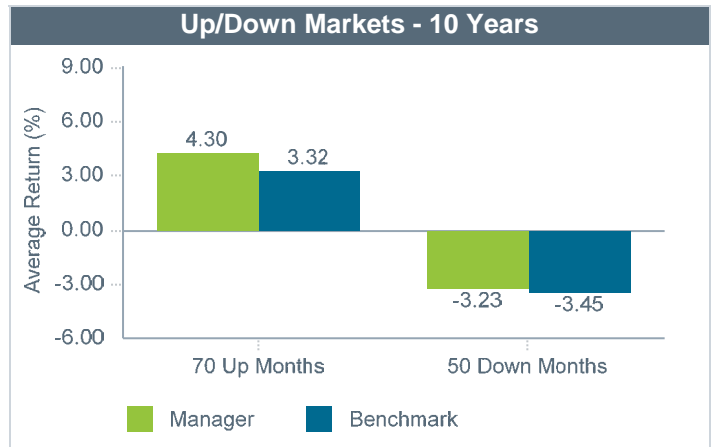
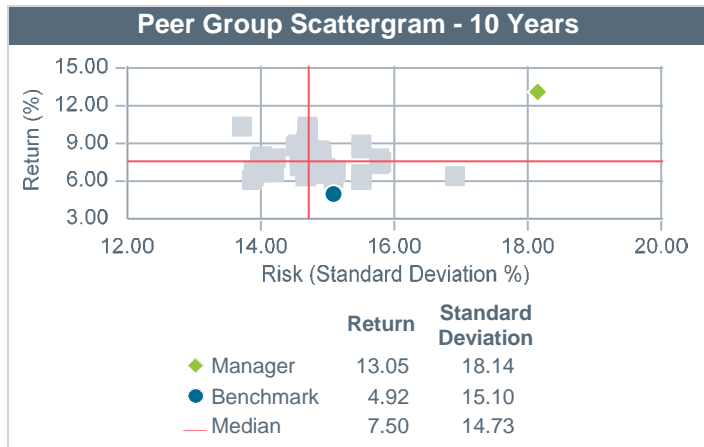


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	15.36	0.17	0.66	7.18	5.29	7.78	18.05	-13.74	28.10	8.27	2.35
Benchmark	19.20	-2.63	-1.24	4.20	1.32	3.37	16.09	-14.78	21.44	5.02	-5.68
Difference	-3.84	2.80	1.90	2.98	3.97	4.41	1.96	1.04	6.66	3.25	8.03
Peer Group Median	17.81	4.37	2.16	6.69	3.71	6.23	21.17	-15.76	24.17	3.15	-1.05
Rank	66	82	72	33	25	15	89	41	26	9	26
Population	47	47	47	47	47	45	55	59	61	65	76



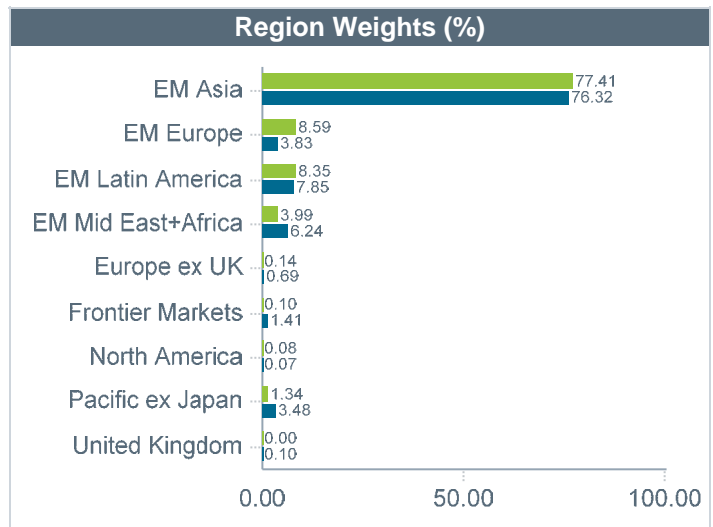
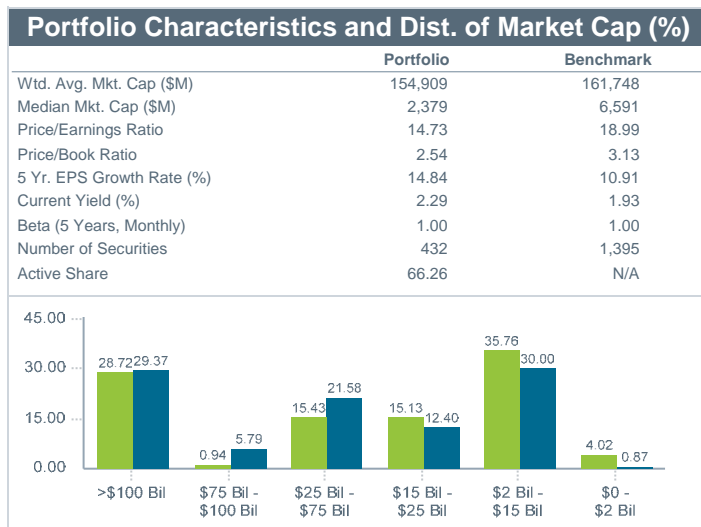
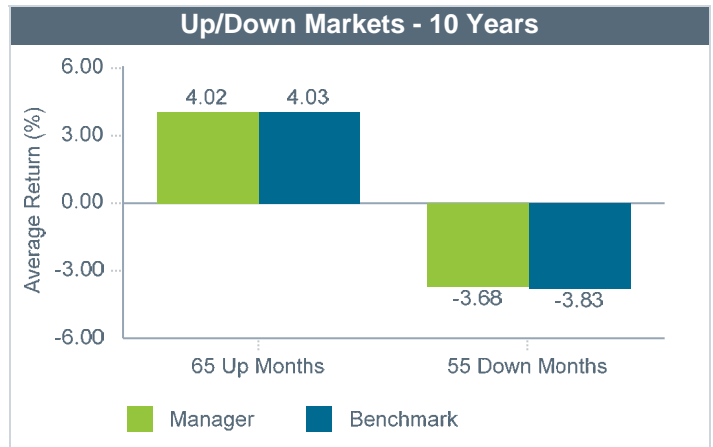
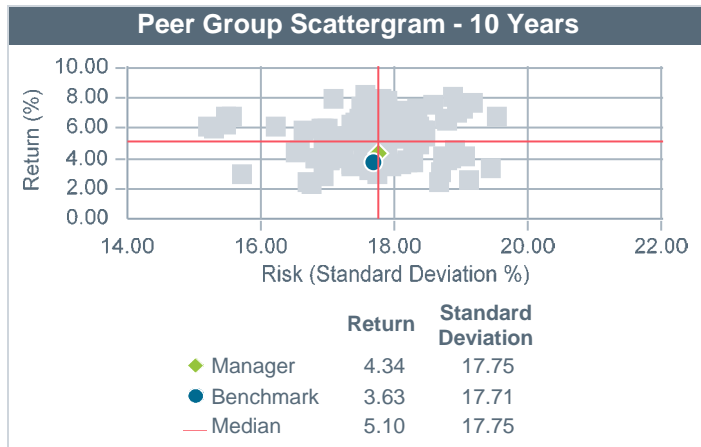
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	20.86	63.13	22.90	22.47	13.91	13.05	37.48	-17.23	46.37	1.43	-2.99
Benchmark	17.01	10.65	4.88	8.93	4.82	4.92	21.51	-14.20	27.19	4.50	-5.66
Difference	3.85	52.48	18.02	13.54	9.09	8.13	15.97	-3.03	19.18	-3.07	2.67
Peer Group Median	14.91	22.75	10.72	12.02	7.90	7.50	27.84	-14.32	32.37	-0.80	0.27
Rank	5	1	2	2	7	5	2	79	5	17	100
Population	170	170	170	152	127	107	172	176	188	165	143



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

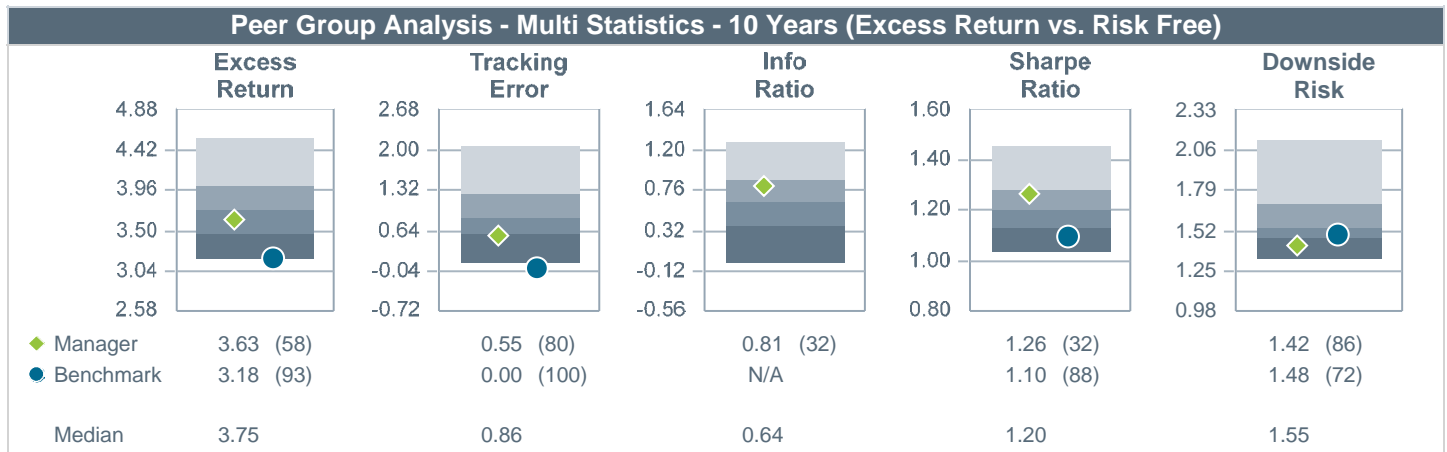
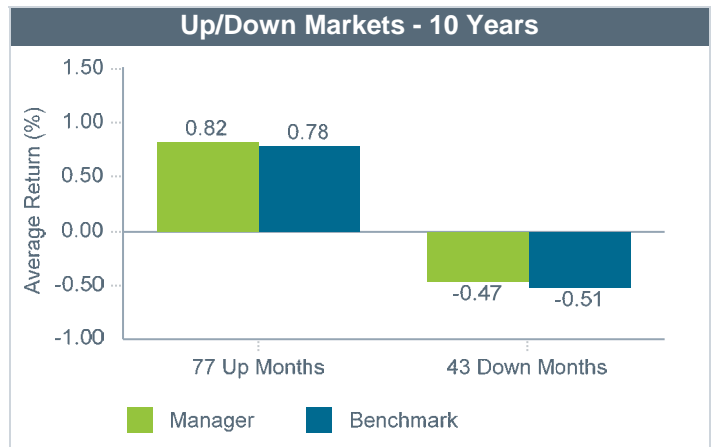
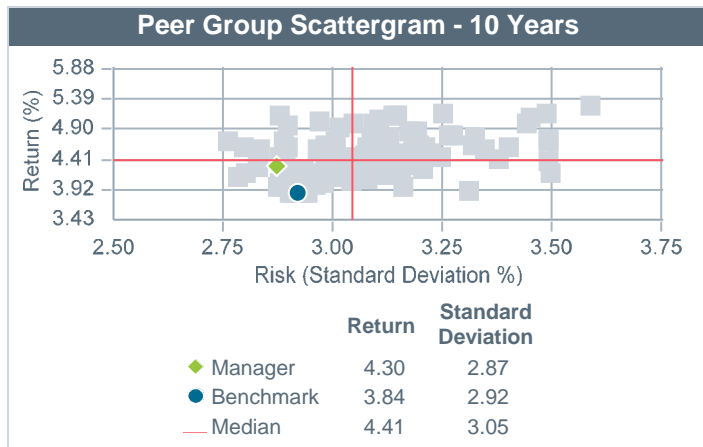
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	18.81	12.55	2.76	11.45	5.50	4.34	18.00	-18.30	38.94	14.08	-17.37
Benchmark	19.70	18.31	6.17	12.81	6.17	3.63	18.44	-14.58	37.28	11.19	-14.92
Difference	-0.89	-5.76	-3.41	-1.36	-0.67	0.71	-0.44	-3.72	1.66	2.89	-2.45
Peer Group Median	19.78	18.14	6.18	12.71	6.66	5.10	19.49	-15.23	36.79	10.37	-12.66
Rank	63	73	79	66	69	62	64	81	36	23	90
Population	258	257	244	232	201	138	314	323	336	347	348



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

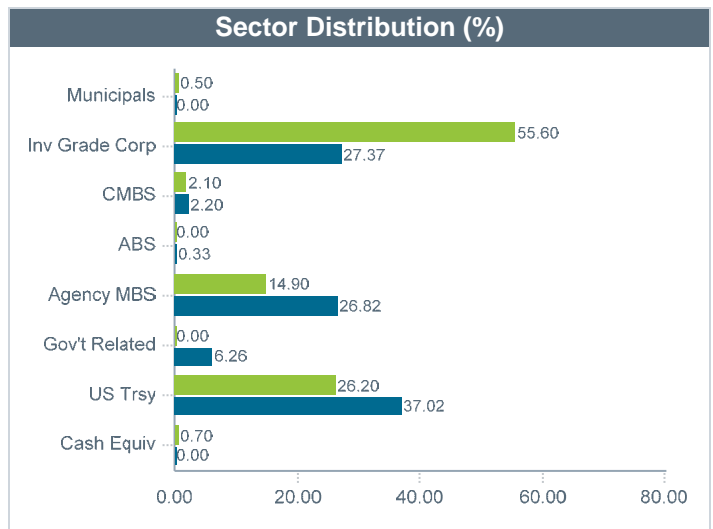


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	0.70	7.85	5.57	4.72	4.48	4.30	8.82	0.26	3.84	3.08	1.21
Benchmark	0.67	7.51	5.34	4.44	4.09	3.84	8.72	0.01	3.54	2.65	0.55
Difference	0.03	0.34	0.23	0.28	0.39	0.46	0.10	0.25	0.30	0.43	0.66
Peer Group Median	1.13	8.60	5.88	5.04	4.58	4.41	9.18	0.07	4.03	3.10	0.82
Rank	78	72	72	72	60	57	69	31	61	53	17
Population	136	136	133	131	128	121	152	158	163	170	175



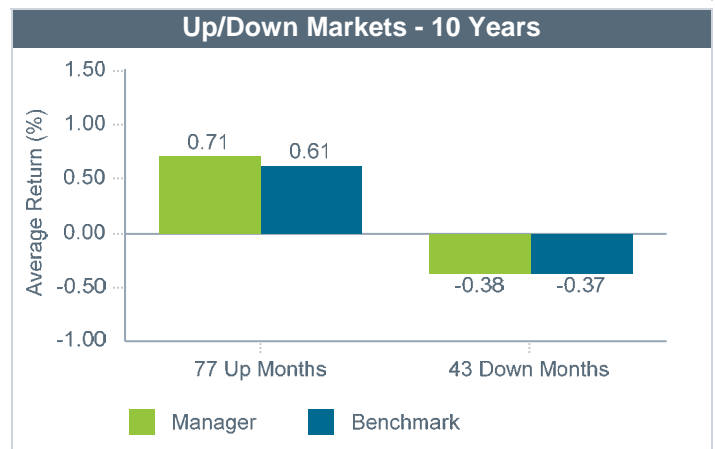
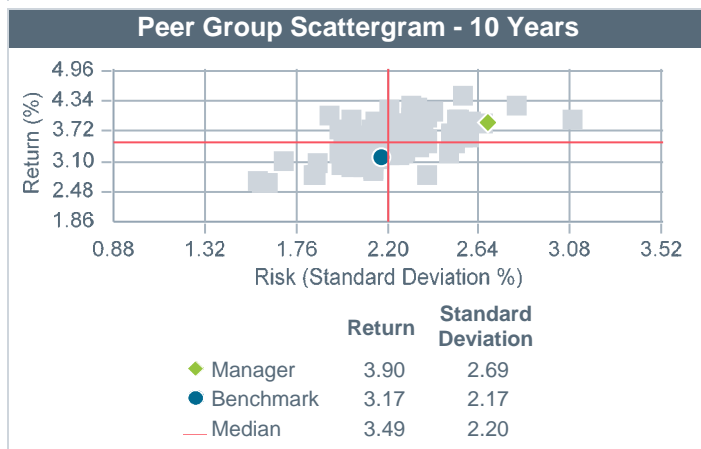
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.10	6.22
Spread Duration	5.28	6.44
Avg. Maturity	7.64	8.28
Avg. Quality	Aa2	Aa1/Aa2
Yield To Maturity (%)	1.14	1.14
Coupon Rate (%)	3.66	2.76
Current Yield (%)	3.09	N/A
Holdings Count	202	11,984



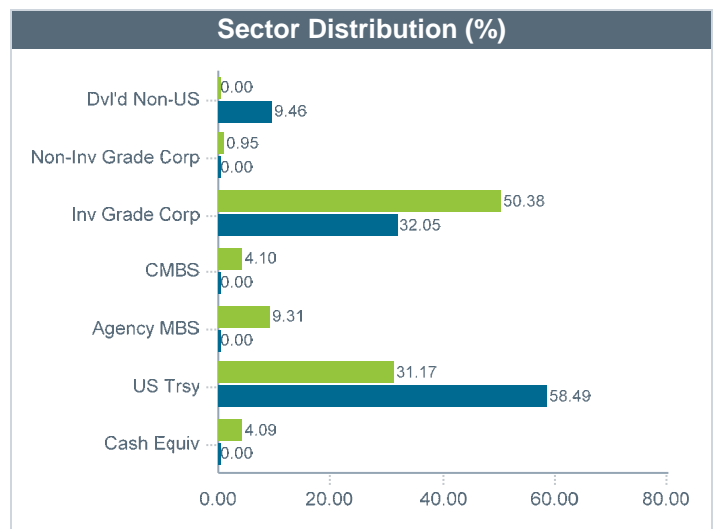
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	0.99	6.75	4.81	4.49	3.64	3.90	7.97	-0.10	3.38	4.66	-0.91
Benchmark	0.50	6.30	4.67	3.66	3.25	3.17	6.91	0.89	2.17	2.15	1.17
Difference	0.49	0.45	0.14	0.83	0.39	0.73	1.06	-0.99	1.21	2.51	-2.08
Peer Group Median	0.69	6.88	4.92	3.93	3.53	3.49	6.93	0.93	2.55	2.37	1.30
Rank	31	56	59	14	38	18	11	98	16	5	100
Population	146	146	146	144	140	131	162	169	173	182	181



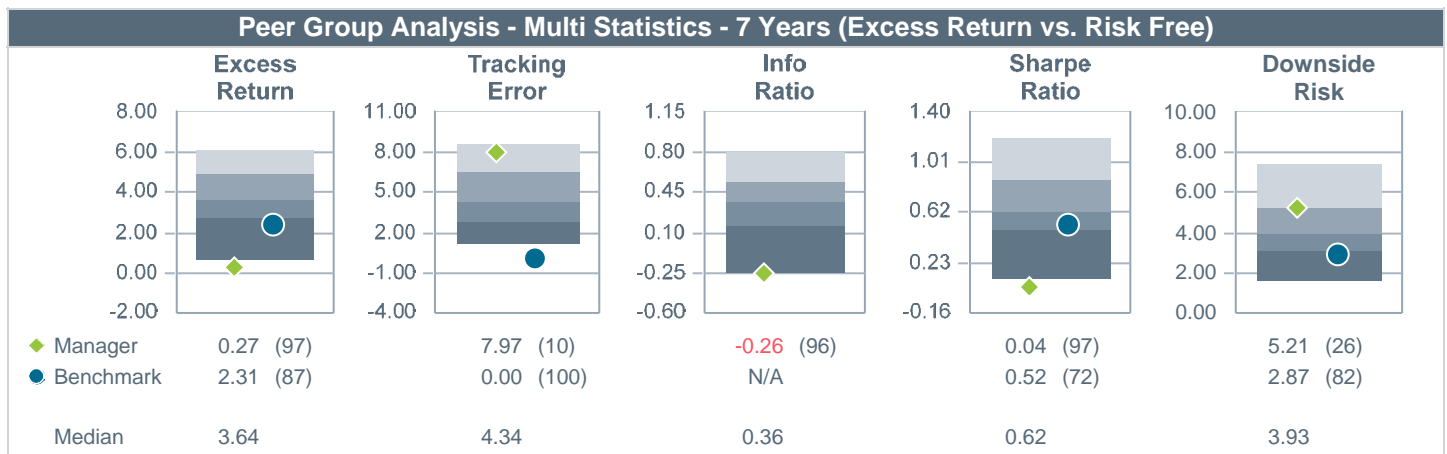
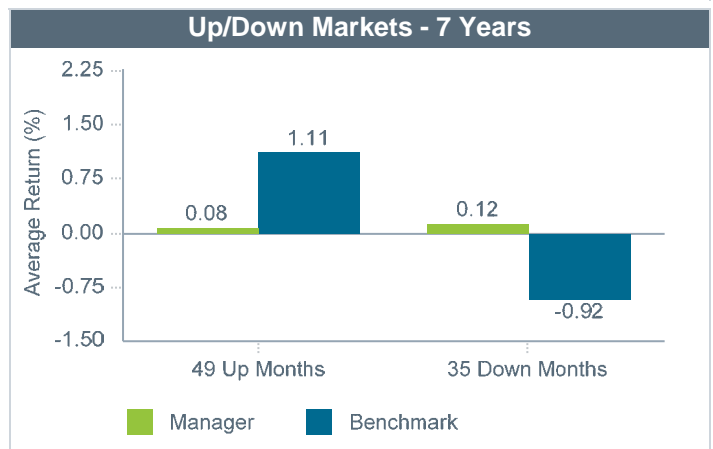
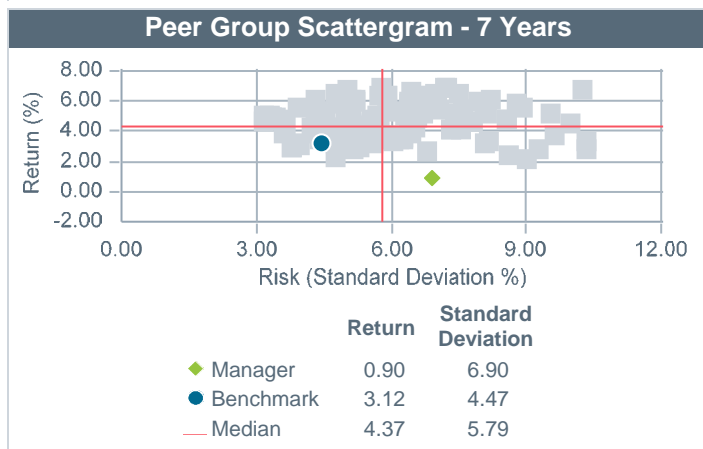
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	4.08	4.06
Spread Duration	N/A	4.05
Avg. Maturity	4.57	4.39
Avg. Quality	Aa3	Aa2
Yield To Maturity (%)	0.90	0.65
Coupon Rate (%)	2.60	2.31
Current Yield (%)	2.44	2.39
Holdings Count	140	7,050



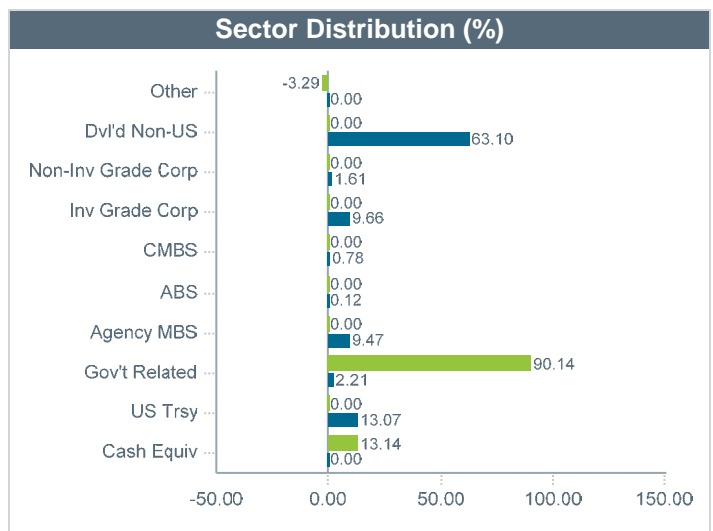
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	1.88	-3.81	-1.22	1.81	0.90	N/A	-0.33	0.52	5.06	8.01	-3.43
Benchmark	3.52	9.02	4.83	4.99	3.12	2.99	7.13	-1.36	7.69	2.84	-3.29
Difference	-1.64	-12.83	-6.05	-3.18	-2.22	N/A	-7.46	1.88	-2.63	5.17	-0.14
Peer Group Median	4.92	8.68	5.58	6.17	4.48	4.46	9.48	-1.73	7.62	6.13	-2.27
Rank	92	100	99	99	97	N/A	100	19	78	39	65
Population	187	187	178	173	163	115	229	247	255	269	279



Portfolio Characteristics

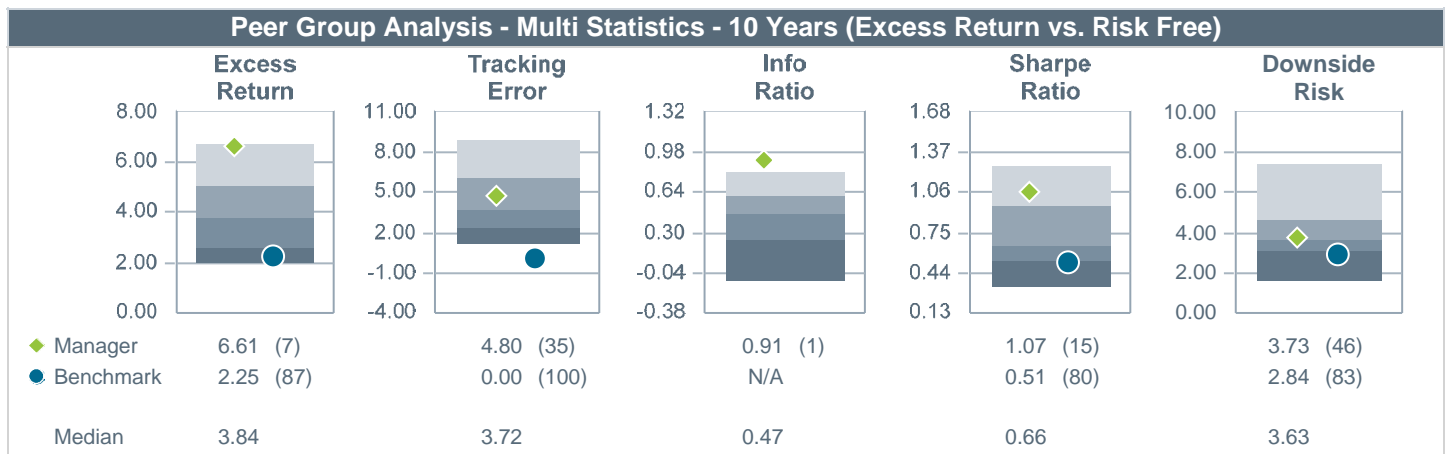
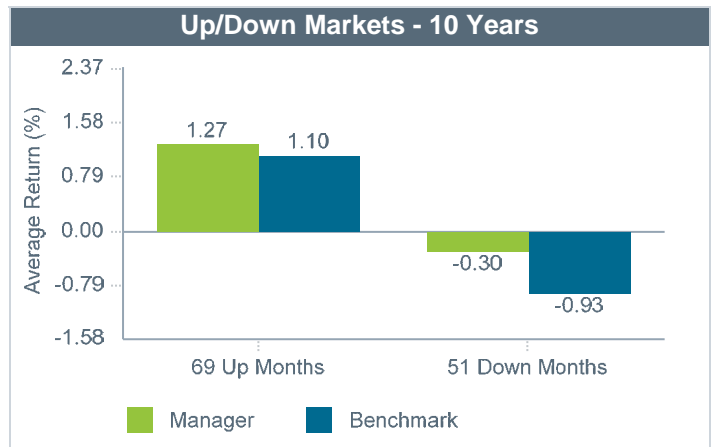
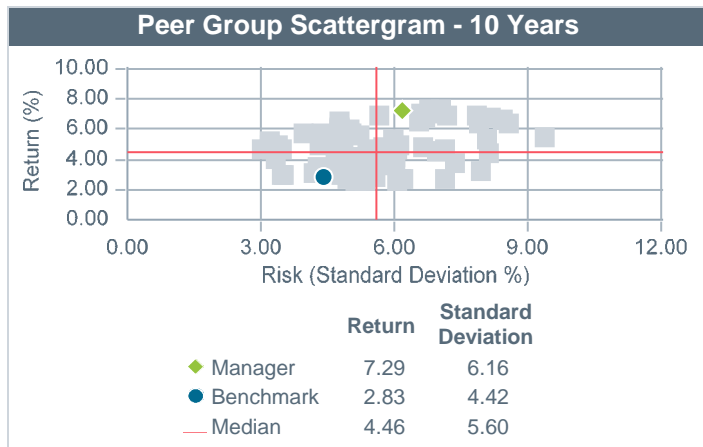
	Portfolio	Benchmark
Effective Duration	1.91	7.28
Spread Duration	1.94	N/A
Avg. Maturity	2.21	9.02
Avg. Quality	A3	N/A
Yield To Maturity (%)	3.21	1.05
Coupon Rate (%)	4.00	2.55
Current Yield (%)	3.79	0.10
Holdings Count	222	30,450



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.

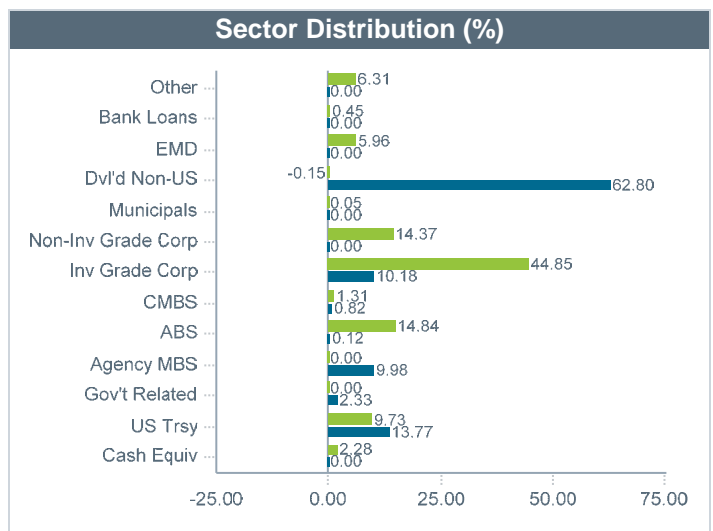


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	4.25	15.08	8.14	8.72	6.62	7.29	9.80	0.09	8.74	10.44	-4.09
Benchmark	3.28	9.20	4.85	4.79	3.01	2.83	6.84	-1.19	7.39	2.09	-3.15
Difference	0.97	5.88	3.29	3.93	3.61	4.46	2.96	1.28	1.35	8.35	-0.94
Peer Group Median	4.92	8.68	5.58	6.17	4.48	4.46	9.48	-1.73	7.62	6.13	-2.27
Rank	62	6	6	9	9	6	47	23	29	27	76
Population	187	187	178	173	163	115	229	247	255	269	279



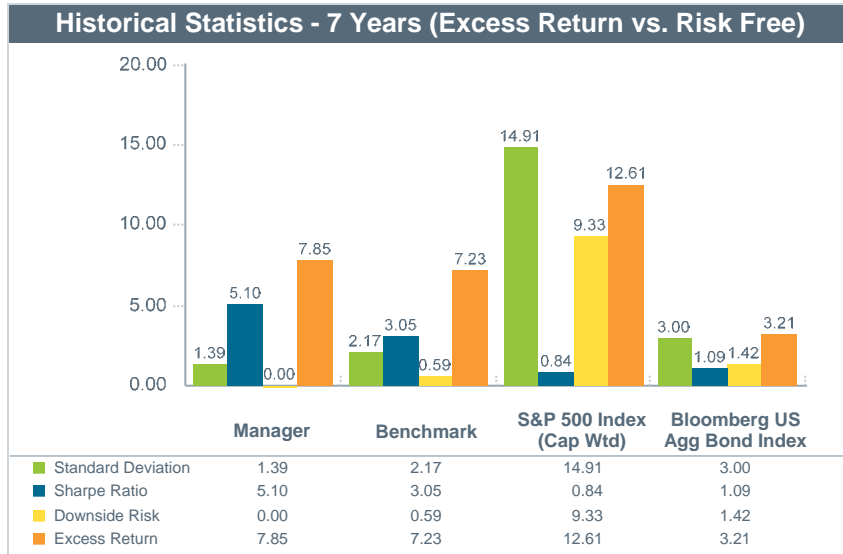
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	7.54	7.43
Spread Duration	5.82	N/A
Avg. Maturity	10.08	9.13
Avg. Quality	Baa2	N/A
Yield To Maturity (%)	2.65	0.83
Coupon Rate (%)	3.76	2.38
Current Yield (%)	3.47	0.03
Holdings Count	682	26,514



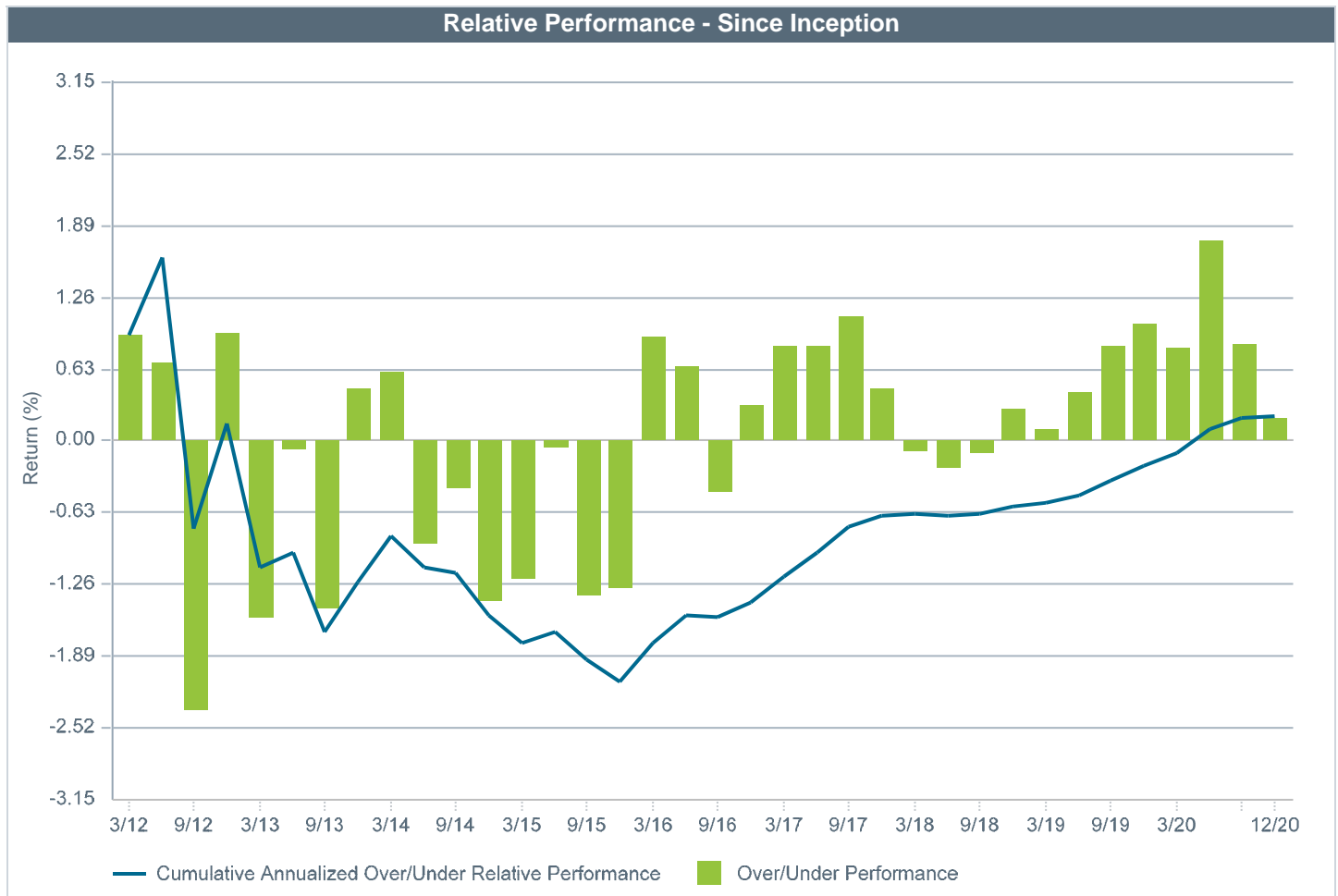
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of preferred equity, hedges, and convertibles.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	1.51	4.91	6.98	8.46	9.00	N/A	7.87	8.18	11.11	10.34	10.60
Benchmark	1.30	1.19	4.92	6.21	8.32	9.88	5.34	8.35	7.62	8.77	15.02
Difference	0.21	3.72	2.06	2.25	0.68	N/A	2.53	-0.17	3.49	1.57	-4.42



Actual Correlation - 7 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.65
S&P 500 Index (Cap Wtd)	-0.34
Russell 2000 Index	-0.34
MSCI EAFE Index (USD) (Net)	-0.26
MSCI Emg Mkts Index (USD) (Net)	-0.19
Bloomberg US Agg Bond Index	-0.31
Bloomberg US Trsy US TIPS Index	-0.37
Wilshire US REIT Index	-0.25
HFRI FOF Comp Index	-0.37
Bloomberg Cmdty Index (TR)	0.05
ICE BofAML 3 Mo US T-Bill Index	-0.20
Cons Price Index (Unadjusted)	0.26
NCREIF ODCE Index (AWA) (Gross)	0.65



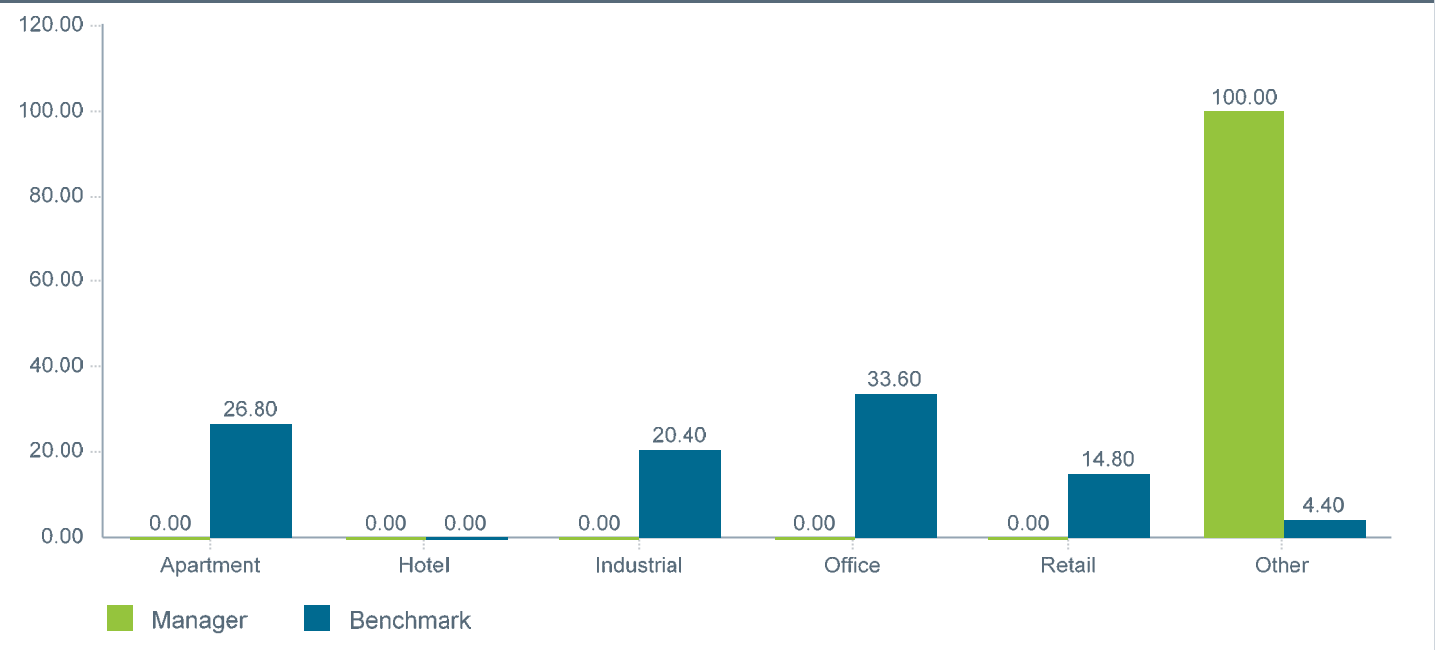
Investment Strategy

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.

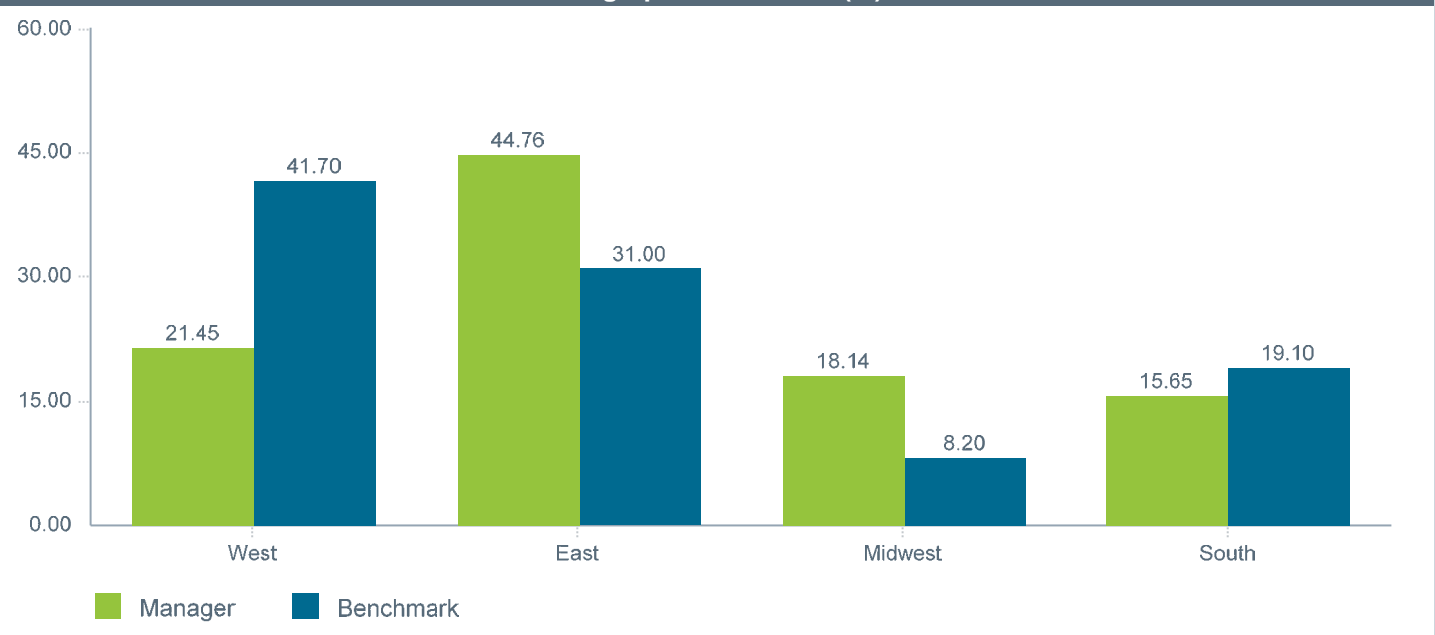
Investment Profile

Fund Inception	2011
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	10,050
Fund Leverage %	24.62
Portfolio Occupancy %	86.00
Cash Reserve %	4.90
Number of Investments	310
Number of Limited Partners	183

Property Type Allocation (%)



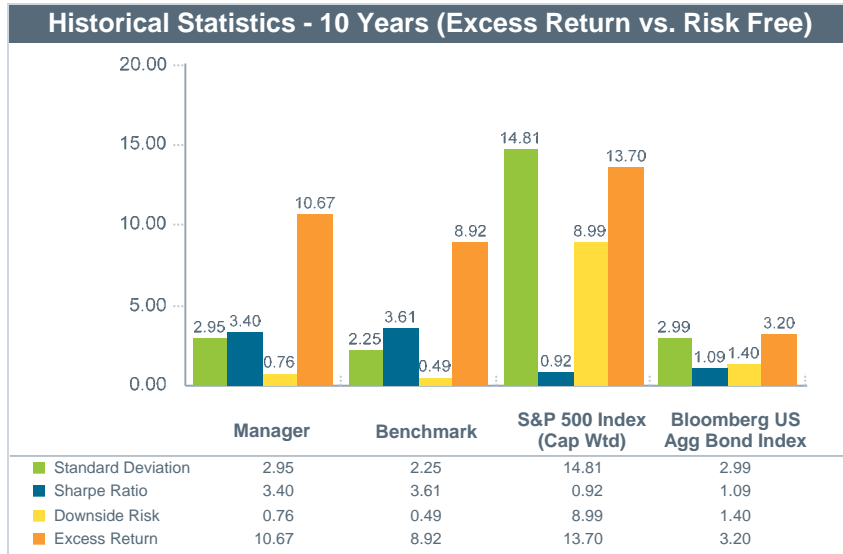
Geographic Allocation (%)



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 education, healthcare, and storage real estate. 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.

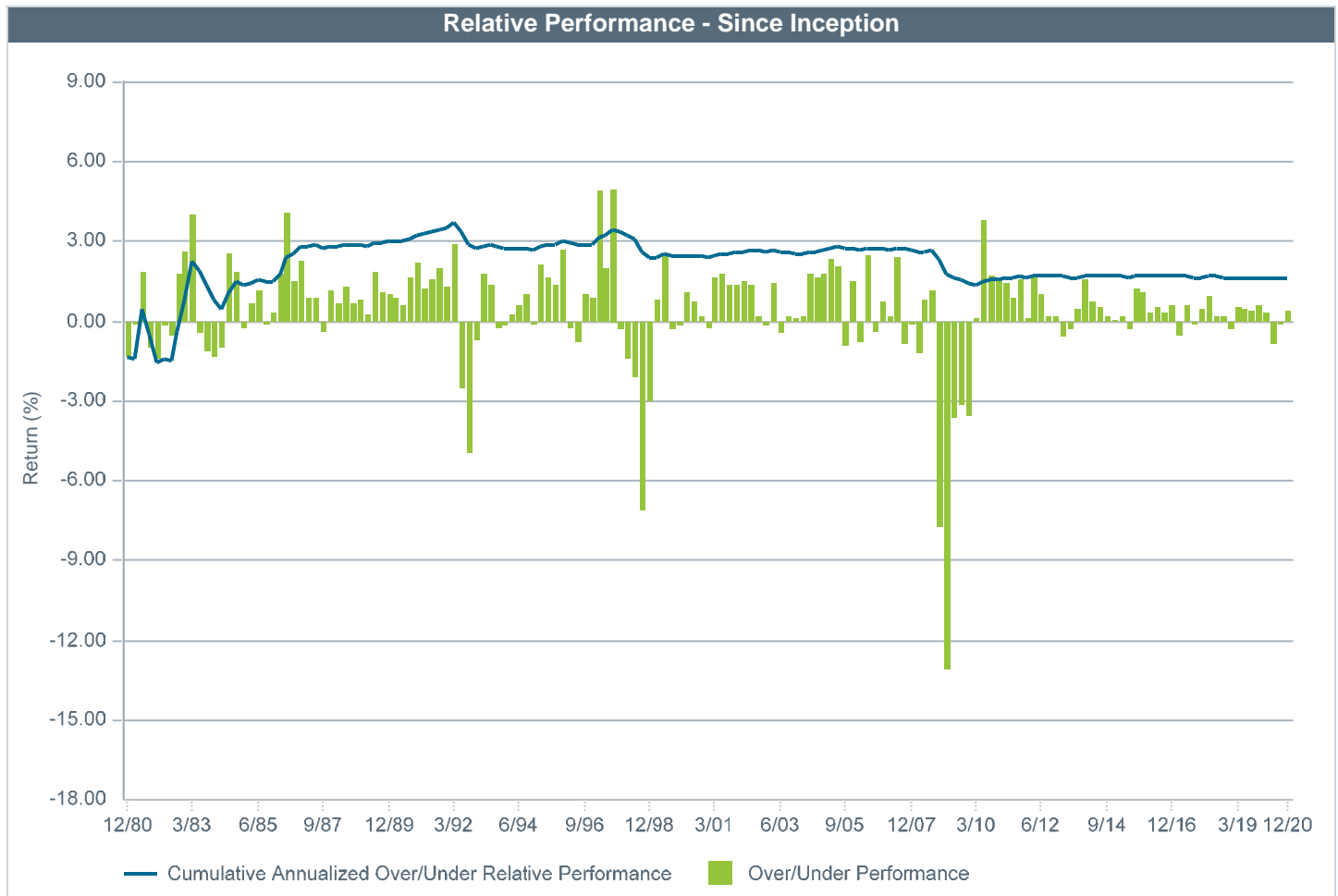


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	1.71	1.03	5.95	7.31	9.68	11.75	7.52	9.48	8.06	10.70	17.53
Benchmark	1.30	1.19	4.92	6.21	8.32	9.88	5.34	8.35	7.62	8.77	15.02
Difference	0.41	-0.16	1.03	1.10	1.36	1.87	2.18	1.13	0.44	1.93	2.51



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.93
S&P 500 Index (Cap Wtd)	-0.26
Russell 2000 Index	-0.23
MSCI EAFE Index (USD) (Net)	-0.23
MSCI Emg Mkts Index (USD) (Net)	-0.36
Bloomberg US Agg Bond Index	-0.18
Bloomberg US Trsy US TIPS Index	-0.19
Wilshire US REIT Index	-0.04
HFRI FOF Comp Index	-0.32
Bloomberg Cmnty Index (TR)	-0.25
ICE BofAML 3 Mo US T-Bill Index	-0.39
Cons Price Index (Unadjusted)	0.08



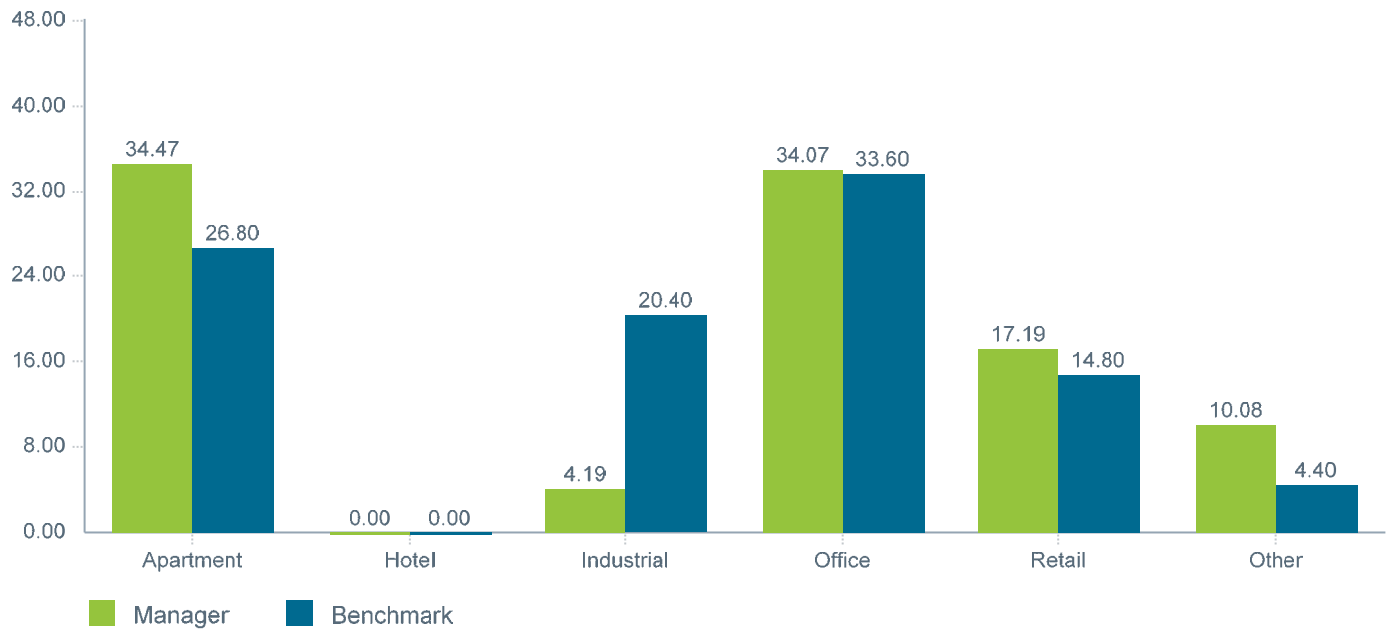
Investment Strategy

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.

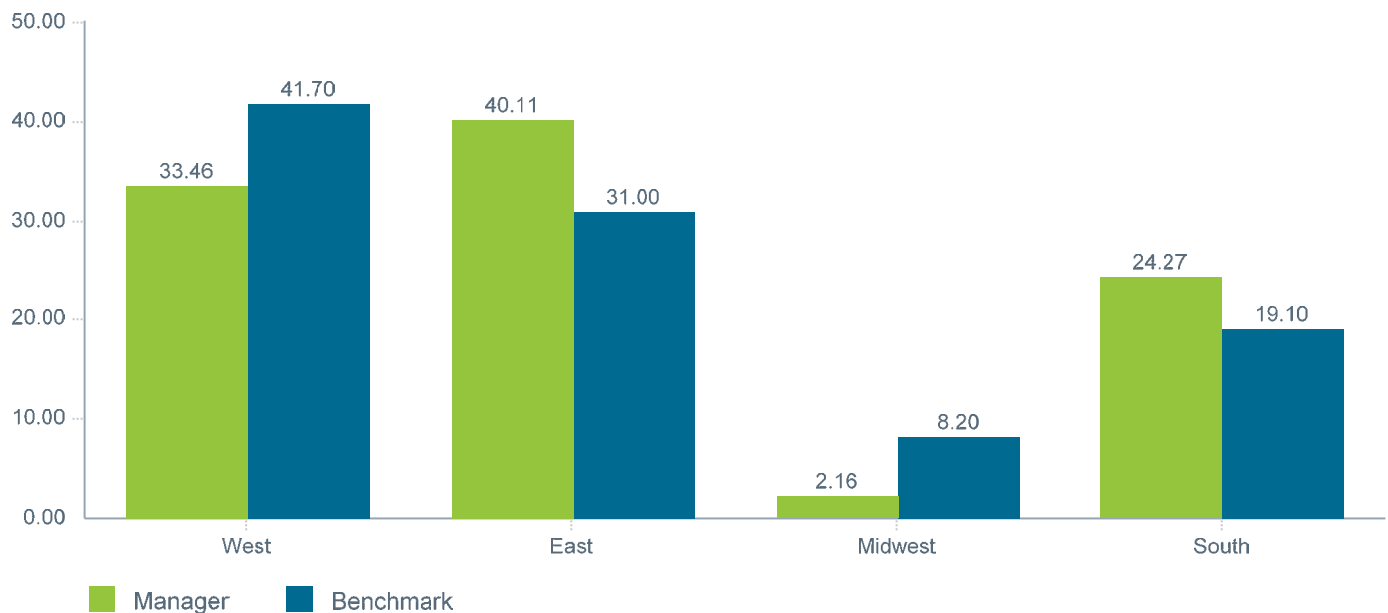
Investment Profile

Fund Inception	1980
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	13,656
Fund Leverage %	37.77
Portfolio Occupancy %	86.75
Cash Reserve %	1.67
Number of Investments	164
Number of Limited Partners	106

Property Type Allocation (%)



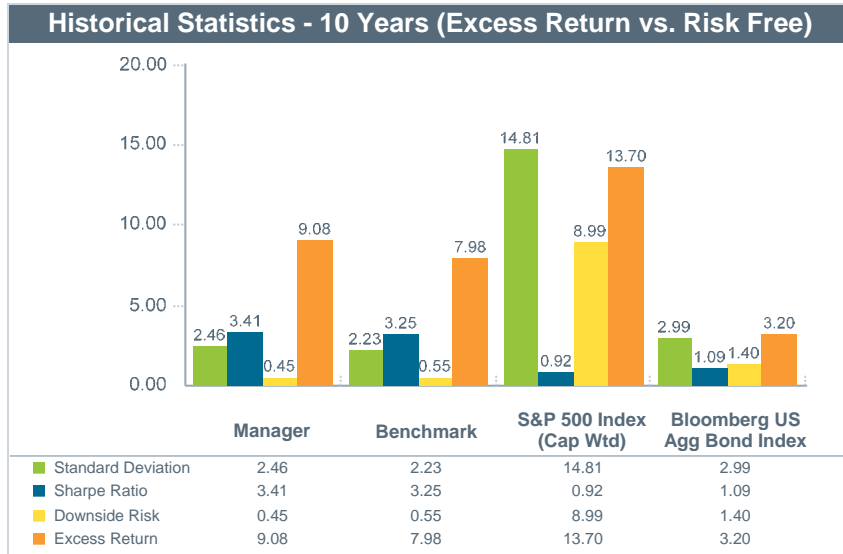
Geographic Allocation (%)



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.

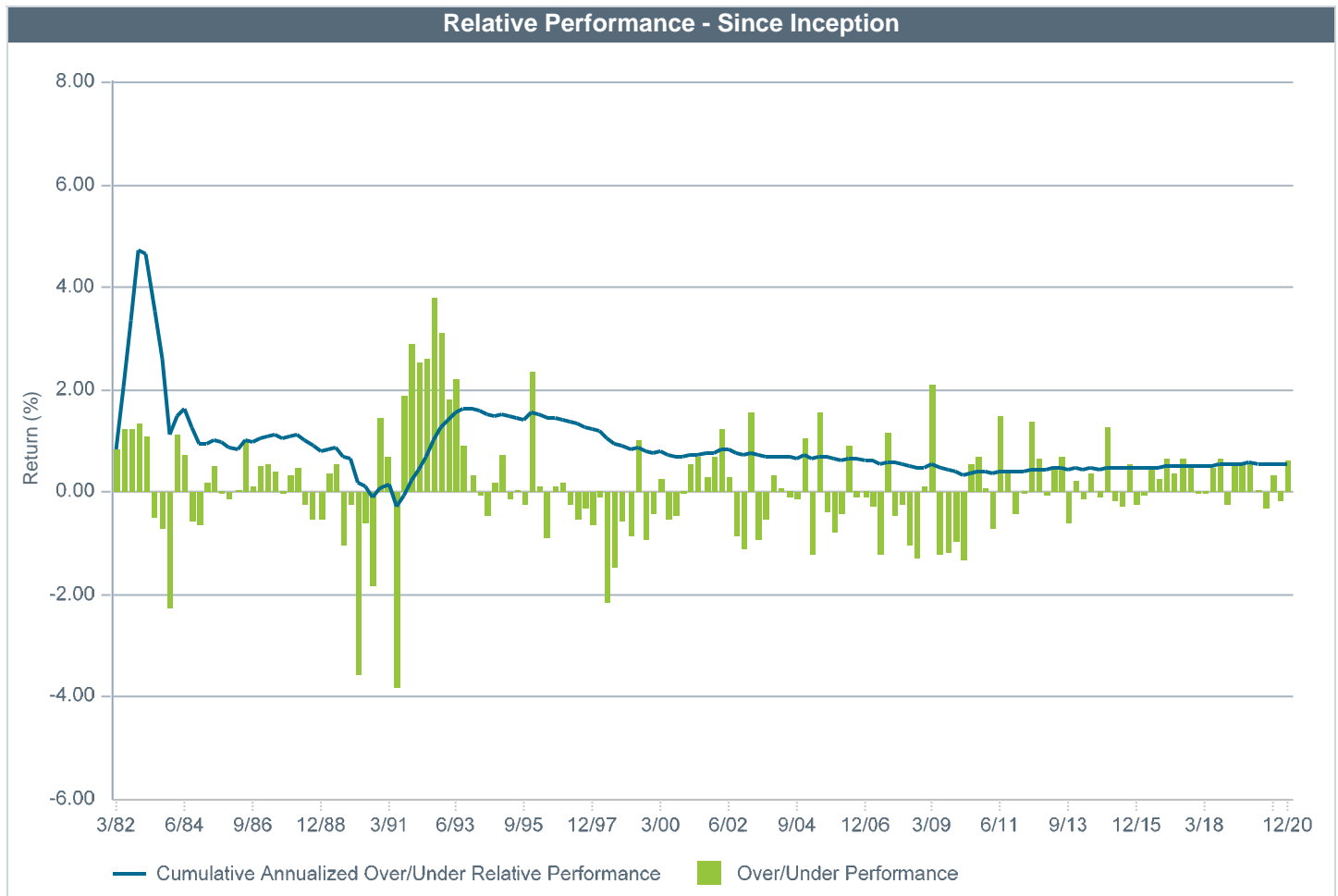


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	1.73	0.81	5.07	6.52	8.45	10.04	6.22	8.32	8.29	9.21	13.81
Benchmark	1.10	0.34	3.99	5.27	7.34	8.87	4.39	7.36	6.66	7.79	13.95
Difference	0.63	0.47	1.08	1.25	1.11	1.17	1.83	0.96	1.63	1.42	-0.14



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.91
S&P 500 Index (Cap Wtd)	-0.21
Russell 2000 Index	-0.16
MSCI EAFE Index (USD) (Net)	-0.21
MSCI Emg Mkts Index (USD) (Net)	-0.38
Bloomberg US Agg Bond Index	-0.18
Bloomberg US Trsy US TIPS Index	-0.28
Wilshire US REIT Index	0.05
HFRI FOF Comp Index	-0.26
Bloomberg Cmdty Index (TR)	-0.29
ICE BofAML 3 Mo US T-Bill Index	-0.42
Cons Price Index (Unadjusted)	-0.01
NCREIF ODCE Index (AWA) (Gross)	0.91



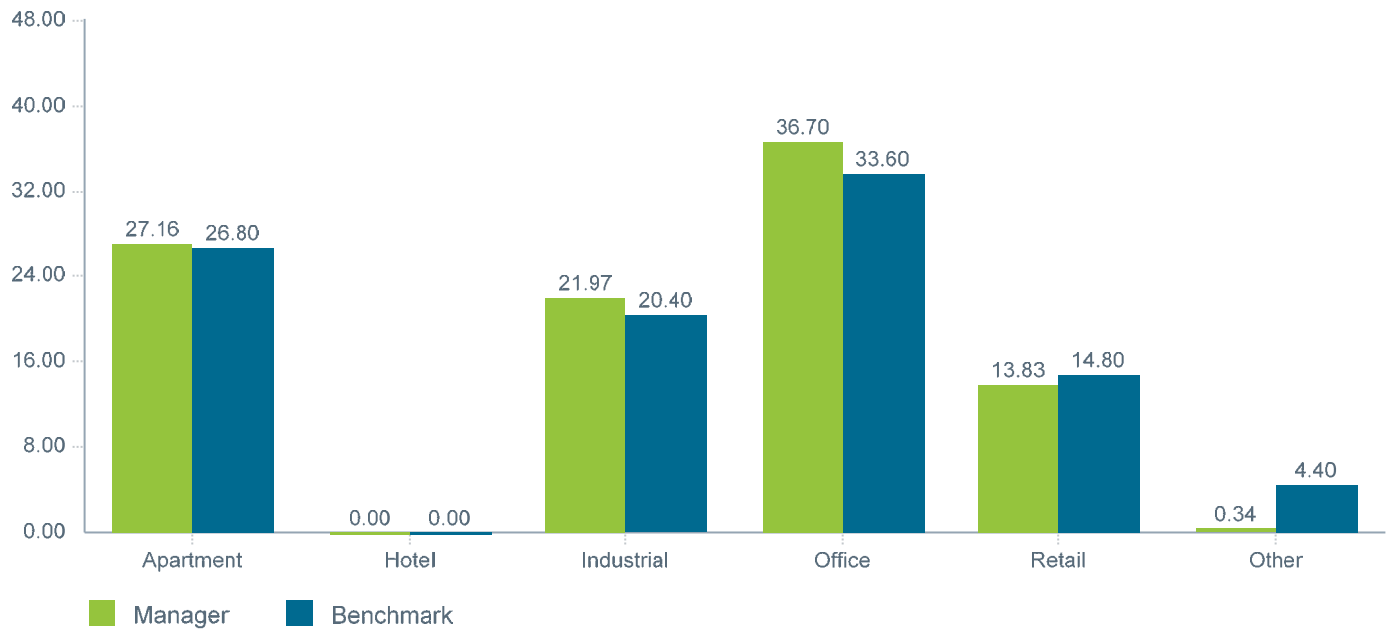
Investment Strategy

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.

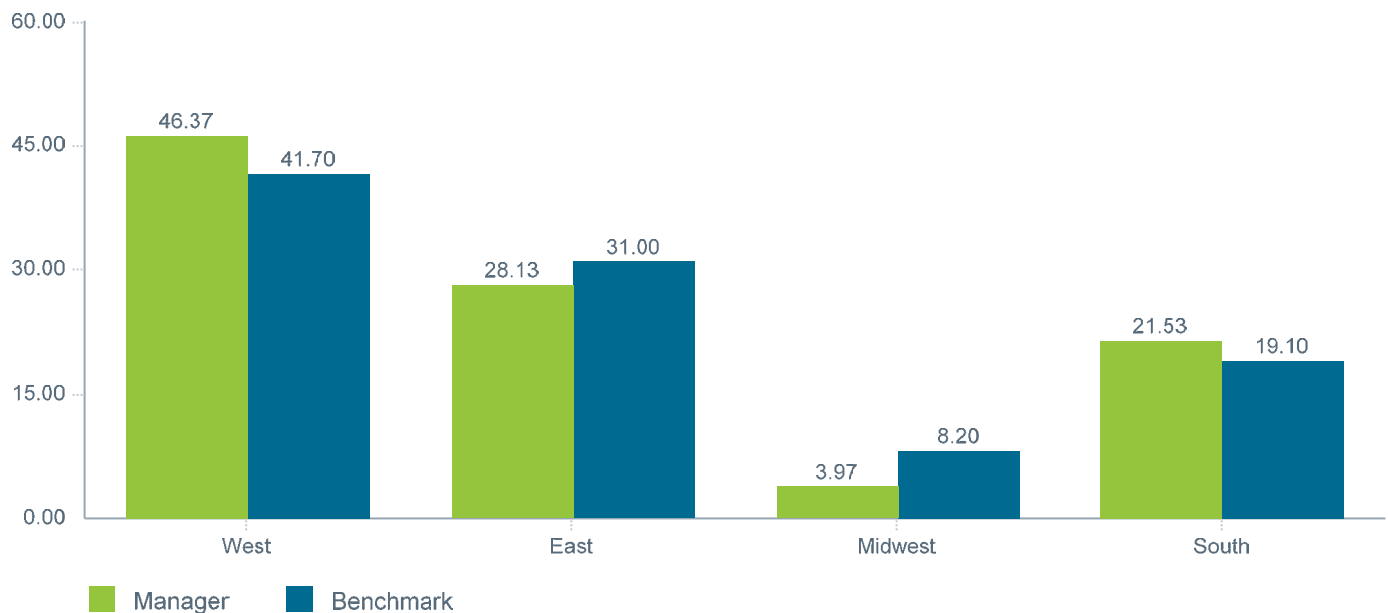
Investment Profile

Fund Inception	1982
Legal Structure	Insurance SA
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	10,430
Fund Leverage %	20.35
Portfolio Occupancy %	91.09
Cash Reserve %	2.34
Number of Investments	133
Number of Limited Partners	5,698

Property Type Allocation (%)



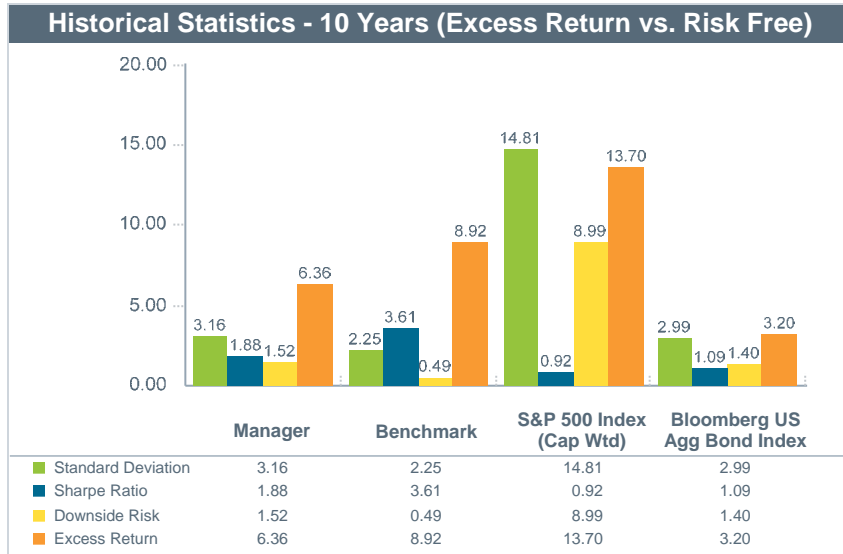
Geographic Allocation (%)



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.

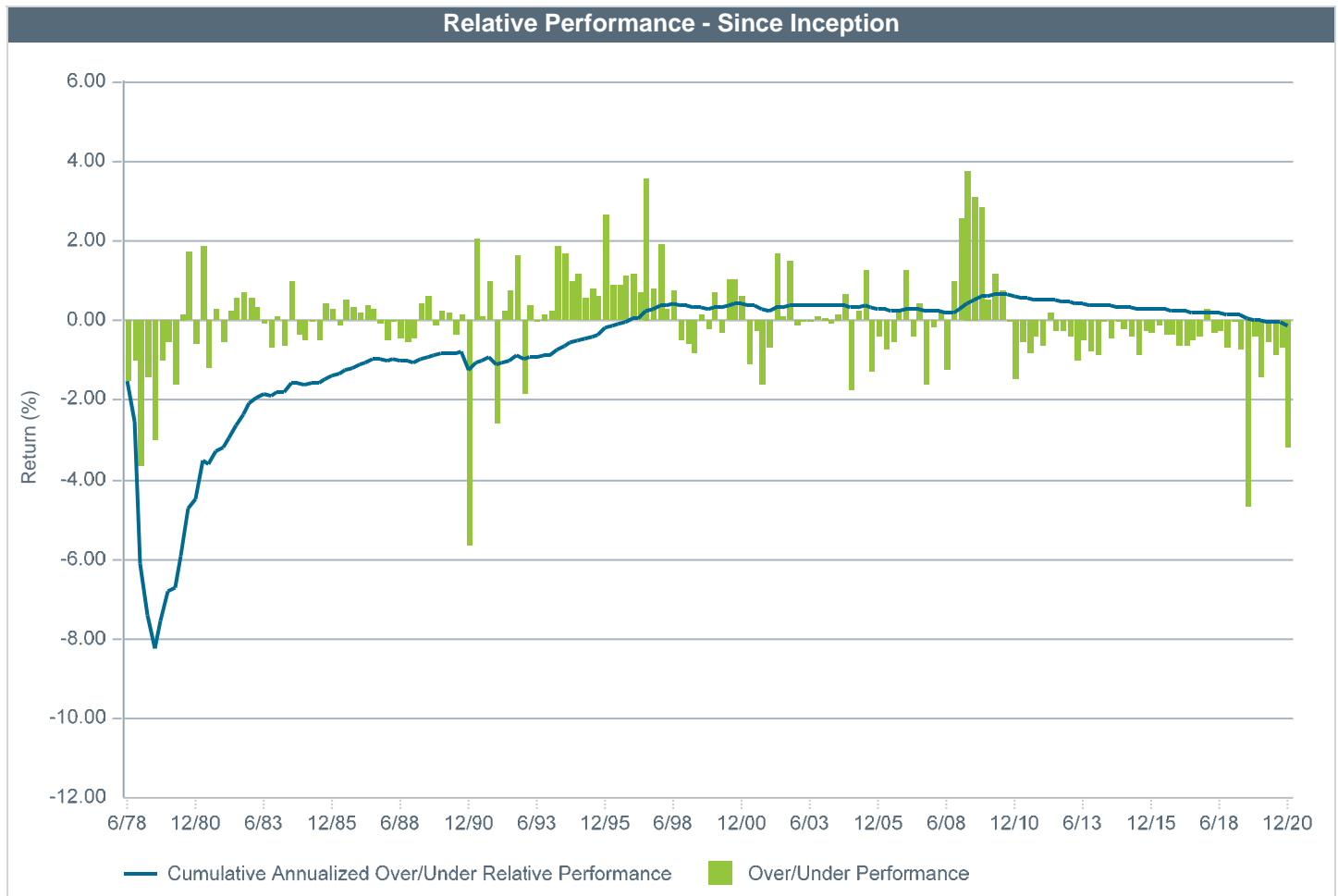


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	-1.90	-4.04	0.17	2.75	5.40	7.12	-2.10	6.99	6.30	7.21	12.94
Benchmark	1.30	1.19	4.92	6.21	8.32	9.88	5.34	8.35	7.62	8.77	15.02
Difference	-3.20	-5.23	-4.75	-3.46	-2.92	-2.76	-7.44	-1.36	-1.32	-1.56	-2.08



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.86
S&P 500 Index (Cap Wtd)	-0.29
Russell 2000 Index	-0.31
MSCI EAFE Index (USD) (Net)	-0.30
MSCI Emg Mkts Index (USD) (Net)	-0.36
Bloomberg US Agg Bond Index	-0.25
Bloomberg US Trsy US TIPS Index	-0.29
Wilshire US REIT Index	-0.05
HFRI FOF Comp Index	-0.39
Bloomberg Cmnty Index (TR)	-0.30
ICE BofAML 3 Mo US T-Bill Index	-0.47
Cons Price Index (Unadjusted)	0.01



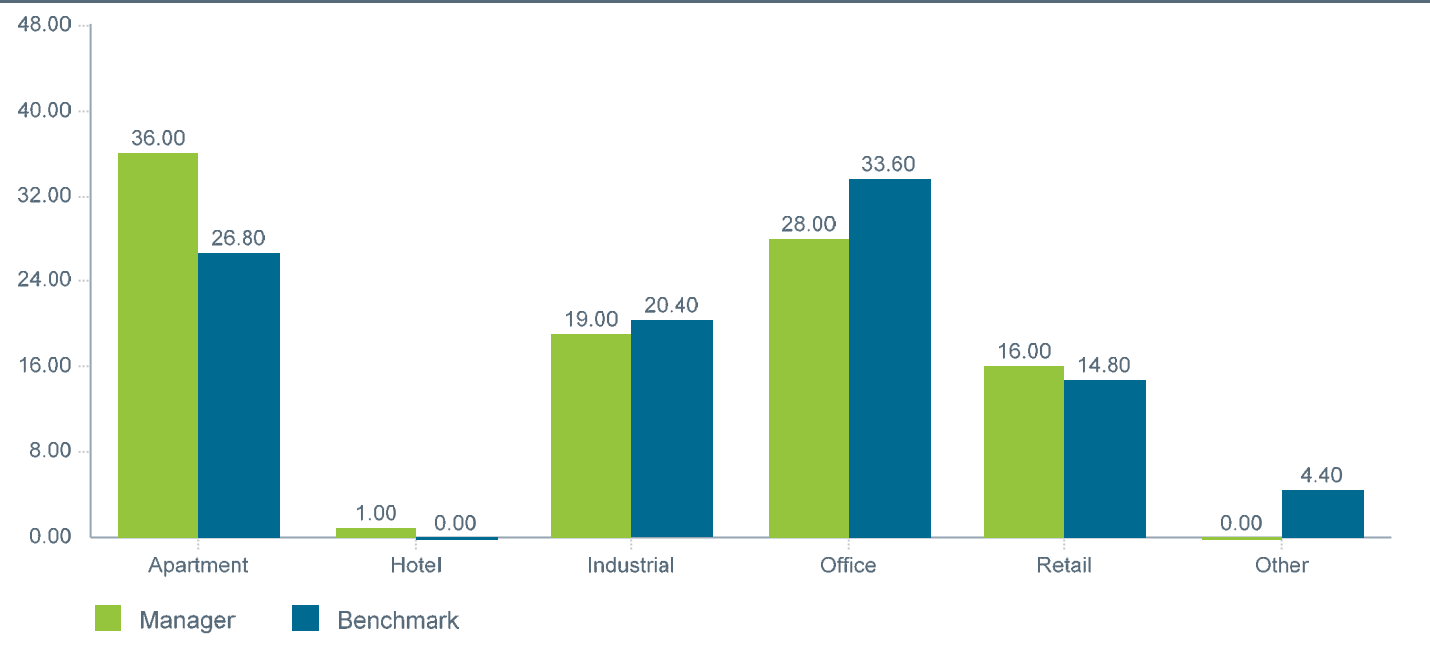
Investment Strategy

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.

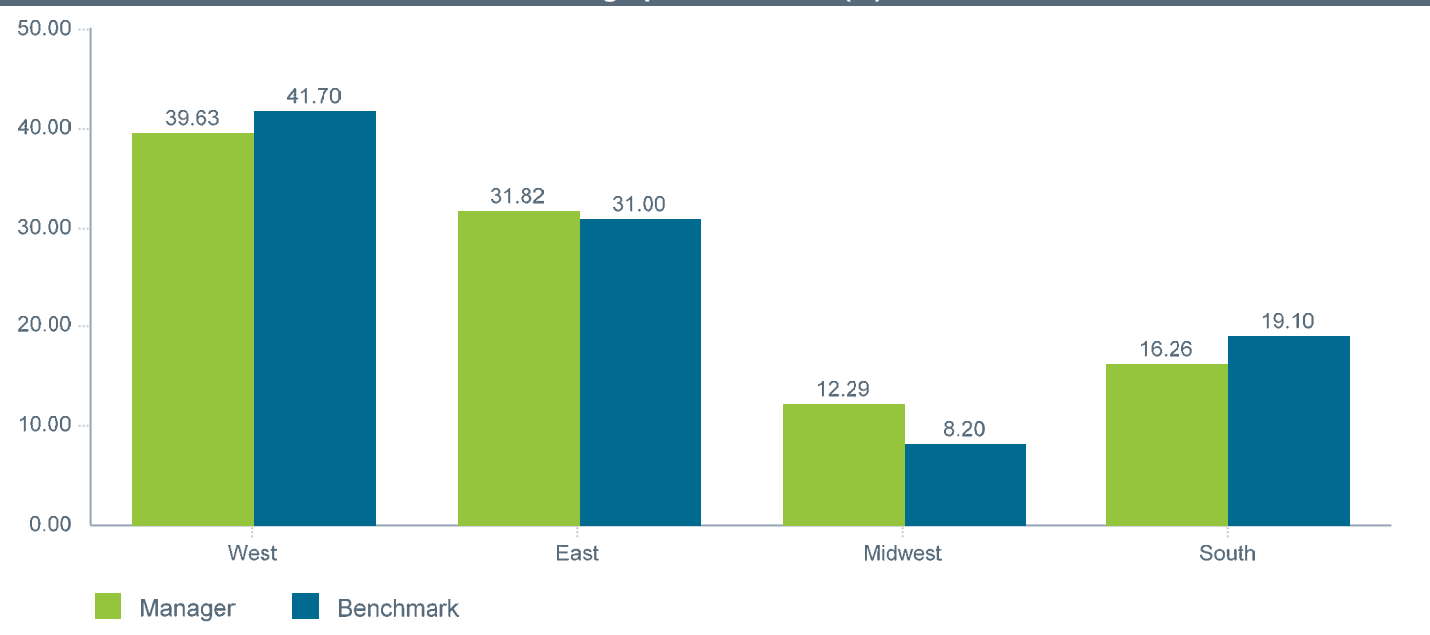
Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	18,723
Fund Leverage %	18.80
Portfolio Occupancy %	91.00
Cash Reserve %	1.50
Number of Investments	184
Number of Limited Partners	445

Property Type Allocation (%)



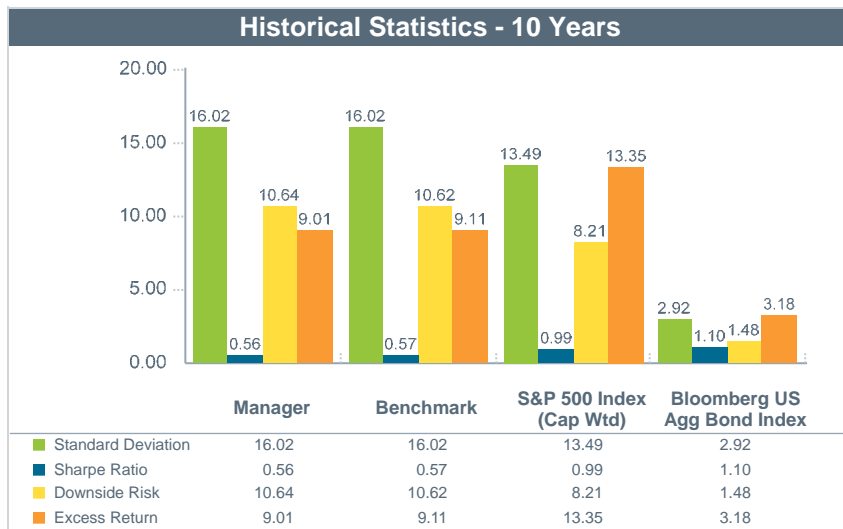
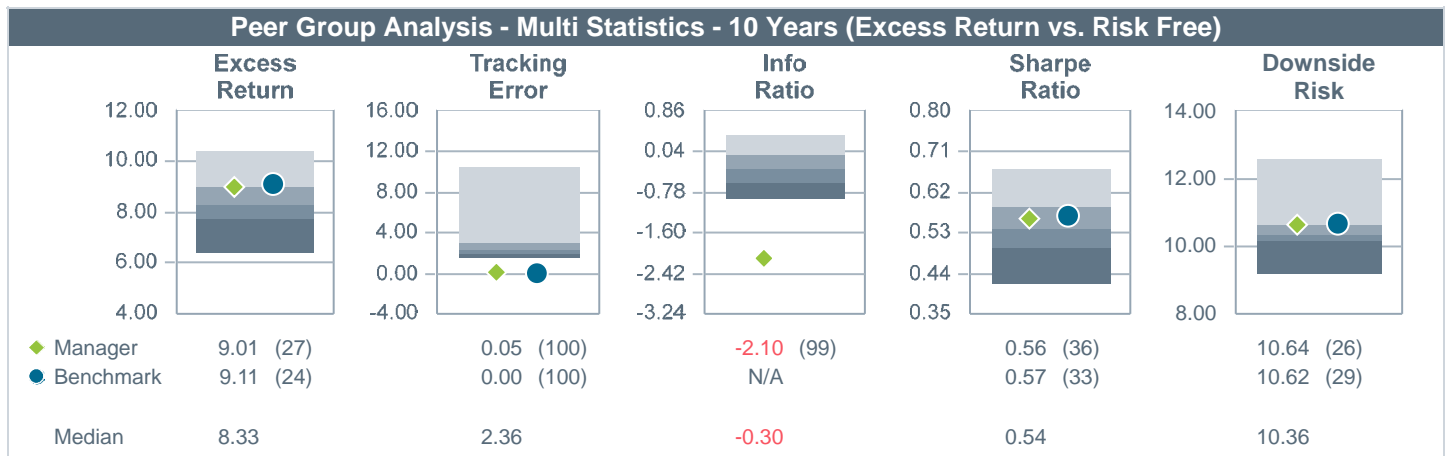
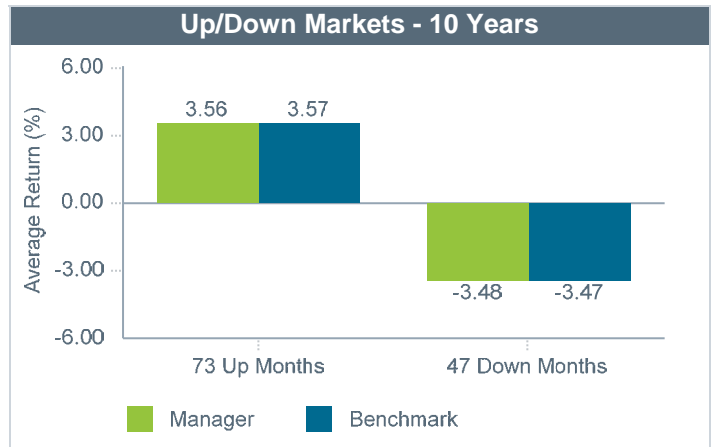
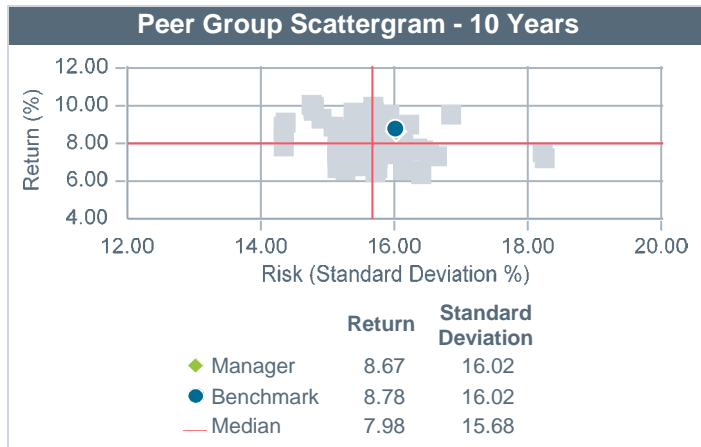
Geographic Allocation (%)



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	2019	2018	2017	2016	2015
Manager	9.25	-4.72	4.92	5.64	8.36	8.67	28.91	-5.95	4.95	8.53	2.37
Benchmark	9.28	-4.55	5.05	5.76	8.48	8.78	29.03	-5.86	5.07	8.60	2.52
Difference	-0.03	-0.17	-0.13	-0.12	-0.12	-0.11	-0.12	-0.09	-0.12	-0.07	-0.15
Peer Group Median	9.24	-4.23	4.69	5.03	7.85	7.98	27.38	-5.75	5.20	6.28	2.91
Rank	49	57	43	39	34	29	36	54	56	19	64
Population	250	247	225	198	172	146	256	244	244	231	218



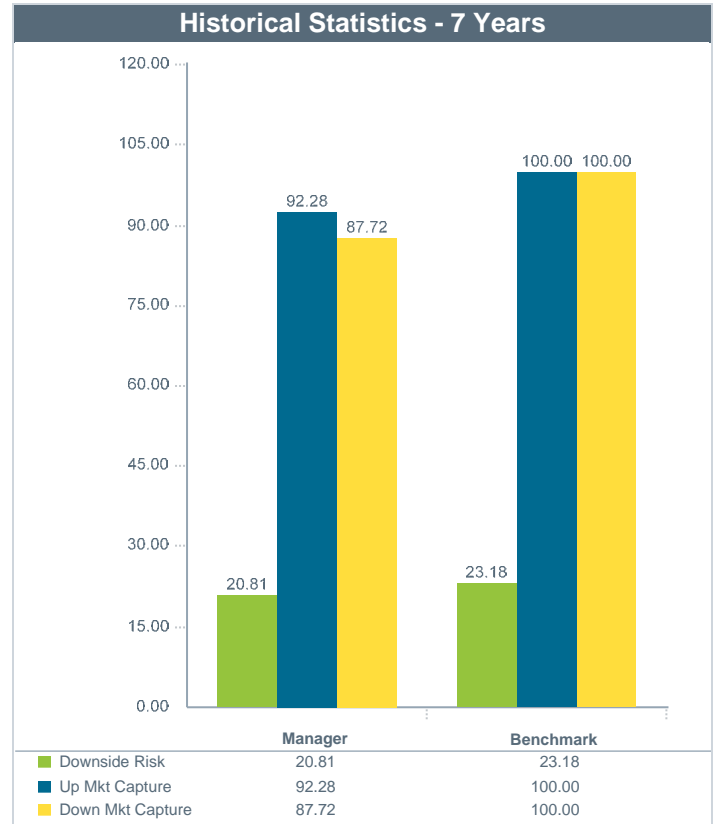
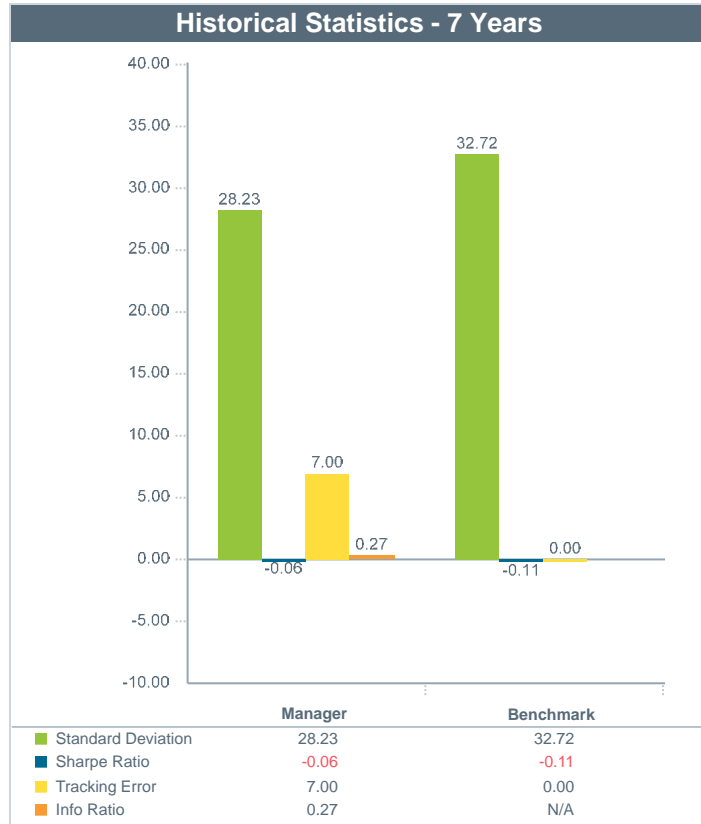
Actual Correlation - 10 Years

Index	Actual Correlation
Vanguard Spl Real Estate Index	1.00
S&P 500 Index (Cap Wtd)	0.66
Russell 2000 Index	0.65
MSCI EAFE Index (USD) (Net)	0.61
MSCI Emg Mkts Index (USD) (Net)	0.55
Bloomberg US Agg Bond Index	0.39
Bloomberg US Trsy US TIPS Index	0.46
Wilshire US REIT Index	1.00
HFRI FOF Comp Index	0.57
Bloomberg Cmnty Index (TR)	0.35
ICE BofAML 3 Mo US T-Bill Index	-0.13
Cons Price Index (Unadjusted)	-0.04

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 04/30/09; MSCI US REIT Index (USD) (Gross) through 01/31/18; MSCI US IM Real Estate 25/50 Transition Index through 07/24/18; and MSCI US IM Real Estate 25/50 Index (Gross) thereafter.

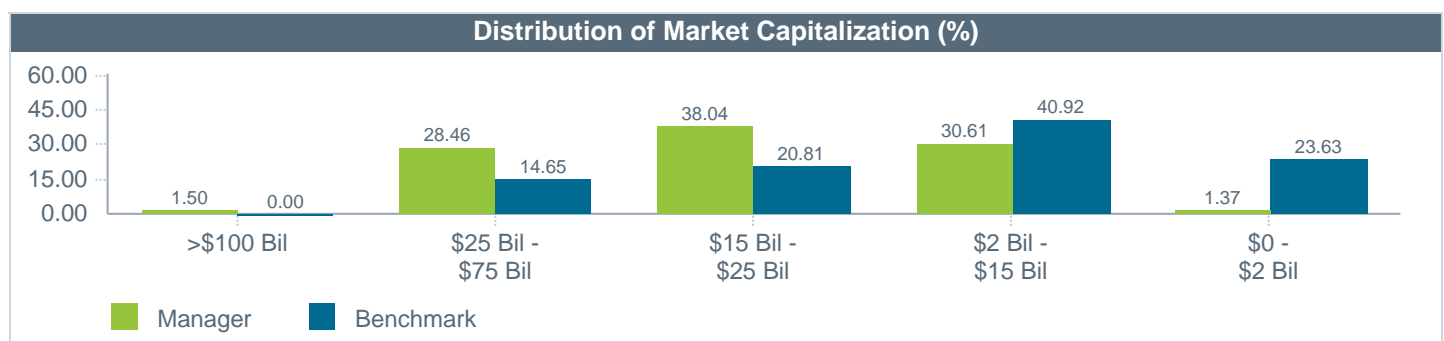


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	22.88	-24.56	-9.35	-3.15	-4.97	N/A	13.49	-13.00	-4.80	20.17	-30.26
Benchmark	29.23	-28.75	-11.60	-4.47	-8.04	-1.42	9.78	-11.67	-5.58	21.95	-35.07
Difference	-6.35	4.19	2.25	1.32	3.07	N/A	3.71	-1.33	0.78	-1.78	4.81



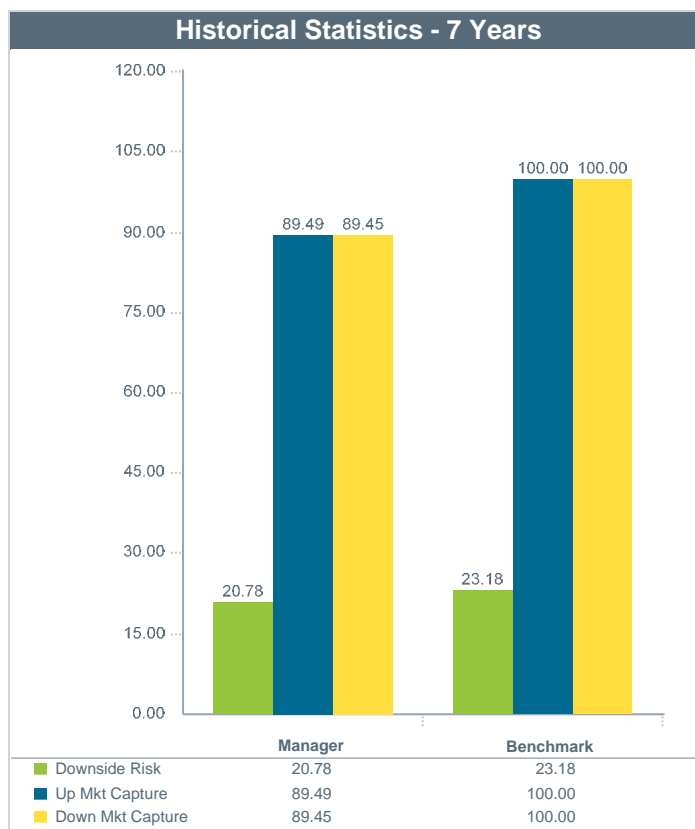
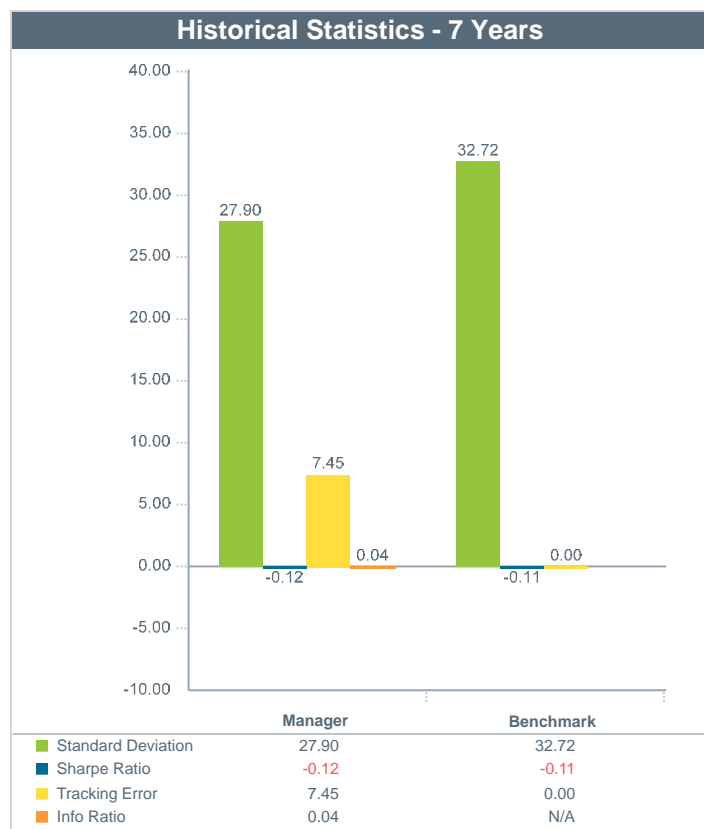
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	25,379	12,521
Median Mkt. Cap (\$M)	7,768	1,983
Price/Earnings Ratio	15.84	9.92
Price/Book Ratio	1.87	2.20
5 Yr. EPS Growth Rate (%)	0.07	4.08
Current Yield (%)	7.98	9.94
Beta (5 Years, Monthly)	0.84	1.00
Number of Securities	24	30



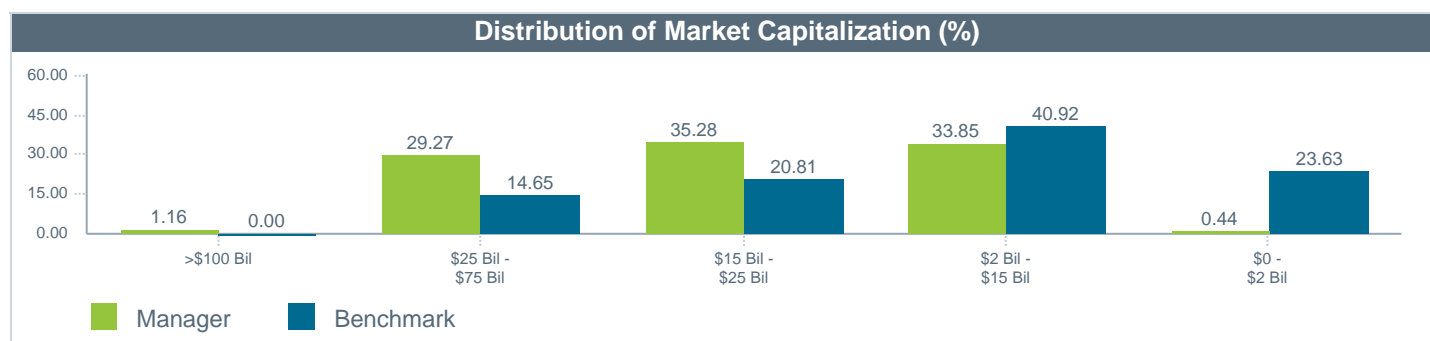
Performance shown is gross of fees and client specific. Calculations are based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	21.95	-30.83	-13.03	-5.78	-6.36	N/A	8.97	-12.73	-2.70	15.99	-26.79
Benchmark	29.23	-28.75	-11.60	-4.47	-8.04	-1.42	9.78	-11.67	-5.58	21.95	-35.07
Difference	-7.28	-2.08	-1.43	-1.31	1.68	N/A	-0.81	-1.06	2.88	-5.96	8.28



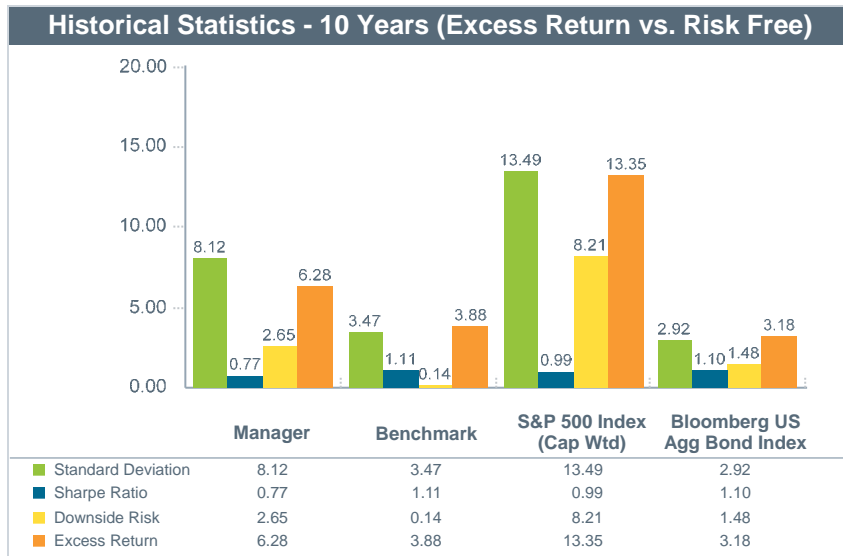
Portfolio Characteristics

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	24,344	12,521
Median Mkt. Cap (\$M)	9,494	1,983
Price/Earnings Ratio	17.24	9.92
Price/Book Ratio	1.95	2.20
5 Yr. EPS Growth Rate (%)	-2.74	4.08
Current Yield (%)	7.75	9.94
Beta (5 Years, Monthly)	0.83	1.00
Number of Securities	23	30



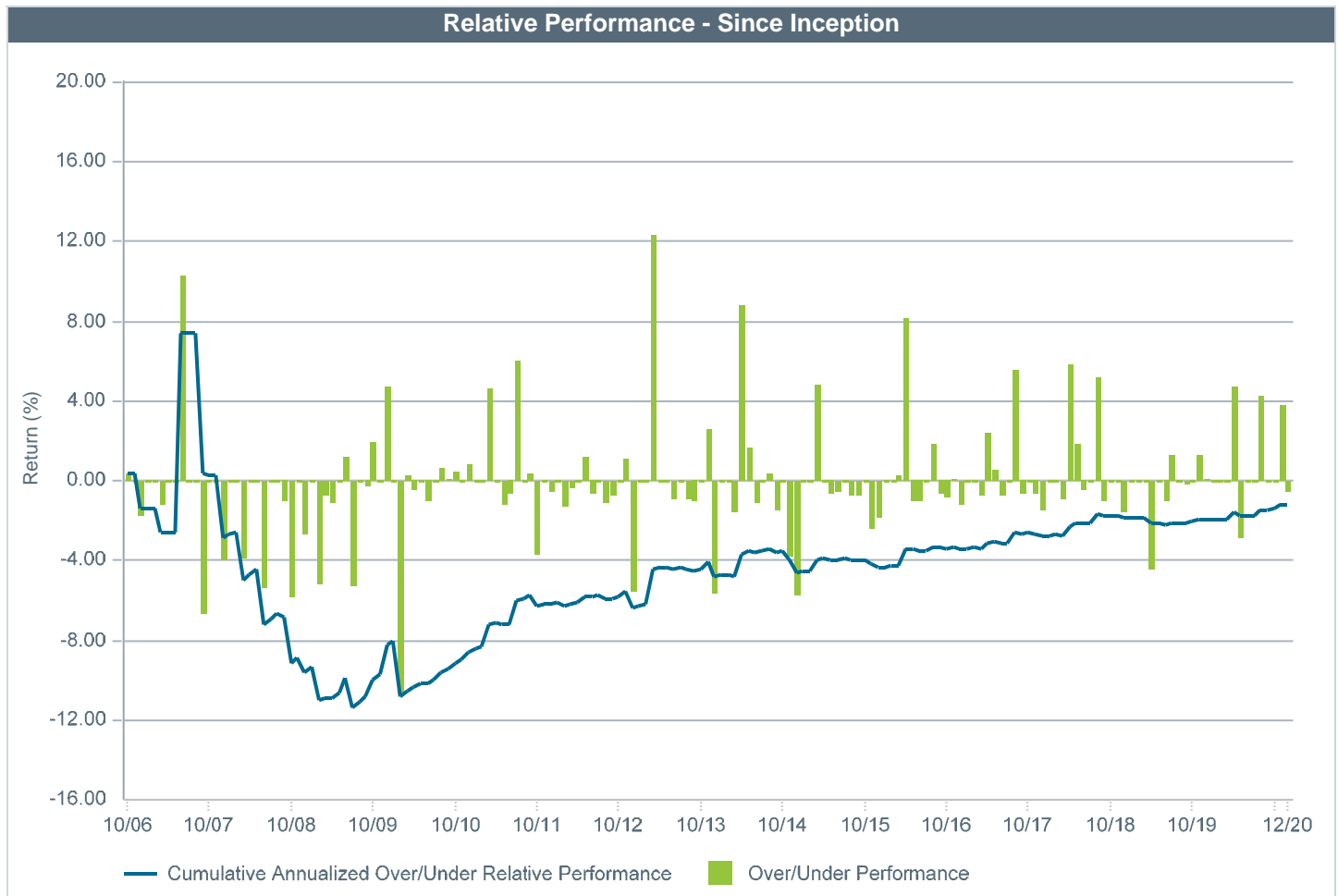
Performance shown is gross of fees and client specific. Calculations are based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2019	2018	2017	2016	2015
Manager	3.84	10.18	6.80	7.36	6.61	6.80	-1.69	12.47	8.08	8.32	2.66
Benchmark	0.58	0.81	1.77	2.30	3.81	4.55	1.30	3.21	3.63	2.59	4.97
Difference	3.26	9.37	5.03	5.06	2.80	2.25	-2.99	9.26	4.45	5.73	-2.31



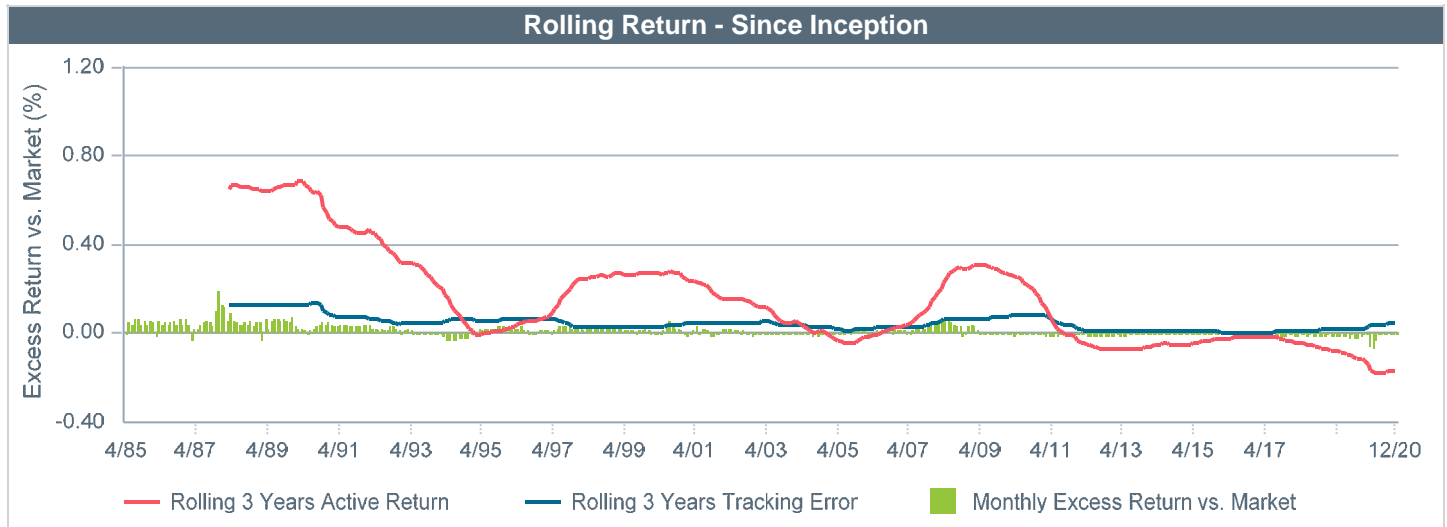
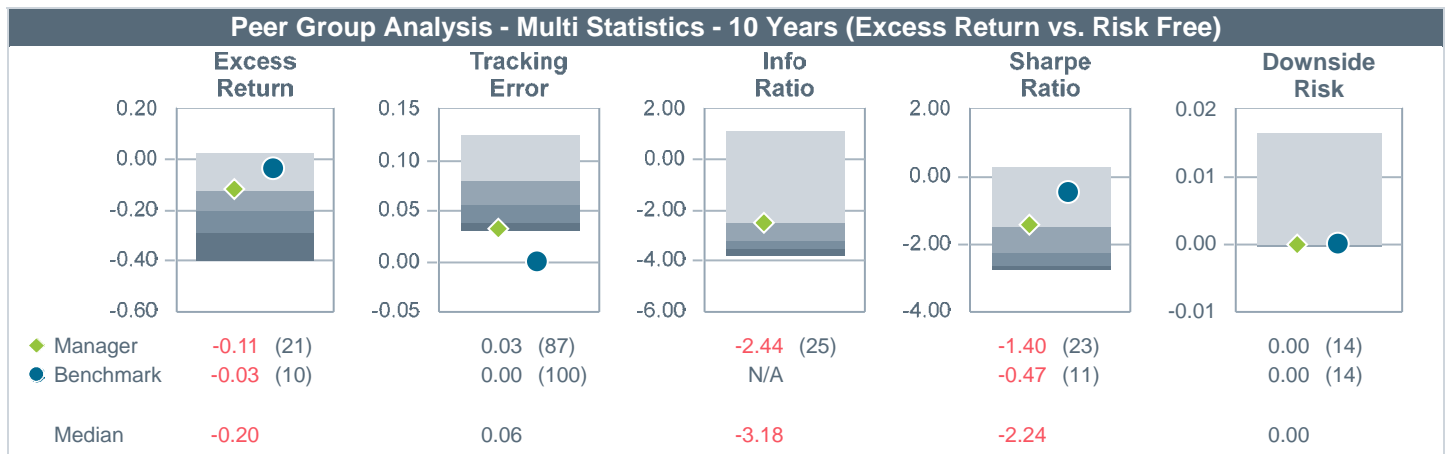
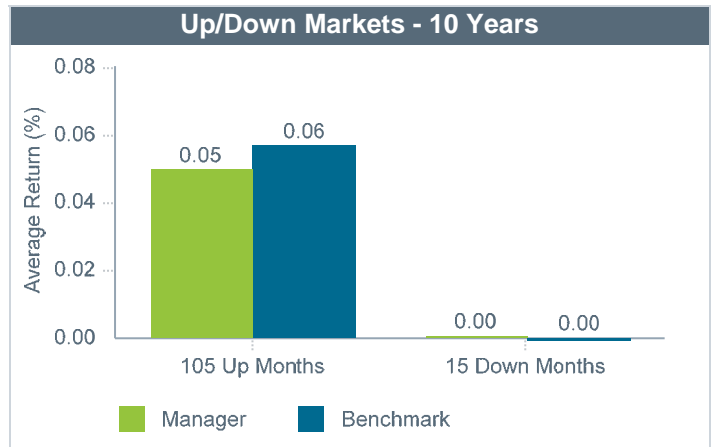
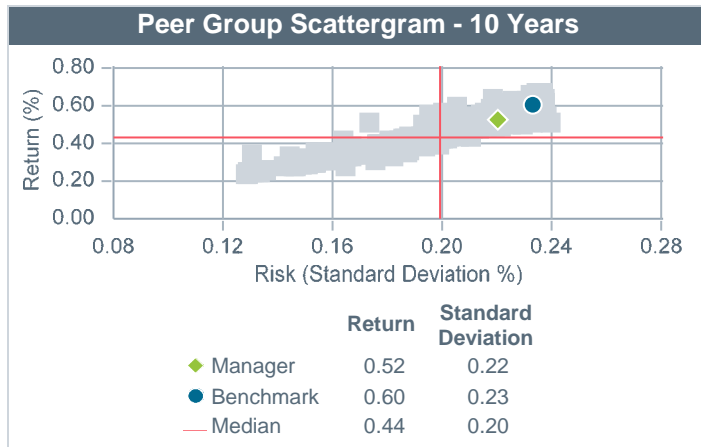
Actual Correlation - 10 Years

	Actual Correlation
NCREIF Timberland Index	0.04
S&P 500 Index (Cap Wtd)	0.05
Russell 2000 Index	0.07
MSCI EAFE Index (USD) (Net)	0.03
MSCI Emg Mkts Index (USD) (Net)	0.01
Bloomberg US Agg Bond Index	0.07
Bloomberg US Trsy US TIPS Index	0.15
Wilshire US REIT Index	0.04
HFRI FOF Comp Index	0.09
Bloomberg Cmdty Index (TR)	0.13
ICE BofAML 3 Mo US T-Bill Index	-0.04
Cons Price Index (Unadjusted)	0.14



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	2019	2018	2017	2016	2015
Manager	0.00	0.37	1.39	1.04	0.75	0.52	2.09	1.73	0.79	0.25	0.01
Benchmark	0.02	0.58	1.56	1.16	0.83	0.60	2.25	1.86	0.84	0.27	0.03
Difference	-0.02	-0.21	-0.17	-0.12	-0.08	-0.08	-0.16	-0.13	-0.05	-0.02	-0.02
Peer Group Median	0.00	0.30	1.25	0.86	0.62	0.44	1.90	1.54	0.55	0.06	0.01
Rank	25	31	22	19	19	21	20	22	17	18	35
Population	805	790	738	641	587	569	794	819	834	746	700



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.
- Franklin Templeton Global Multisector Plus (CF) performance prior to 03/2016 is represented by Templeton Global Total Return (SICAV).
- In January 2018, Taplin Canida & Habacht Intermediate Duration (SA) was renamed to BMO Intermediate Fixed Income (SA) as part of a rebranding initiative.

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. Prior to 11/01/2017, 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 Diversifying Assets Index is calculated monthly and consists of 50% S&P MLP Index (TR)/50% NCREIF Timberland Index through 10/2017, 67% S&P MLP Index (TR)/33% NCREIF Timberland Index through 09/2020, and calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return thereafter.

Custom Manager Benchmark Comments:

- **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.
- **Baillie Gifford Spliced Index:** The passive Baillie Gifford Spliced Index consists of 100% MSCI EAFE Index (USD) (Net) through 11/2019 and 100% MSCI ACW Ex US Index (USD) (Net) thereafter.
- **Richmond Capital Index:** The passive Richmond Capital Index consists of 100% ICE BofAML US Domestic Master Index through 06/2011 and 100% Bloomberg US Agg Bond 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 01/2019 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.
- **Tortoise Spliced Index:** The passive Tortoise Spliced Index consists of 100% S&P MLP Index (TR) through 07/2020 and 100% Alerian Midstream Energy Index 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, and thus may differ from the classification of the investment manager and/or index provider.

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, and 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. Stocks are unclassified when there is not enough data to determine a size and style metric.

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.

Glossary

- 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.
- 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.
- Unemployment Rate** - The percentage of the total labor force that is unemployed but actively seeking employment.
- 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.
- 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 that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. 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

Glossary

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.

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.

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 valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

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.

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.

Return - Compounded rate of return for the period.

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

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	Stable Value (Plan Sponsor Directed)	50
TIPS	95	Hedge Funds of Funds	35
US Large Cap Equity	95		
Diversified Real Return	93		
Stable Value (Participant Directed)	91		
Global Equity	90	<u>Not Liquid Investments</u>	
Non-US Large Cap Equity	90	Core Real Estate	25
Global Tactical Asset Allocation	88	Core Plus Real Estate	15
MLPs	85	Non-Core Real Estate	5
US Mid Cap Equity	85	Private Equity Funds of Funds	5
US SMid Cap Equity	85		
US Small Cap Equity	85		
REITs	85		
Non-US Small Cap Equity	85		
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.

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		

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

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.

Glossary

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

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 portfolio's 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

BOISE

CHICAGO

NEW YORK

Disclaimer of Warranties and Limitation of Liability - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.

